

## CHAPTER SEVEN

### **The Urgent Need for an Academic Revolution: The Rational Pursuit of Wisdom**

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#### **Introduction**

We are in a state of impending crisis. And the fault lies in part with academia. For two centuries or so, academia has been devoted to the pursuit of knowledge and technological know-how. This has enormously increased our power to act which has, in turn, brought us both all the great benefits of the modern world *and* the crises we now face. Modern science and technology have made possible modern industry and agriculture, the explosive growth of the world's population, global warming, modern armaments and the lethal character of modern warfare, destruction of natural habitats and rapid extinction of species, immense inequalities of wealth and power across the globe, pollution of earth, sea and air, even the AIDS epidemic (AIDS being spread by modern travel). All these global problems, involving preventable deaths of millions, have arisen because some of us have acquired unprecedented powers to act without acquiring the capacity to act *wisely*. We urgently need to bring about a revolution in universities so that the basic intellectual aim becomes, not knowledge merely, but rather to help humanity acquire the capacity to resolve conflicts and problems of living in more cooperatively rational ways. The revolution we need would affect every branch and aspect of academic inquiry. The basic intellectual task of academia would be to articulate our problems of living (personal, social and global) and propose and critically assess possible solutions, possible *actions*. This would be the task of social inquiry and the humanities. Tackling problems of knowledge would be secondary. Social inquiry would be at the heart of

the academic enterprise, intellectually more fundamental than natural science. On a rather more long-term basis, social inquiry would be concerned to help humanity build cooperatively rational methods of problem-solving into the fabric of social and political life, so that we may gradually acquire the capacity to resolve our conflicts and problems of living in more cooperatively rational ways. Natural science would change to include three domains of discussion: evidence, theory, and aims – the latter including discussion of metaphysics, values and politics. Academia would actively seek to educate the public by means of discussion and debate. These changes all come from demanding that academia cure its current damaging structural irrationality, so that reason – the authentic article – may be devoted to promoting human welfare.

That, in outline, is my thesis and argument. In order to develop my case in a little more detail, let me begin with a slightly more detailed discussion of our current global problems.

### **Our Grave Global Problems**

There is, to begin with, the problem of the sustained and profound injustice of immense differences of wealth across the globe, the industrially advanced first world of North America, Europe and elsewhere experiencing unprecedented wealth while something like a third of all people alive today, in Africa, south America, Asia and elsewhere, live in conditions of poverty in the developing world, hungry, unemployed, without proper housing, health care, education, or even access to safe water. UNICEF estimates that over 9 million children die every year from preventable causes – some 25,000 every day. There is the problem of the lethal character of modern warfare. Whereas something like 12 million people were killed in wars in the 19<sup>th</sup> century, over 100 million died in wars in the 20<sup>th</sup> century – and we have not done very well in the 21<sup>st</sup> century so far. There is the

arms trade, the massive stockpiling of armaments, even by poor countries, and the ever-present threat of their use by terrorists or in war, whether the arms be conventional, chemical, biological or nuclear. And not only is there the threat of terrorism: even more serious, perhaps, there are the dire consequences of our appalling responses to terrorism.<sup>1</sup> There is the problem of the progressive destruction of tropical rain forests and other natural habitats, with its concomitant devastating extinction of species. There is the long-standing problem of the rapid growth of the world's population, especially pronounced in the poorest parts of the world, and adversely affecting efforts at development. If current trends continue there will be over nine and a half billion people in the world by the middle of the century. There is the horror of the AIDS epidemic, again far more terrible in the poorest parts of the world, devastating millions of lives, destroying families, and crippling economies.

And over all this hangs the menace of global warming. We have known about global warming for a very long time. John Tyndall discovered that carbon dioxide is a greenhouse gas as long ago as 1859, and Svante Arrhenius realised in 1896 that we would cause global warming. The first person really to discover that we are causing global warming was Guy Callendar, who gave a lecture to the Meteorological Society in London on the subject in 1938. He was not believed – and of course, 1938 was not the best time to make the announcement! Any lingering doubts should have been removed, however when, in the late 1950s, Charles Keeling, in Hawaii, began to make extremely accurate measurements of the increase in carbon dioxide in the atmosphere.<sup>2</sup> Nearly half a century later, we are just beginning to realise how serious the problem is. We have hardly begun to do anything about it. Some experts think it is already too late. If we carry on as we are, vast tracts of the earth's surface will become uninhabitable. Even if we cut back dramatically on our CO<sub>2</sub> emissions globally overnight, global warming

will still occur. And there are dreadful dangers. Ice at the poles and in glaciers is melting at an alarming rate. As the polar ice melts, less sunlight is reflected back into space, which further contributes to global warming. And there are a number of other such ‘tipping points’. Vast quantities of methane are trapped in permanently frozen ground in Canada and Russia, and under the sea. If global warming melts this ground, and the methane is released from the earth and sea, as is already happening to some extent, this will further accelerate warming, as methane is a very much stronger greenhouse gas than carbon dioxide. Global warming might turn tropical rain forests, already under threat, into deserts: the destruction of trees and other vegetation that this would involve would further contribute to carbon dioxide in the atmosphere, and to global warming. Even if we avoid the worst, nevertheless millions of people may die as a result of drought, hurricanes, floods, and rising tides.

### **The Urgent Need for an Academic Revolution.**

What can we do to tackle these immense global problems more effectively and humanely than we are doing at present? There are endlessly many different things that need to be done, some of which are being done. But I want to concentrate on just one crucial institution, rarely mentioned in the present context, which nevertheless has a crucial role to play – namely academia.

Academia – universities and schools – ought to be playing a vital role in helping us discover what we need to do to tackle our global problems, and how we can motivate ourselves to do what we need to do. Sustained exploration of what our global problems are, and what we need to do in order to help resolve them, ought to be at the heart of the academic enterprise. But this is not the case. Instead, academia has, by and large, concentrated on the pursuit of knowledge and technological know-how. And in some respects this has just made matters worse. Modern science

and technological know-how have made possible all our current global problems, so characteristic of our age. Indeed, in a perfectly respectable sense of “cause”, science and technology have *caused* our global problems (Maxwell, 2000).

Natural science has been extraordinarily successful in improving knowledge. This has had all sorts immensely beneficial results, for medicine, agriculture, industry, transport, communications, etc., etc. – as well as having the intrinsic value of enormously enhancing our knowledge and understanding of the universe around us. The modern world is inconceivable without modern science. But knowledge and technological know-how increase our capacity to *act* which, in addition to having beneficial consequences, can also have harmful ones, whether intended, as in war or terrorism, or unintended as – at least initially – in the case of environmental degradation. Scientific knowledge and technological know-how make modern industry, agriculture, medicine and hygiene possible, which in turn lead to population growth, destruction of natural habitats and extinction of species, pollution of the earth, sea and air, global warming, and even the AIDS crisis – AIDS being spread by modern travel. And modern technology has massively increased the lethal character of modern war, and terrorism. Martin Rees, the current President of the Royal Society, thinks the dangers are so great this may even be “our final century” – the title of a book of his (Rees, 2003).

What has gone wrong? Some blame science for our troubles – but that rather misses the point. As I shall argue in a moment, we need to *learn* from the immense success of science, rather than just blame it for our troubles. What has gone wrong is that academic inquiry as a whole has concentrated on acquiring knowledge *dissociated from a more fundamental concern with helping us learn how to tackle our problems of living in cooperatively rational ways.*

Instead of giving priority to problems of living, academia has concentrated on solving problems of knowledge and this, entirely predictably, has resulted in our current global problems. Judged from the really quite orthodox standpoint of helping to promote human welfare, academic inquiry devoted to acquiring knowledge is grossly and damagingly irrational – and this is, in the long term, the source of our troubles. The crisis of our times – the crisis behind all the others – is science without wisdom. Far from trying to ameliorate this crisis, modern science and academia in important respects have the effect of intensifying it.

Here, then, in outline, is the nub of my thesis and argument. We need to distinguish two conceptions and kinds of inquiry which I shall call *knowledge-inquiry* and *wisdom-inquiry*. Knowledge-inquiry is, by and large, what we have at present. It is, however, damagingly and profoundly irrational, in a wholesale, structural way. Wisdom-inquiry results when knowledge-inquiry is modified just sufficiently to become a kind of inquiry rationally devoted to helping promote human welfare by intellectual and educational means. Two arguments establish that knowledge-inquiry is irrational, one that appeals to *problem-solving rationality*, and a second that appeals to *aim-oriented rationality*. The outcome of these arguments is that we urgently need to bring about a revolution in academia so that the basic task becomes to help humanity learn how to create a better world.

The argument, as just stated, simplifies matters somewhat, as I shall indicate as we proceed. Academia today does not, in every respect, conform to the edicts of knowledge-inquiry. Many universities are probably, in academic practice, an admixture of the two conceptions of inquiry. Furthermore, as I shall indicate, there are hints that, in recent years, the influence of wisdom-inquiry is on the increase. The revolution may already be underway! Nevertheless, at the

time of writing, knowledge-inquiry is still the dominant view in academic practice.<sup>3</sup>

### **Knowledge-Inquiry: Exposition**

Knowledge-inquiry demands that a sharp split be made between the social or humanitarian aims of inquiry and the *intellectual* aim. The intellectual aim is to acquire knowledge of truth, nothing being presupposed about the truth. Only those considerations may enter into the intellectual domain of inquiry relevant to the determination of truth – claims to knowledge, results of observation and experiment, arguments designed to establish truth or falsity. Feelings and desires, values, ideals, political and religious views, expressions of hopes and fears, cries of pain, articulation of problems of living: all these must be ruthlessly excluded from the intellectual domain of inquiry as having no relevance to the pursuit of knowledge – although of course inquiry can seek to develop factual knowledge about these things, within psychology, sociology or anthropology. Within natural science, an even more severe censorship system operates: an idea, in order to enter into the intellectual domain of science, must be an empirically testable claim to factual knowledge.

The basic idea of knowledge-inquiry, then, is this. First, knowledge is to be acquired; then it can be applied to help solve social problems. For this to work, authentic objective knowledge must be acquired. Almost paradoxically, human values and aspirations must be excluded from the intellectual domain of inquiry so that genuine factual knowledge is acquired and inquiry can be of genuine human value, and can be capable of helping us realise our human aspirations.

At the core of knowledge-inquiry there is a conception of science which may be called *standard empiricism*: the basic intellectual aim of science is truth, and the basic method is to assess claims to knowledge with respect to evidence, *nothing*

*being assumed permanently about the universe independent of evidence.*<sup>4</sup>

Knowledge-inquiry exercises a profound influence over the whole character and structure of academia – in influencing such things as what is to count as a contribution to thought, criteria for publication, factors influencing promotions, prizes and academic status, content of thought and education.<sup>5</sup> Not everything in academia conforms to knowledge-inquiry. It is qualified by the influence of the Romantic movement, by what Isaiah Berlin (1980, pp. 1-24) called the counter-Enlightenment, and by recent fads such as postmodernism, relativism and social constructivism, all of which, in various ways, cast doubt on the feasibility or value of science, knowledge and rationality.<sup>6</sup> And, as I have mentioned, a few recent, scattered hints of movement toward wisdom-inquiry can perhaps be discerned. Knowledge-inquiry is, however, the only widely understood current ideal of rational inquiry, and its influence, by and large, still prevails.

It is vital to appreciate that the problem with knowledge-inquiry is not that it gives too much emphasis to rationality but, quite the contrary, that it is a characteristic form of *irrationality* masquerading as rationality. Knowledge-inquiry violates three of the four most elementary rules of reason one can think of.

## **From Knowledge-Inquiry to Wisdom-Inquiry:**

### **First Argument**

I now spell out my first argument in support of my contention that knowledge-inquiry, despite being the predominant influence over academia today, is nevertheless profoundly and damagingly irrational in a wholesale, structural way, there being, for both intellectual and humanitarian reasons, an urgent need to put wisdom-inquiry into academic practice instead.



But first, what do I mean by “rationality”? As I use the term, rationality appeals to the idea that there is some no doubt rather ill-defined set of rules, methods or strategies which, if implemented, give us, other things being equal, our best chances of solving our problems, achieving our aims. The rules of reason don’t guarantee success, don’t prescribe in detail what we must do or think, and cannot be mechanically implemented. They require us, when relevant, to attend to our feelings, desires, intuition and imagination. They are meta-rules, in that they presuppose that we can already put many specific rules into practice in acting successfully in the world, and tell us how to marshal what we can already do to give ourselves the best chances of solving new problems, realizing new aims.

Four basic rules of rational problem-solving are:

- (1) Articulate, and try to improve the articulation of, the problem to be solved.
- (2) Propose and critically assess possible solutions.
- (3) If the problem to be solved is especially difficult, specialize. That is, break the problem up into subordinate problems, and formulate preliminary, easier-to-solve versions of the problem, in an attempt to work gradually to the solution to the basic problem to be solved.
- (4) If (3) is implemented, ensure that basic and specialized problem-solving interact with one another, so that each influences the other.

There are now two crucial preliminary points that I must make.

(a) Granted we seek to realise what is of value in life, the *problems* we need to solve are, fundamentally, problems of *living*, of *action*, not problems of *knowledge*. It is what we do, or refrain from doing, and not what we know, that enables us to realise what is of value (except when what we

seek of value is knowledge and understanding themselves). Even when new knowledge is needed, in medicine say, or agriculture, it is always what this knowledge enables us to do that enables us to realise what is of value, not the knowledge or technological know-how as such.

(b) Furthermore, in order to realise what is of value in life more successfully than we do at present, we need to discover how to tackle our problems of living in more *cooperative ways* than we do at present.

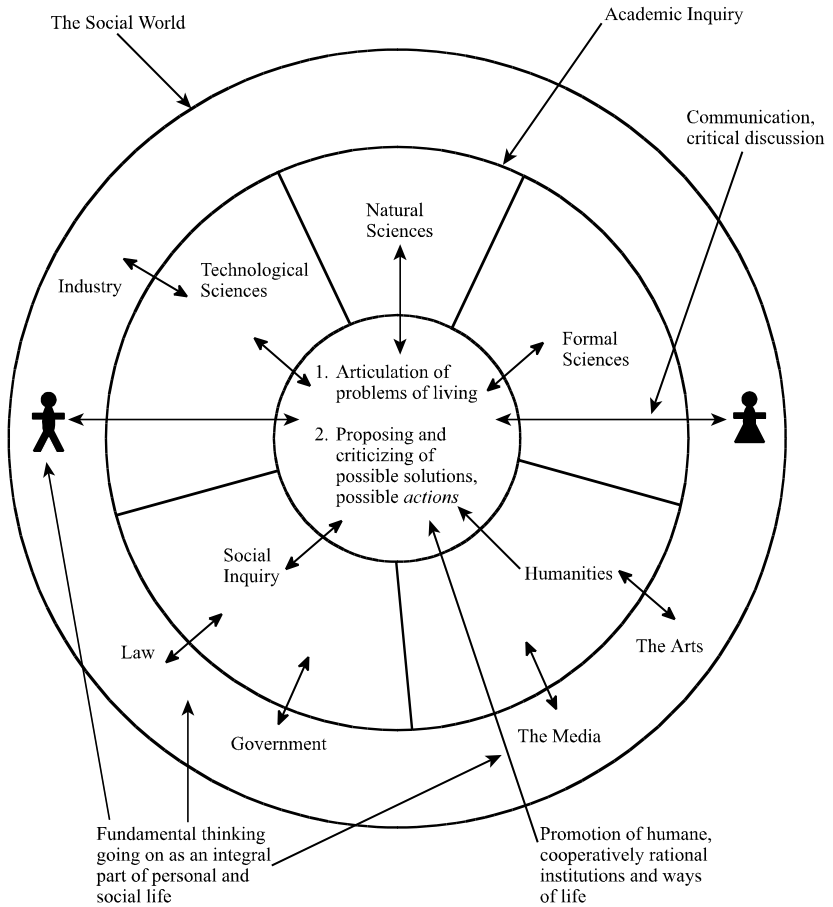
It follows from (1) to (4) and (a) and (b) that, if academic inquiry is to help promote human welfare *rationally*, then it needs to give absolute intellectual priority to the tasks of (1) articulating, and improving the articulation of, our problems of living, individual, social and global, and (2) proposing and critically assessing possible (increasingly cooperative) solutions – possible *actions, policies, political programmes, philosophies of life*. This would be the task of social inquiry and the humanities. Social inquiry would be intellectually more fundamental than natural science, but would not itself be *science*, or concerned, in the first instance, to acquire knowledge. Academia would also need to tackle a vast array of specialized problems of knowledge and technological know-how, in accordance with rule (3), but would at the same time have to interconnect fundamental and specialized problem-solving, in accordance with rule (4).

Knowledge-inquiry puts rule (3) splendidly into effect in tackling a maze specialized problems, of all kinds. Disastrously, it violates rules (1), (2) and (4). What most needs to be done, from the standpoint of helping to promote human welfare, namely (1) articulate problems of living and (2) propose and critically assess possible solutions, possible *actions*, is excluded from knowledge-inquiry altogether. The failure to implement rules (1) and (2) means rule (4) cannot be implemented either.

In short, knowledge-inquiry violates *three* of the four most elementary rules of rational problem solving that one can think of.

It is this massive structural irrationality of knowledge-inquiry which sabotages its capacity to help humanity learn how to create a better world. What inquiry most needs to do, namely (1) articulate problems of living and (2) propose and critically assess possible solutions, cannot be done at all, if the edicts of knowledge-inquiry are observed. In addition, this means the pursuit of knowledge is dissociated from such discussion, so that scientific research fails to respond adequately to human need and values. It is worth noting that something like 30% of research and development funds in the UK is devoted to the military – 50 % in the USA (Langley, 2005; Smith, 2003).

Wisdom-inquiry, first version, is what emerges when knowledge-inquiry is modified just sufficiently to ensure that the four rules of reason are put into academic practice in a wholesale, structural fashion. The primary change that needs to be made is to ensure that academic inquiry implements rules (1) and (2). It becomes the fundamental task of social inquiry and the humanities (1) to articulate, and seek to improve the articulation of, our problems of living, and (2) to propose and critically assess possible solutions, from the standpoint of their practicality and desirability. In particular, social inquiry has the task of discovering how conflicts may be resolved in less violent, more cooperatively rational ways. It also has the task of promoting such tackling of problems of living in the social world beyond academe. Social inquiry is, thus, not primarily social *science* nor, primarily, concerned to acquire knowledge of the social world; its primary task is to promote more cooperatively rational tackling of problems of living in the social world. Pursued in this way, social inquiry is intellectually more fundamental than the natural and technological sciences, which tackle subordinate



**Diagram 1:**  
**Wisdom-Inquiry Implementing Problem-Solving Rationality**

problems of knowledge, understanding and technology, in accordance with rule (3). In diagram 1, implementation of rule (3) is represented by the specialized problem solving of the natural, technological and formal sciences, and more specialized aspects of social inquiry and the humanities. Rule (4) is represented by the two-way arrows linking

fundamental and specialized problem solving, each influencing the other.

One can go further. According to this view, the thinking that we engage in as we live, in seeking to realise what is of value to us, is intellectually more fundamental than the whole of academic inquiry (which has, as its basic purpose, to help cooperatively rational thinking and problem solving in life to flourish). Academic thought emerges as a kind of specialization of personal and social thinking in life, the result of implementing rule (3); this means there needs to be a two-way interplay of ideas, arguments and experiences between the social world and academia, in accordance with rule (4). This is represented, in diagram 1, by the two-way arrows linking academic inquiry and the social world.

The natural and technological sciences need to recognize three domains of discussion: evidence, theory, and aims. Discussion of aims seeks to identify that highly problematic region of overlap between that which is discoverable, and that which it is of value to discover. Discussion of what it is of value to discover interacts with social inquiry, in accordance with rule (4): see diagram 1.

Wisdom-inquiry as depicted in diagram 1, the outcome of putting rules (1) to (4) into practice, differs profoundly from academia as it exists at present, the product of knowledge-inquiry plus some policy studies and anti-rationalist trends on the fringes of academic work. (For further details see Maxwell, 1976; 1984 or, better, 2007a.)

### **From Knowledge-Inquiry to Wisdom-Inquiry: Second Argument**

Why has this profound and damaging structural irrationality of academic inquiry not been noticed? When and how did it come about?

It all goes back to the Enlightenment of the 18<sup>th</sup> century – especially the French Enlightenment. The *philosophes* had the wonderful idea that it might be possible to learn from scientific progress how to make social progress towards an enlightened world.

This is a profoundly important idea. The *philosophes* of the Enlightenment – Voltaire, Diderot, Condorcet and others – did what they could to put this profoundly important idea into practice in their lives. They fought dictatorial power, dogma and superstition with weapons no more lethal than argument and wit (Gay, 1973).

But in developing the idea intellectually, the *philosophes* blundered. They botched the job. They thought that what needed to be done was to develop the *social* sciences alongside the *natural* sciences. Three steps need to be got right to put the basic Enlightenment idea properly into practice. The 18<sup>th</sup> century Enlightenment got all three steps wrong!

This traditional, bungled version of the Enlightenment was then developed throughout the 19<sup>th</sup> century by Saint-Simon, Comte, Marx, Mill and others, and institutionalised in universities all over the world in the first part of the 20<sup>th</sup> century with the creation of departments of social science: economics, anthropology, sociology, psychology, political science.<sup>7</sup>

The outcome is knowledge-inquiry – by and large what we have at present: seriously defective and irrational from the standpoint of helping us create a better world.

But what, it may be asked, is wrong with the traditional Enlightenment programme?

In order to implement the Enlightenment programme properly of learning from scientific progress how to achieve social progress towards an enlightened world, the three crucial steps that need to be got right are:

- (i) The progress-achieving methods of science need to be correctly identified.
- (ii) These methods need to be correctly generalized so that they become fruitfully applicable to any human endeavour, whatever the aims may be, and not just applicable to the endeavour of improving knowledge.
- (iii) The correctly generalized progress-achieving methods then need to be exploited correctly in the great human endeavour of trying to make social progress towards an enlightened, wise, civilized world.

Unfortunately, the *philosophes* of the Enlightenment got all three points wrong. And as a result these blunders, undetected and uncorrected, are built into the intellectual-institutional structure of academia as it exists today.

First, the *philosophes* failed to capture correctly the progress-achieving methods of natural science. From D'Alembert in the 18<sup>th</sup> century to Popper in the 20<sup>th</sup> (Popper, 1963), the widely held view, amongst both scientists and philosophers, has been (and continues to be) that science proceeds by assessing theories impartially in the light of evidence, *no permanent assumption being accepted by science about the universe independently of evidence*.

But this standard empiricist view is untenable. If taken literally, it would instantly bring science to a standstill. For, given any accepted Theory of physics (T), Newtonian theory say, or quantum theory, endlessly many empirically more successful rivals can be concocted which agree with T about observed phenomena but disagree arbitrarily about

some unobserved phenomena. Physics would be drowned in an ocean of such empirically more successful rival theories.

In practice, these rivals are excluded because they are disastrously disunified. *Two* considerations govern acceptance of theories in physics: empirical success and unity. But in persistently accepting unified theories, to the extent of rejecting disunified rivals that are just as, or even more, empirically successful, physics makes a big persistent assumption about the universe. The universe is such that all disunified theories are false. It has some kind of unified dynamic structure. It is physically comprehensible in the sense that explanations for phenomena exist to be discovered.

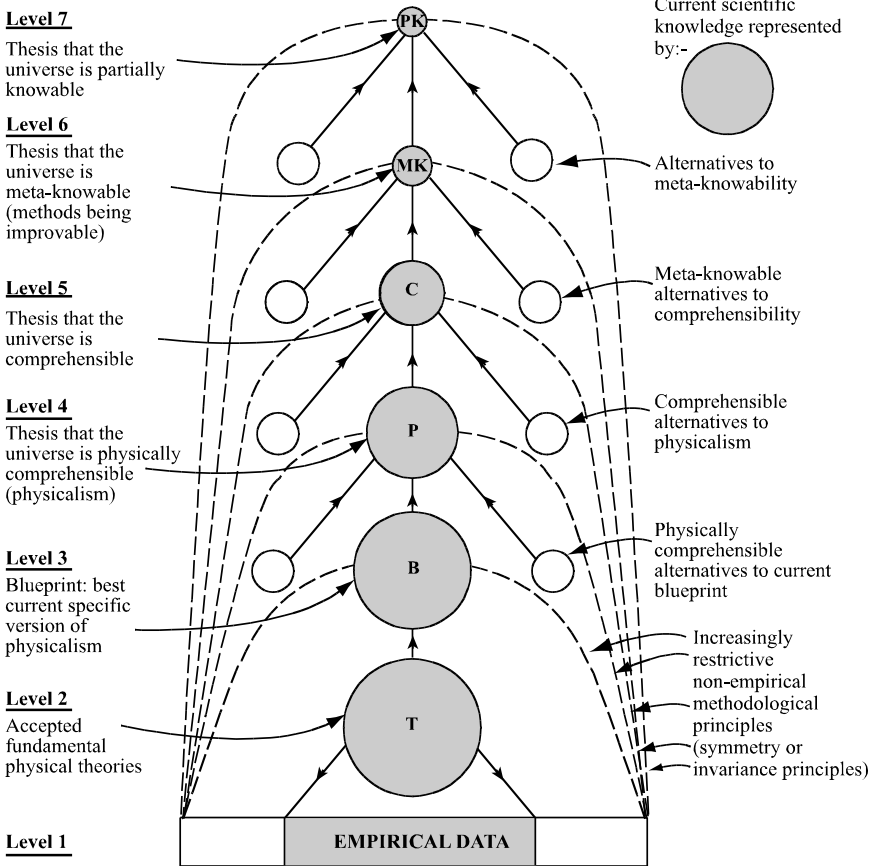
But this untestable (and thus metaphysical) assumption that the universe is comprehensible is profoundly problematic. Science is obliged to assume, but does not know, that the universe is comprehensible. Much less does it know that the universe is comprehensible in this or that way. A glance at the history of physics reveals that ideas have changed dramatically over time. In the 17<sup>th</sup> century there was the idea that the universe consists of corpuscles, minute billiard balls, which interact only by contact. This gave way to the idea that the universe consists of point-particles surrounded by rigid, spherically symmetrical fields of force, which in turn gave way to the idea that there is one unified self-interacting field, varying smoothly throughout space and time. Nowadays we have the idea that everything is made up of minute quantum strings embedded in ten or eleven dimensions of space-time. Some kind of assumption along these lines must be made but, given the historical record, and given that any such assumption concerns the ultimate nature of the universe, that of which we are most ignorant, it is only reasonable to conclude that it is almost bound to be false.



The way to overcome this fundamental dilemma inherent in the scientific enterprise is to construe physics as making a hierarchy of metaphysical assumptions concerning the comprehensibility and knowability of the universe, these assumptions asserting less and less as one goes up the hierarchy, and thus becoming more and more likely to be true: see diagram 2. In this way a framework of relatively insubstantial, unproblematic, fixed assumptions and associated methods is created within which much more substantial and problematic assumptions and associated methods can be changed, and indeed improved, as scientific knowledge improves. Put another way, a framework of relatively unspecific, unproblematic, fixed *aims* and methods is created within which much more specific and problematic aims and methods evolve as scientific knowledge evolves. (A basic aim of science is to discover in what precise way the universe is comprehensible, this aim evolving as assumptions about comprehensibility evolve.) There is positive feedback between improving knowledge, and improving aims-and-methods, improving knowledge-about-how-to-improve-knowledge. This is the nub of scientific rationality, the methodological key to the unprecedented success of science. Science adapts its nature to what it discovers about the nature of the universe. (For further details of this argument see Maxwell, 1976, 1984, 1998, 2004, 2007a, especially chapter 14.)

So much for the first blunder of the traditional Enlightenment, and how to put it right.

Second, having failed to identify the methods of science correctly, the *philosophes* naturally failed to generalize these methods properly. They failed to appreciate that the idea of representing the problematic aims (and associated methods) of science in the form of a hierarchy can be generalized and applied fruitfully to other worthwhile enterprises besides science. Many other enterprises have problematic aims –



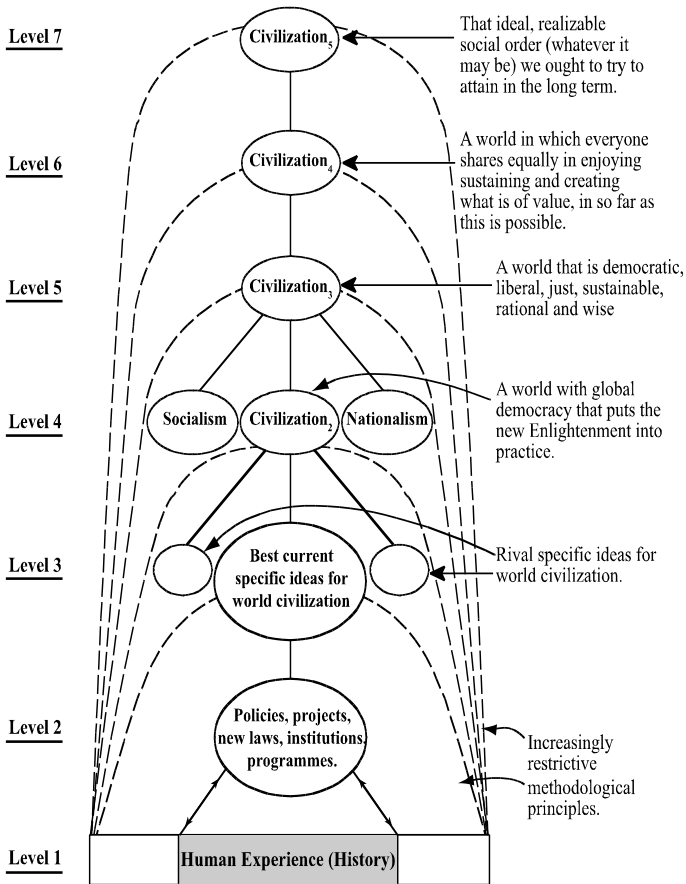
**Diagram 2:  
Hierarchical Conception of Science**

problematic because aims conflict, and because what we seek may be unrealisable, undesirable, or *both*. Such enterprises, with problematic aims, would benefit from employing a hierarchical methodology, generalized from that of science, thus making it possible to improve aims and methods as the enterprise proceeds. There is the hope that, as a result of exploiting in life methods generalized from those employed with such success in science, some of the astonishing success of science might be exported into other

worthwhile human endeavours, with problematic aims quite different from those of science.

Third, and most disastrously of all, the *philosophes* failed completely to try to apply such generalized, hierarchical progress-achieving methods to the immense, and profoundly problematic enterprise of making social progress towards an enlightened, wise world. The aim of such an enterprise is notoriously problematic. For all sorts of reasons, what constitutes a good world, an enlightened, wise or civilized world, attainable and genuinely desirable, must be inherently and permanently problematic.<sup>8</sup> Here, above all, it is essential to employ the generalized version of the hierarchical, progress-achieving methods of science, designed specifically to facilitate progress when basic aims are problematic: see diagram 3. It is just this that the *philosophes* failed to do. Instead of applying the hierarchical methodology to *social life*, the *philosophes* sought to apply a seriously defective conception of scientific method to *social science*, to the task of making progress towards, not a *better world*, but to better *knowledge* of social phenomena. And this ancient blunder is still built into the institutional and intellectual structure of academia today, inherent in the current character of social science (Maxwell, 1984 or 2007a, chapters 3, 6 and 7).

Properly implemented, in short, the Enlightenment idea of learning from scientific progress how to achieve social progress towards an enlightened world would involve developing social inquiry, not as social *science*, but as social *methodology*, or social *philosophy*. A basic task would be to get into personal and social life, and into other institutions besides that of science – into government, industry, agriculture, commerce, the media, law, education, international relations – hierarchical, progress-achieving methods (designed to improve problematic aims) arrived at by generalizing the methods of science. A basic task for academic inquiry as a whole would be to help humanity



**Diagram 3:**  
**Hierarchical Social Methodology Generalized from Science**

learn how to resolve its conflicts and problems of living in more just, cooperatively rational ways than at present. This task would be intellectually more fundamental than the scientific task of acquiring knowledge. Social inquiry would be intellectually more fundamental than physics. Academia would be a kind of people's civil service, doing openly for the public what actual civil services are supposed to do in secret for governments. Academia would have just sufficient

power (but no more) to retain its independence from government, industry, the press, public opinion, and other centres of power and influence in the social world. It would seek to learn from, educate, and argue with the great social world beyond, but would not dictate. Academic thought would be pursued as a specialized, subordinate part of what is really important and fundamental: the thinking that goes on, individually, socially and institutionally, in the social world, guiding individual, social and institutional actions and life. The fundamental intellectual and humanitarian aim of inquiry would be to help humanity acquire wisdom – wisdom being the capacity to realise (apprehend and create) what is of value in life, for oneself and others, wisdom thus including knowledge and technological know-how but much else besides (Maxwell, 1984, p. 86; 2007a, p. 79).

One outcome of getting into social and institutional life the kind of aim-evolving, hierarchical methodology indicated above, generalized from science, is that it becomes possible for us to develop and assess rival philosophies of life as a part of social life, somewhat as theories are developed and assessed within science. Such a hierarchical methodology provides a framework within which competing views about what our aims and methods in life should be – competing religious, political and moral views – may be cooperatively assessed and tested against broadly agreed, unspecific aims (high up in the hierarchy of aims) and the experience of personal and social life. There is the possibility of cooperatively and progressively improving *such philosophies of life* (views about what is of value in life and how it is to be achieved) much as *theories* are cooperatively and progressively improved in science. In science, ideally, theories are critically assessed with respect to each other, with respect to metaphysical ideas concerning the comprehensibility of the universe, and with respect to *experience* (observational and experimental results). In a somewhat analogous way, diverse philosophies of life may be critically assessed with respect to each other, with

respect to relatively uncontroversial, agreed ideas about aims and what is of value, and with respect to *experience* – what we do, achieve, fail to achieve, enjoy and suffer – the aim being to improve philosophies of life (and more specific philosophies of more specific enterprises within life such as government, education or art) so that they offer greater help with the realization of what is of value in life. This hierarchical methodology is especially relevant to the task of resolving conflicts about aims and ideals, as it helps disentangle agreement (high up in the hierarchy) and disagreement (more likely to be low down in the hierarchy).

Wisdom-inquiry, because of its greater rigour, has intellectual standards that are, in important respects, different from those of knowledge-inquiry. Whereas knowledge-inquiry demands that emotions and desires, values, human ideals and aspirations, philosophies of life be excluded from the intellectual domain of inquiry, wisdom-inquiry requires that they be included. In order to discover what is of value in life it is essential that we attend to our feelings and desires. But not everything we desire is desirable, and not everything that feels good is good. Feelings, desires and values need to be subjected to critical scrutiny. And of course feelings, desires and values must not be permitted to influence judgements of factual truth and falsity. Wisdom-inquiry embodies a synthesis of traditional rationalism and romanticism. It includes elements from both, and it improves on both. It incorporates romantic ideals of integrity, having to do with motivational and emotional honesty, honesty about desires and aims; and at the same time it incorporates traditional rationalist ideals of integrity, having to do with respect for objective fact, knowledge, and valid argument. Traditional rationalism takes its inspiration from science and method; romanticism takes its inspiration from art, from imagination, and from passion. Wisdom-inquiry holds art to have a fundamental rational role in inquiry, in revealing what is of value, and in unmasking false

values; but science, too, is of fundamental importance. What we need, for wisdom, is an interplay of sceptical rationality and emotion, an interplay of mind and heart, so that we may develop mindful hearts and heartfelt minds (Maxwell, 1976, p. 5). It is time we healed the great rift in our culture, so graphically depicted by Snow (1986).

All in all, if the Enlightenment revolution had been carried through properly, the three steps indicated above being correctly implemented, the outcome would have been a kind of academic inquiry very different from what we have at present, inquiry devoted primarily to the intellectual aim of acquiring knowledge.

### **Conclusion**

Humanity is in deep trouble. We urgently need to learn how to make progress towards a wiser, more civilized world. This in turn requires that we possess traditions and institutions of learning rationally designed – *well designed* – to help us achieve this end. It is just this that we do not have at present. What we have instead is natural science and, more broadly, inquiry devoted to acquiring knowledge. Judged from the standpoint of helping us create a better world, knowledge-inquiry of this type is dangerously and damagingly irrational. We need to bring about a major intellectual and institutional revolution in the aims and methods of inquiry, from knowledge-inquiry to wisdom-inquiry. Almost every branch and aspect of academic inquiry needs to change.

A basic intellectual task of academic inquiry would be to articulate our problems of living (personal, social and global) and propose and critically assess possible solutions, possible actions. This would be the task of social inquiry and the humanities. Tackling problems of knowledge would be secondary. Social inquiry would be at the heart of the academic enterprise, intellectually more fundamental than

natural science. On a rather more long-term basis, social inquiry would be concerned to help humanity build hierarchical methods of problem-solving into the fabric of social and political life so that we may gradually acquire the capacity to resolve our conflicts and problems of living in more cooperatively rational ways than at present. Natural science would change to include three domains of discussion: evidence, theory, and aims – the latter including discussion of metaphysics, values and politics. Academia would actively seek to educate the public by means of discussion and debate, and would not just study the public.

This revolution – intellectual, institutional and cultural – if it ever comes about, would be comparable in its long-term impact to that of the Renaissance, the scientific revolution, or the Enlightenment. The outcome would be traditions and institutions of learning rationally designed to help us acquire wisdom. There are a few scattered signs that this intellectual revolution, from knowledge to wisdom, is already under way provoked in the main by growing awareness of the menace that global warming represents.<sup>9</sup> It will need, however, much wider cooperative support – from scientists, scholars, students, research councils, university administrators, vice chancellors, teachers, the media and the general public – if it is to become anything more than what it is at present, a fragmentary and often impotent movement of protest and opposition, often at odds with itself, exercising little influence on the main body of academic work. I can hardly imagine any more important work for anyone associated with academia than, in teaching, learning and research, to help promote this revolution.



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## Endnotes

1. See Maxwell (2007b).
2. For an excellent history of the discovery of global warming see Weart (2003).
3. For a detailed presentation of the case that knowledge-inquiry is dominant in academic practice, see Maxwell (2007a, ch. 6).
4. For a more detailed exposition of standard empiricism and knowledge-inquiry see Maxwell (1984, ch. 2) or (2007a, ch. 2).
5. See note 3.
6. For devastating criticisms of postmodernism, relativism and social constructivism see Sokal (2008).
7. For an excellent brief account of the origins of social science along these lines, see Farganis (2003). See also Hayek (1979).
8. There are a number of ways of highlighting the inherently problematic character of the aim of creating civilization. People have very different ideas as to what does constitute civilization. Most views about what constitutes Utopia, an ideally civilized society, have been unrealizable *and* profoundly undesirable. People's interests, values and ideals clash. Even values that, one may hold, ought to be a part of civilization may clash. Thus freedom and equality, even though inter-related, may nevertheless clash. It would be an odd notion of individual freedom which held that freedom was for some, and not for others; and yet if equality is pursued too singlemindedly this will undermine individual freedom, and will even undermine equality, in that a privileged class will be required to enforce equality on the rest, as in the old Soviet Union. A basic aim of legislation for civilization, we may well hold, ought to be to increase freedom by restricting it: this brings out the inherently problematic, paradoxical character of the aim of achieving civilization. One thinker who has stressed the inherently problematic, contradictory character of the idea of

civilization is Isaiah Berlin; see, for example, Berlin (1980, pp. 74-79). Berlin thought the problem could not be solved; I, on the contrary, hold that the hierarchical methodology indicated here provides us with the means to learn how to improve our solution to it in real life.

**9.** See chapter 12 of the second edition of Maxwell (1984), and Maxwell (2009).