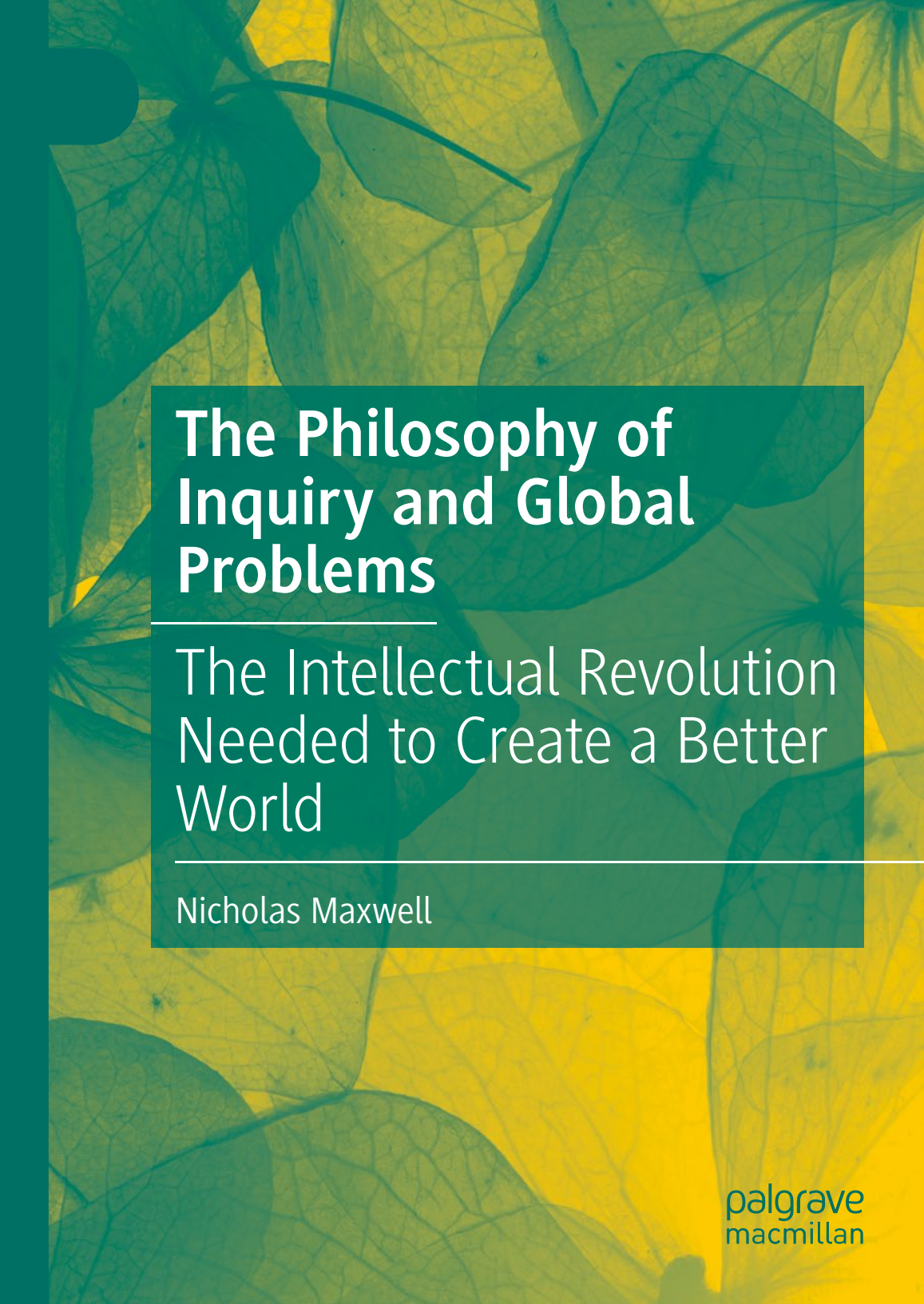




# The Philosophy of Inquiry and Global Problems

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The Intellectual Revolution  
Needed to Create a Better  
World

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Nicholas Maxwell

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# Preface

The world is in a state of crisis. This is all too apparent in the impending catastrophe of climate change. But it is also manifest in other environmental crises: the destruction of natural habitats, the devastating loss of wildlife, and the impending mass extinction of species. And there are other global problems that threaten our future: lethal modern war; the spread of modern armaments; the menace of nuclear weapons; pollution of earth, sea and air; rapid rise in the human population; increasing antibiotic resistance; the degradation of democratic politics, brought about in part by the internet.

It is not just that universities around the world have failed to help humanity solve these global problems; they have made the genesis of these problems possible. Modern science and technology, developed in universities, have made possible modern industry and agriculture, modern hygiene and medicine, modern power production and travel, modern armaments, which in turn made possible much that is good, all the great benefits of the modern world, but also all the global crises that now threaten our future.

What has gone wrong? The fault lies with a bad philosophy of inquiry—a bad view as to what the aims and methods of inquiry ought to be—built into universities around the world. The basic idea of this bad philosophy is that universities should help promote human welfare by, in the first instance, acquiring scientific knowledge and technological

know-how. First, knowledge is to be acquired; once acquired, it can be applied to help solve social problems and promote human welfare. We may call this bad philosophy of inquiry *knowledge-inquiry*.

Knowledge-inquiry is an intellectual disaster. Judged from the standpoint of promoting human welfare, it is profoundly and damagingly irrational, in a structural way. *Three* of the four most elementary rules of rational problem-solving are violated. Reason is betrayed and, as a consequence, humanity is betrayed as well. As a result of being restricted to the tasks of acquiring and applying knowledge, universities are prevented from doing what they most need to do to help humanity solve global problems, namely, *engage actively with the public to promote action designed to solve global problems*. Universities do not take their basic task to be public education about what our problems are and what we need to do about them. As a result of giving priority to the pursuit of knowledge, universities do not even give priority within academia to the vital tasks of articulating problems of living, local and global, and proposing and critically assessing possible solutions—possible and actual *actions*, policies, political programmes, ways of living.

A bad philosophy of inquiry, built into universities around the world is, in short, in part responsible for the genesis of many of our global problems and our persistent failure subsequently to solve them. Bad philosophy is, in short, responsible in part for many of the ills of the modern world.

But if that really is the case, why has academic philosophy not highlighted this disastrous state of affairs long ago and spelled out for everyone to understand what needs to be done to put matters right?

That is the question tackled in this book. Academic philosophy, I argue, has become esoteric, effete, lost in intricate puzzle-solving, remote from the burning issues of the times, blind and dysfunctional—so outrageously blind and dysfunctional, indeed, that it hasn't even noticed that universities are dominated by a profoundly irrational and damaging philosophy of inquiry.

Once upon a time, philosophy was a profoundly significant, potent discipline. It made discoveries that transformed the path of human history. In the sixteenth and seventeenth centuries, natural philosophy—the philosophical study of nature—discovered the secret of how to improve dramatically our knowledge and understanding of the natural world and,

in doing so, created modern science, a creation that transformed subsequent history and made possible the modern world.

But then philosophy made three monumental intellectual blunders: the post-Cartesian blunder, the post-Newtonian blunder, and the Enlightenment blunder, all still unacknowledged and uncorrected right down to today. These three blunders, unacknowledged and uncorrected, had a devastating effect on philosophy. They trivialized the discipline or reduced it to a discipline that peddled obscure absurdity and fantasy. Philosophy lost its way. And because the three intellectual blunders, made long ago, have still not been acknowledged and corrected today, philosophy still remains locked in trivial puzzle-solving, or bombastic obscurity, hopelessly dysfunctional, blind to the bad philosophy of inquiry of knowledge-inquiry that, built into universities, prevents them from devoting themselves, rigorously and effectively, to helping humanity learn how to make progress to a better world.

Correct the three intellectual blunders made by philosophy long ago, put right the bad repercussions that stem from these blunders, and extraordinarily fruitful consequences emerge, for philosophy itself, but also for domains that lie far beyond what would ordinarily be thought to be the territory of philosophy: for physics, for natural science, for social science, for academic inquiry as a whole, for education, for our social and cultural life, for our capacity to solve grave global problems that at present we seem incapable of resolving. Ultimately, for our capacity to make progress towards a genuinely good, civilized world. Correcting the three intellectual blunders properly, so that all the implications and repercussions are corrected as well, has profoundly fruitful implications for our entire social and cultural landscape. Philosophy becomes again the potent enterprise it once was. And, in particular, correcting the three ancient blunders would enable us to reshape universities so that they become actively, rationally, and effectively devoted to helping humanity learn how to put a stop to the disaster of climate change.

Here, in brief, is an indication of what correcting these three ancient intellectual blunders would accomplish.

Correcting the post-Cartesian blunder has fruitful consequences for philosophy itself. It leads to a new kind of philosophy, *Critical Fundamentalism*, that takes, as its basic task, to promote imaginative and

critical—that is, rational—thinking about how to solve our most urgent and fundamental problems of thought and life. A basic job of the academic philosopher is to promote this imaginative and critical speculative thinking, this fundamental problem-solving, so that it becomes a part of such fields as education; science; academic thought more generally; and entirely generally, personal and public life, so that anyone in many a context may feel free to do philosophy in this way, not obsessively, but from time to time.

Critical fundamentalism puts centre stage our fundamental problem—the problem that encompasses all others of thought and life: How can our human world, the world we see and touch, the world of consciousness, free will, meaning and value, exist and best flourish embedded as it is in the physical universe?

Critical fundamentalism has further fruitful implications for philosophy itself. It leads to the solution to one of the most substantial, long-standing problems of philosophy, the philosophical problem of consciousness—what has been called “the hard problem of consciousness”.

But fruitful implications of critical fundamentalism go far beyond philosophy itself. There are implications for the fields I have already mentioned, but also for much more: natural science; social science; the humanities; the arts; education; personal, social, and political life; our capacity to achieve civilization.

Correcting the second great intellectual blunder, the post-Newtonian blunder, adds to and reinforces the fruitful implications and repercussions of correcting the post-Cartesian blunder. It leads immediately to a new conception and, kind of, theoretical physics. Physics becomes a modern version of what it once was, *natural philosophy*, a synthesis of physics, metaphysics, methodology, epistemology, and philosophy. It emerges that rigour requires that physics must make explicit, and so criticizable, a problematic, influential but at present implicit metaphysical—that is, untestable—assumption about the nature of the physical universe: it is such that physical laws governing the way physical phenomena occur are (more or less) *unified*. In other words, the universe is *physically comprehensible*.

In order to facilitate criticism of this substantial, highly problematic assumption that influences discovery, interpretation, and acceptance of physical theories, physics needs to adopt a new meta-methodology, *aim-oriented empiricism*, which represents the metaphysical assumption of unity of physics in the form of a hierarchy of assumptions, these assumptions becoming increasingly insubstantial as one goes up the hierarchy, and so increasingly likely to be true, and increasingly such that their truth is required for science, the pursuit of knowledge, or life, to be possible at all. As we go down the hierarchy, assumptions become increasingly substantial and thus increasingly likely to be false. It is here that physics needs to concentrate criticism in an attempt to improve the assumption that is adopted, so that it does better justice to the actual lawful structure of the physical universe. At the two lowest levels in the hierarchy we have accepted fundamental physical theories (today, general relativity and the standard model—the quantum field theory of fundamental particles and the forces between them) and then, at the bottom, accepted experimental and observational results.

Associated with each metaphysical assumption there is a methodological rule which asserts: in order to be acceptable, an assumption, or physical theory, next down in the hierarchy, must (as far as possible) accord with the assumption above it. The metaphysical assumption accepted at the lowest level in the hierarchy must, in addition, be associated with the most empirically successful physical theories. The hope is that, as a result of subjecting the lowest-level metaphysical thesis to sustained criticism, taking these two considerations into account, an improved metaphysical thesis will be adopted which, when made precise, becomes a new, revolutionary, empirically successful, unifying physical theory. The key idea of aim-oriented empiricism is, indeed, that as physics advances, metaphysical assumptions and associated methods improve as well. As our knowledge improves, our knowledge about how to improve knowledge improves too. As we learn more about the universe, we learn more about how to learn about it.

Aim-oriented empiricism has, I argue, a number of fruitful implications. It clarifies and specifies accurately the actual methods employed in physics. It solves the problem of what it means to say that a physical theory is *unified* (a problem that even Einstein did not know how to

solve). It solves a long-standing and absolutely fundamental problem of philosophy: Hume's problem of induction. And it has fruitful implications for physics in that it provides a rational, if fallible, method of discovery for physics, exploited by Einstein in discovering special and general relativity, but still not recognized and understood by physicists today. Einstein exploited the method of discovery successfully but failed to articulate it properly.

Finally, aim-oriented empiricism has vital, fruitful implications, not just for physics, but for the whole of science. For it is not just in physics that basic assumptions, or aims, are problematic. This is the case for the whole of natural science. All scientific disciplines, in their choice of research aims, inevitably make problematic assumptions about (a) what is unknown but discoverable, (b) what it is of value to discover, and (c) how discoveries that are made can be of benefit to social life. These inevitable, influential, often highly problematic assumptions concerning metaphysics, values and social use, inherent in research aims, need to be made explicit, within science, so that they can be subjected to sustained criticism in the hope of improving them. We need to see science as consisting of three domains of discussion: evidence, theory, and *aims*. Subjecting problematic aims of scientific disciplines to sustained critical scrutiny in this way, within the framework of aim-oriented empiricism, enhances the likelihood that science will discover that which is genuinely of value and use to humanity.

Aim-oriented empiricism, when generalized, has even broader, fruitful implications, as becomes apparent now as we consider the consequences of correcting the third monumental blunder, perhaps the most serious blunder of all.

Correcting this third, Enlightenment blunder has, potentially, enormously fruitful implications and repercussions for almost everything. The eighteenth-century Enlightenment, especially the French Enlightenment, made a discovery of profound significance. It can be put quite simply like this. *We can learn from scientific progress how to make social progress towards an enlightened world.* In their lives, the *philosophes*, Voltaire, Diderot, Condorcet and the rest, did what they could to put this idea into practice. They fought dictatorial authority, dogma, and injustice with weapons no more lethal than argument and wit. Whenever possible,

they promoted the virtues of doubt, criticism, and learning from experience. They did what they could to get knowledge and reason taken seriously in public and personal life.

But in developing their profound discovery intellectually, the *philosophes* made three disastrous mistakes. In order to develop their discovery correctly, three things need to be got right.

1. The progress-achieving methods of science need to be correctly specified.
2. These methods need to be correctly generalized, so that they become fruitful, potentially, to any worthwhile human endeavour with problematic aims.
3. These progress-achieving methods, generalized from those of science, need to be got into the fabric of social life, into politics, industry, economics, finance, business, the media, and the law, and above all into the endeavour to make progress towards an enlightened world, so that we may make in social life some of the progress towards enlightenment that science makes towards greater knowledge.

The Enlightenment *philosophes* got all three steps wrong. They got the first step wrong. Misled by the pronouncements of their intellectual hero, Isaac Newton, they thought that *evidence alone* is what matters as far as scientific method is concerned and thus failed to conceive of, adopt, and implement aim-oriented empiricism. Having failed to get the first step right, they naturally failed at the second step. But it is when we come to the third step that the Enlightenment *philosophes* made their most disastrous mistake. In order to develop correctly their magnificent idea of learning from scientific progress how to achieve social progress towards an enlightened world, what they ought to have done is get a generalized version of scientific progress directly into social life itself. In their lives, as I have already indicated, the *philosophes* did indeed attempt to do something like that, and for that they should be forever honoured. But when it came to developing their idea intellectually, they did something quite different. They sought to apply progress-achieving methods of natural science, not to social life directly, but rather to the task of improving *knowledge* of the social world. They set about creating the social sciences:

economics, psychology, sociology, anthropology, political science. This malformed version of the profound Enlightenment idea was then developed throughout the nineteenth century by Auguste Comte, J.S. Mill, Karl Marx, Max Weber, and Emilé Durkheim, and in the late nineteenth and early twentieth centuries, it was built into universities with the creation of departments and disciplines of social science. The outcome is what we still have today, *knowledge-inquiry*, academic inquiry devoted to the acquisition and application of knowledge.

But this damagingly irrational kind of academic enterprise of knowledge-inquiry fails disastrously—as I have already pointed out—to help humanity learn how to solve global problems it has helped to create: the climate crisis, the ecological crisis, lethal modern war, the menace of nuclear weapons, pollution of earth, sea and air, rapid population growth, increasing antibiotic resistance, and degradation of democratic politics brought about in part by the internet.

In order to correct this third, devastating blunder, all three steps of the profound Enlightenment idea of learning from scientific progress how to make social progress towards an enlightened world need to be put properly into practice. This requires that we do the following.

1. We need to characterize the progress-achieving methods of natural science correctly, in terms of aim-oriented empiricism.
2. Aim-oriented empiricism needs to be correctly generalized to form aim-oriented rationality, fruitfully applicable to any worthwhile human endeavour with problematic aims.
3. Aim-oriented rationality needs to be got into the fabric of social life, into all our other social and institutional endeavours besides science—into government, politics, industry, agriculture, business, economics, finance, the law, the media, and personal and social life—so that something of the astonishing success of science in making intellectual progress towards greater knowledge may be got into the endeavour to make social progress towards an enlightened world.

The consequences of correcting the Enlightenment blunder in this way are dramatic and far-reaching. To begin with, social inquiry is transformed. Social inquiry is not social *science*; the disciplines of social inquiry

are not, primarily, devoted to the pursuit of *knowledge* of social phenomena. The primary task of social inquiry—economics, sociology, psychology, anthropology, political science, and the rest—becomes to help humanity get aim-oriented rationality into the fabric of social life—above all, get aim-oriented rationality into powerful and influential institutions, businesses, organizations, and activities that have worthwhile but problematic aims and methods—above all into those that have *harmful* aims and methods.

In other words, as a result of correcting the Enlightenment blunder, and correcting its implications and repercussions, social *science* becomes social *methodology* or social *philosophy*. What philosophy of science is to science (according to aim-oriented empiricism), social inquiry is to social life: that enterprise which helps diverse aspects of social life improve aims and methods as life goes on.

But correcting the Enlightenment blunder leads to far more than a transformation in the nature of social inquiry. It leads, as we shall see, to a transformation in the entire academic enterprise. Almost every department and aspect of knowledge-inquiry is transformed. I have already mentioned that, judged from the standpoint of helping to promote human welfare, knowledge-inquiry violates three of the four most basic rules of reason conceivable. Modify knowledge-inquiry just enough to ensure that these three rules are not violated, ensure that aim-oriented rationality is put into practice throughout, and a new kind of inquiry emerges, wisdom-inquiry as it may be called, designed and devoted to help people tackle problems of living, local and global, rationally and effectively. Wisdom-inquiry actively engages with the social world to help people learn how to resolve conflicts and problems of living in increasingly effective and cooperatively rational ways. The basic aim of inquiry is to seek and promote wisdom, conceived of as the capacity, active endeavour, and perhaps desire to realize what is of value in life for oneself and others. Wisdom in this sense includes knowledge and technological know-how, but much more.

Instead of helping to create global problems and subsequently failing to help solve them, as knowledge-inquiry has done, wisdom-inquiry would do all that it could to help humanity solve global problems that threaten our future, above all the climate and ecological crises. It would

devote itself to helping humanity learn how to make progress towards a good, civilized, wise world.

We urgently need to bring about a revolution in our universities around the world, wherever possible, so that knowledge-inquiry becomes the more intellectually rigorous and far more humanly valuable wisdom-inquiry.

London, UK

Nicholas Maxwell

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## About the Author

**Nicholas Maxwell** has devoted much of his working life to arguing that we need to bring about a revolution in academia so that it comes to seek and promote wisdom and does not just acquire and apply knowledge. He has published 15 books related to this theme. He has also published over 170 articles in scientific and scholarly journals on this theme and on such diverse subjects as scientific method, the rationality of science, the philosophy of the natural and social sciences, the humanities, quantum theory, causation, the mind-body problem, aesthetics, and moral philosophy. For a book about his work, see L. McHenry, ed., *Science and the Pursuit of Wisdom: Studies in the Philosophy of Nicholas Maxwell*. For nearly 30 years Maxwell taught philosophy of science at University College London, where he is now Emeritus Reader. In 2003 he founded Friends of Wisdom, an international group of academics and educationalists concerned that universities should seek wisdom and not just acquire knowledge. He has appeared on BBC Radio 4 *Start the Week* and on Canadian Broadcasting Corporation's *Ideas* programme. He has lectured at universities and conferences all over the UK, Europe, the USA, Canada, and Taiwan.

Previous Books by Nicholas Maxwell

*What's Wrong with Science?*  
*From Knowledge to Wisdom*

*The Comprehensibility of the Universe*

*The Human World in the Physical Universe*

*Is Science Neurotic?*

*Cutting God in Half—And Putting the Pieces Together Again*

*How Universities Can Help Create a Wiser World*

*Global Philosophy*

*Understanding Scientific Progress*

*In Praise of Natural Philosophy*

*Karl Popper, Science and Enlightenment*

*Science and Enlightenment: Two Great Problems of Learning*

*The Metaphysics of Science and Aim-Oriented Empiricism*

*Our Fundamental Problem: A Revolutionary Approach to Philosophy*

*The World Crisis—And What to Do About It*

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*Wisdom in the University*

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# 1

## Bad Philosophy, the Climate Crisis, and Other Global Problems

### Introduction

Bad philosophy is responsible for the climate crisis.

And not just the climate crisis. Bad philosophy is also responsible for most of our other global problems too: the progressive destruction of natural habitats, catastrophic loss of wild life, and impending mass extinction of species; the lethal character of modern war; existence of totalitarian states; the menace of nuclear weapons; vast differences in wealth between the wealthiest and poorest countries; rapid growth in the human population; pollution of earth, sea and air; the growth of antibiotic resistance; the degradation of democracy brought about in part by social media and the internet.

The idea that bad philosophy is, in any way, to any extent, even in part responsible just for climate crisis is, on the face of it, so absurd, so ludicrous, that we hardly need bother with the rest of it, all the other global problems it is supposed to be responsible for. Let us, to begin with at least, concentrate on just this first preposterous claim: bad philosophy is responsible for the climate crisis.

How on earth can something as esoteric, effete and impotent as mere *philosophy*—however BAD it may be—have any impact whatsoever on the real world, let alone an impact so potent that it is actually responsible for the genesis of the climate crisis—a crisis that threatens the future of humanity?

Let me at once remark, in an attempt to demolish, or at least diminish, the apparent absolute absurdity of what I have to say, that it is not philosophy as such that has these dire consequences, but rather a bad philosophy of inquiry *built into our universities, our institutions of learning, that has the effect of sabotaging their capacity to help humanity learn how to solve the climate crisis*—and the other global problems that threaten our future.

“Philosophy” is being used here in the sense that is alluded to when one speaks of one’s “philosophy of theatre”, or “philosophy of business”. A philosophy of an enterprise or institution, in this sense, is a view about what the aims and methods of that enterprise or institution are or ought to be. It is just that sense of “philosophy” that philosophers employ when they refer to a “philosophy of science”: a view as to what the aims and methods of science are or ought to be. A *bad* philosophy of some enterprise is a view that attributes a bad aim to that enterprise, bad methods, or both.

What, then, is this bad philosophy of inquiry which, built into universities around the world, sabotages their capacity to help us learn how to solve the climate crisis—and other global problems that beset us? And what is so bad about it?

It is the view that a basic aim of the university is to help promote human welfare, but that the proper way for the university to set about achieving this aim is, in the first instance, to acquire specialized knowledge and technological know-how. First, knowledge is to be acquired; once acquired, it can be applied to solve social problems, and thus help promote human welfare. I call this philosophy of inquiry, and the kind of inquiry that results when it is put into practice, *knowledge-inquiry*.

There is an argument in support of knowledge-inquiry, that is sometimes produced to defend the doctrine. It goes like this. In order to help promote human welfare, it is vital that academia acquires authentic, reliable, objective, factual knowledge, insofar as this can be acquired. That in

turn means—according to knowledge-inquiry—that everything that might subvert or corrupt the attainment of such knowledge must be excluded from the intellectual domain of inquiry: values, desires and feelings, human aspirations, policies, political programmes and philosophies. This in turn means that problems of living (distress and deprivation suffered by people in life), and possible solutions to such problems (actions, policies, political programmes and so on) cannot be properly discussed within the intellectual domain of inquiry, for to do so would involve appealing to values, desires, feelings, and human aspirations, and that would threaten to subvert the objectivity and integrity of the pursuit of knowledge. In short, in order to be genuinely of human value, inquiry must refrain from discussing real-life problems and their potential solutions—although factual statements about what people hold to be problems and their potential solution can of course be discussed.

At the core of knowledge-inquiry there is a philosophy of science I call *standard empiricism*; this embodies an even stricter system of censorship. According to standard empiricism, the basic aim of science is factual truth, and the basic method is to assess impartially claims to knowledge, laws and theories, in terms of *evidence*. Choice of theory may be biased for a time in the direction of which theory is the simplest, most unified or explanatory, but in the end evidence alone must decide what theory is accepted and rejected. In order to enter into science, an idea must be, not just purely factual; it must at least be empirically testable (verifiable or falsifiable). And to become scientific knowledge it must be sufficiently well corroborated empirically.<sup>1</sup> A basic tenet of standard empiricism is that *in science, no factual thesis can be accepted as a permanent item of scientific knowledge independently of evidence, let alone in violation of evidence*.

Scientists do not teach standard empiricism. They hardly ever advocate it, or discuss it. It is just implicit in much of what scientists do teach and publish. Nevertheless, scientists do sometimes express their conviction that a view that corresponds to standard empiricism is correct. Thus Planck once remarked “Experiments are the only means of knowledge at our disposal. The rest is poetry, imagination”.<sup>2</sup> Or, as Poincaré put it “Experiment is the sole source of truth. It alone can teach us something new; it alone can give us certainty.”<sup>3</sup> Millikan expressed it like this: “the distinguishing feature of modern scientific thought lies in the fact that it

begins by discarding all a priori conceptions about the nature of reality—or about the ultimate nature of the universe—... and takes instead, as its starting point, well-authenticated, carefully tested experimental facts.... In a word, modern science is essentially empirical”.<sup>4</sup> Popper put it slightly more succinctly like this: “in science, only observation and experiment may decide upon the acceptance and rejection of scientific statements, including laws and theories”.<sup>5</sup> More recently, the President of the Royal Society in 2016 put it like this: “Science is simply the systematic accumulation of knowledge based on evidence”.<sup>6</sup>

Knowledge-inquiry, like standard empiricism, is rarely expounded and defended explicitly in an academic context. It is not explicitly taught; it is just implicit in everything that is taught. Not everything that goes on in the university today conforms precisely to the edicts of knowledge-inquiry, and not all academics would agree that knowledge-inquiry is the proper philosophy for the academic enterprise to put into practice. It was once upon a time—in the 1950s perhaps—rather more dominant than it is today. Nevertheless, knowledge-inquiry still dominates academia. It exercises a profound and far-reaching influence over the whole structure and character of the university, and much of the academic activities of academics. It influences what is to count as a contribution to academic thought, what is to count as progress in a branch of inquiry, what is accepted for publication, criteria for publication, academic status and prestige, academic careers and prizes, the aims and character of academic disciplines—natural and technological science, mathematics, social inquiry and the humanities—how these branches of academic inquiry are related to one another—education and research in all fields, and finally the way the university is related to the rest of the social world.

Again, the central component of knowledge-inquiry of standard empiricism is, in one form or another, taken for granted by most scientists and philosophers of science as a kind of implicit dogma. It exercises a profound influence over the conduct of science. It influences such things as science publications, criteria for acceptance of scientific results, scientific careers and prizes, science education, communication of science to the public.

Despite all this, knowledge-inquiry is profoundly and damagingly irrational. It violates *three* of the four most basic rules of reason conceivable

in a wholesale, structural fashion. And standard empiricism is untenable. It is not, and cannot be, put into scientific practice, despite the widespread belief among scientists that it is.

This disastrous irrationality of knowledge-inquiry, and untenability of standard empiricism, is no mere formal matter; it has devastating consequences for the capacity of universities to help humanity solve global problems and make progress towards a good, civilized world. As a result of proceeding within the straightjacket of the irrational knowledge-inquiry, universities are prohibited from doing what they most need to do to help solve global problems, namely engage actively with the public *to promote action designed to solve global problems*. Universities cannot take their basic task to be public education about what our problems are, and what we need to do about them. They cannot even give priority within academia to the vital tasks of articulating problems of living, local and global, and proposing and critically assessing possible solutions—possible and actual *actions*, policies, political programmes, ways of living. As I have said in a recently published article “It is hardly too much to say that Extinction Rebellion and Greta Thunberg have done more in 1 year to bring the climate crisis to public attention than all the universities of the world have done in 60 years—ever since we first really knew that global warming would occur.”<sup>7</sup> As a result of conforming to the strictures of knowledge-inquiry, universities betray reason, and as a result betray humanity.<sup>8</sup>

In short, a bad philosophy of inquiry, built into the structure of universities, has prevented them from doing what they most need to do to help humanity learn, first, how to stop the climate and ecological crises, and other global problems, from developing in the first place, and then, second, how to solve these global problems once they have become an all-too apparent, horrific reality. Bad philosophy is thus responsible for the genesis of these global problems, and our failure to solve them once they have become a reality.<sup>9</sup>

We urgently need to bring about a revolution in academic inquiry and universities that corrects the gross, structural rationality defects of standard empiricism and knowledge-inquiry, thus creating a more intellectually rigorous kind of inquiry able, as a result, to offer far more effective help to humanity in the great task of solving global problems and making

real progress towards a good, civilized world. The intellectual and institutional revolution we require would affect, to a greater or lesser extent, every department and aspect of the university, every discipline and feature. The philosophy and kind of academic inquiry that would emerge from this revolution I shall call *wisdom-inquiry*; and the philosophy and kind of natural science I shall call *aim-oriented empiricism*.

We urgently need to replace bad philosophy with good philosophy!

## Rationality

What should we mean by “reason” in the present context? Whatever else it may be, academia is an enterprise that seeks to solve problems, helps us to realize worthwhile, problematic aims. The conception of reason we require appeals to the idea that there is some no doubt rather ill-defined set of rules, methods, or strategies which, other things being equal, give us our best chances of solving our problems, realizing desirable aims, whatever we may be doing, if we put these rules into practice. (All problem-solving is aim-pursuing and, in a certain sense, all aim-pursuing is problem-solving—it’s just that our brilliant brains enable us to solve intricate problems associated with realizing many aims without us even noticing.)

The rules of reason don’t guarantee success; they don’t specify precisely what is to be done, but rather suggest the kind of things that should be attempted. They are meta-rules, in that they presume one has already solved a multitude of problems employing a multitude of methods, and the rules of reason indicate how these already solved problems can be marshalled to solve new problems.<sup>10</sup>

There are two arguments to establish that knowledge-inquiry is profoundly and damagingly irrational; these arguments reveal what changes need to be made, and why, to put right current rationality defects, and thus develop the more intellectually rigorous and humanly beneficial kind of academic enterprise of wisdom-inquiry. The first appeals to rules of rational problem-solving, the second to rules of rational aim pursuing, the second presupposing and building upon the results of the first. I take these two arguments in turn.

## From Knowledge-Inquiry to Wisdom-Inquiry: Problem-Solving Rationality

Four absolutely basic, wholly uncontroversial<sup>11</sup> rules of rational problem-solving are:

1. Articulate and seek to improve the articulation of the basic problem(s) to be solved.
2. Propose and critically assess alternative possible solutions.<sup>12</sup>
3. When necessary, break up the basic problem to be solved into a number of specialized problems—preliminary, simpler, analogous, subordinate problems—(to be tackled in accordance with rules (1) and (2)), in an attempt to work gradually toward a solution to the basic problem to be solved.
4. Inter-connect attempts to solve the basic problem and specialized problems, so that basic problem-solving may guide, and be guided by, specialized problem-solving.<sup>13</sup>

Any problem-solving endeavour which persistently violates one or other of these rules will be seriously irrational and will have its capacity to solve problems seriously degraded as a result. Academic inquiry as it exists today in universities around the world, as a result of implementing knowledge-inquiry, violates *three* of these four basic rules of reason, as I have already remarked. It really is as bad as that.

Granted that academia has, as its basic aim, to help promote human welfare,<sup>14</sup> the problems that academia is fundamentally concerned to help solve are problems of living, problems people encounter in their lives that are solved by what people do, or refrain from doing: problems of poverty, exploitation, suffering, unemployment, illness, misery, loneliness, despair.<sup>15</sup> Knowledge and technology may be required to solve some of these problems, as they are in the case of such things as agriculture and medicine, but it is always what knowledge and technology enable us to do, or refrain from doing, that solves the problem of living, not the knowledge or technology in itself. Problems of living are solved by *what we do* or refrain from doing.

There is an additional point about the nature of the problems that academia needs to try to help solve, at the most basic level. In order to achieve what is of value in life more successfully than we do at present, we need to discover how to resolve conflicts and problems of living in more *cooperatively rational* ways than we do at present. There is a spectrum of ways in which conflicts can be resolved, from murder or all-out war at the violent end of the spectrum, via enslavement, threat of murder or war, threats of a less extreme kind, manipulation, bargaining, voting, to cooperative rationality at the other end of the spectrum, those involved seeking, by rational means, to arrive at that course of action which does the best justice to the interests of all those involved. A basic task for a kind of academic inquiry that seeks to help promote human welfare must be to discover how the resolution of conflicts and global problems can be moved away from the violent end of the spectrum toward the cooperatively rational end.<sup>16</sup>

Taking these points into account, we can declare that academic inquiry, if it is to promote human welfare in such a way as to implement the above four rules of reason, must:-

1. Articulate, and seek to improve the articulation of, personal, social, and global problems of living that need to be solved if the quality of human life is to be enhanced (including the global problems indicated above).
2. Propose and critically assess alternative possible solutions—alternative possible *actions, policies, political programmes, legislative proposals, ideologies, philosophies of life*, especially those that promote enhanced cooperative rationality.
3. Break up the basic problems of living into subordinate, specialized problems—in particular, specialized problems of knowledge and technology.
4. Inter-connect basic and specialized problem-solving.

Academic inquiry today, still massively influenced by knowledge-inquiry, puts rule (3) into practice splendidly. Academia is composed of a maze of ever more specialized sub-divisions of specialized disciplines. But disastrously, academia fails to implement rules (1) and (2). Universities

do not take, as their primary task, to promote cooperatively rational tackling of problems of living in diverse contexts of the social world. Devoted to the pursuit of specialized knowledge, universities do not engage in public education about what our problems are, and what we need to do to solve them, as their primary task. They do not even imagine it might be their primary job to perform such a task. There is, of course, some discussion of problems of living, including global problems, within academia. It proceeds in such disciplines as peace studies, economics, politics, international studies, climate science, and departments of law. But such discussion is not put at the heart of academia; it is not given the prominence and intellectual status it needs if it is to promote public debate, and if it is both to influence, as well as be influenced by, more specialized research that goes on in more specialized disciplines, from mathematics and physics to technological research and studies in higher education, in accordance with rule (4). Discussion of problems of living, and what needs to be done to solve them, does not take place within academia in an intellectually fundamental way, and is not promoted to take place in the public domain; instead, it is pushed to the periphery of academia, and it is that which ensures that academia violates rules (1) and (2). Having violated these two rules, academia cannot put rule (4) into practice either.

Three of the four most basic rules of rational problem-solving are, as I have said, violated, in a wholesale, structural way by academic inquiry as it mostly exists today. And that is a direct consequence of the implementation of knowledge-inquiry. The intellectual standards of knowledge-inquiry demand that (1) discussion of problems of living, and (2) discussion of actions required to solve them, are excluded from the intellectual domain of inquiry, because (1) and (2) do not contribute to the acquisition of knowledge. Items (1) and (2) involve raising political and value issues which knowledge-inquiry holds to be inimical to the pursuit of knowledge, and thus in need of being excluded from the intellectual domain of inquiry. Insofar as some discussion of problems of living does proceed within academic inquiry, it has to struggle against the influential prohibition of such discussion by the dominant creed of knowledge-inquiry.<sup>17</sup>

This gross, structural irrationality of academic inquiry is no mere formal matter. It has profoundly damaging consequences. It means academia fails to do what it most needs to do in order to help humanity resolve conflicts and problems of living in increasingly cooperatively rational ways. Failure to put rules (1) and (2) into practice means that academia fails to give priority to what it most needs to do to promote global problem-solving policies and actions in the social world. Not only does academia fail itself to give intellectual priority to the tasks of getting clearer about what our problems are and what we need to do about them; it fails too, of course, to engage with the social world to promote these tasks in the diverse contexts of politics, industry, the public, the media, international relations, development, economics, the law, finance, agriculture, the military. And, as a result of failing to put (1) and (2) into practice, academia fails to put rule (4) into practice as well; specialized academic problem-solving is pursued in a way that is unrelated to sustained thinking about our most urgent global problems, and thus may develop in ways unrelated to human need.

Wisdom-inquiry—or at least a preliminary version of it—arises when the rationality defects of knowledge-inquiry are put right, and all four of the most basic rules of rational problem-solving are put into academic practice. Let us suppose this has been done. Academic inquiry in its entire structure implements the above four rules in seeking to help solve problems of living in the social world, local and global—problems of climate change, biodiversity loss, war, political enslavement, pollution of earth, sea and air, and so on. The ultimate objective, in seeking to promote rational resolution of these problems is to make social progress to as good, civilized, enlightened a world as possible. What would be the most striking features of academic inquiry conducted in this way? How would it—wisdom-inquiry (first version) differ from knowledge-inquiry?

A basic difference of course is that problems of living are intellectually fundamental, not problems of knowledge. The fundamental problems that wisdom-inquiry seeks to solve, or help solve, are problems we encounter as we live and strive to achieve what is of value to us—and we may hope to others—problems that are solved by what we do, or refrain from doing.<sup>18</sup>

What branches of the academic enterprise have responsibility for the intellectually fundamental tasks of (1) articulating our diverse problems of living, including global problems, and (2) proposing and critically assessing possible solutions—possible actions, individual, social, political—from the standpoint of their capacity, when put into practice, to resolve conflicts and problems of living in increasingly cooperatively rational ways? It all depends, of course, on the nature of the problems involved. If they are economic problems that people encounter, then it is the academic discipline of economics that is relevant. But note, this is economics within wisdom-inquiry. Economics is not a science; its basic task is not to acquire knowledge about economic phenomena, as all knowledge-inquiry textbooks declare.

Its basic task is to put the two most basic rules of rational solving into practice, namely (1) articulate economic problems of living people encounter in their lives, and (2) propose and critically assess possible solutions, possible actions, economic policies, strategies, plans. The fundamental task of wisdom-inquiry economics might be said to be the sustainable creation and just distribution of wealth—basically, problems of action, although knowledge may be involved in a subsidiary way. Better still, one might say that the fundamental task of wisdom-inquiry economics is to solve economic problems of living—problems of action—in such a way that everyone involved realizes what is of real value in life in as good a way as possible, or feasible. Economics is not an end in itself; it serves other ends, all the good things in life.

Economics since Adam Smith up to today has been quite fundamentally misconceived. Almost all the experts get it wrong. It has been pursued as a science, or at least as a branch of knowledge about economic phenomena.<sup>19</sup> That conforms of course to the basic idea of knowledge-inquiry. First acquire knowledge; then apply it to help solve real-life economic problems—what I am calling problems of living. But all the obvious objections apply to this prescription. We can scarcely know what knowledge it is relevant for us to try to acquire if we don't have some preliminary idea as to the problem of living we are trying to solve. It may be very difficult to get the problem of living we want or need to solve properly into perspective; hence the importance of rule (1) of reason: articulate and try to improve the articulation of the problem you seek to