

# Wisdom: Object of Study or Basic Aim of Inquiry?

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## The Need for Wisdom

That the world urgently needs more wisdom can hardly be doubted the moment one considers recent history and the global crises we face. There is the George Bush led “war on terrorism” and the excesses to which that led: Guantanamo Bay, the Afghanistan war and the Iraq war. Bin Laden no doubt hoped the attack on the twin towers in New York would provoke the USA and its allies to over-react. What actually happened must have exceeded his wildest hopes. Then again there is the credit crunch of 2008 and the world-wide recession it caused. A few voices warned of the lunacy of over-extended credit of banks, but they were ignored. The great army of bankers and economists round the world saw no impending disaster, even though it was all but bound to occur, sooner or later. As the population of the earth continues to grow and more and more countries industrialize, so the global consumption of oil and coal steeply rises. The world will not soon run out of coal, but oil is another matter. Many experts estimate that we have already used up half the world’s supply of oil, and what remains will be increasingly difficult to extract. As demand for oil increases and supply decreases, oil will become increasingly expensive, partly because demand exceeds supply and partly because oil becomes increasingly difficult to extract. The world’s industry, transport and economy will face a crisis of epic proportions – one which stares us in the face, but for which we have done little to prepare. In the meantime, increasing consumption of oil and coal leads to increasing emissions of CO<sub>2</sub> into the atmosphere – aided by burning of vast tracts of forests so that the land may be used for agriculture. We know we are rapidly increasing the amount of CO<sub>2</sub> in the atmosphere, we know that this will tend to lead to a warmer climate as CO<sub>2</sub> is a greenhouse gas, and we know the average temperature of the earth is increasing. We know that this will lead to disaster:

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melting glaciers and ice at the poles, rising sea levels and flooding of densely populated land, increasingly frequent and intense storms, floods and drought and vast tracts of the earth eventually becoming uninhabitable. Millions, possibly billions, will die as a result unless we rapidly decrease CO<sub>2</sub> emissions globally. All this is known – and yet, so far, we have been unable to act effectively on this knowledge – and many still deny that there is a problem. On the one hand, we strive to promote industrial and economic development even though we know, on the other hand that, as conducted at present, this will lead to catastrophe.

These, no doubt, are the kind of considerations that led Robert Sternberg to say recently, “If there is anything the world needs, it is wisdom. Without it, I exaggerate not at all in saying that very soon, there may be no world”.<sup>1</sup> And these, no doubt, are leading considerations that have led Sternberg and others, recently, to initiate and develop the scientific study of wisdom. If the world is to acquire vitally needed wisdom – so it is implicitly assumed – we first need to know what wisdom is, and how it is to be acquired. We need – it is assumed – more *scientific knowledge* about wisdom.

I first became aware of this new field of the scientific study of wisdom as a result of the publication of Sternberg’s book *Wisdom: Its Nature, Origins, and Development*<sup>2</sup> in 1990, to which 19 researchers contributed, including Sternberg himself. Since then, there has been an upsurge in scientific research into wisdom.<sup>3</sup> Allied to this, no doubt, is the University of Chicago’s Arête Initiative, a \$2 million research programme on “the nature and benefits of wisdom” which seeks in part to arrive at a definition of wisdom.<sup>4</sup>

Does this upsurge in scientific research into wisdom constitute an adequate response to the global crises we face? The rationale behind the research is clear. If we are to manage our planetary affairs in wiser ways than we have done in the recent past, we urgently need more wisdom in the world. In order to discover how we might achieve this, what we need, it would seem, is more knowledge and understanding about the nature of wisdom, what it is, what its origins are and how it is to be acquired and developed. Hence the growth in research that seeks to define wisdom and improve our scientific knowledge and understanding of it.

All this seems reasonable enough, and yet, I shall argue, it represents a seriously inadequate response to the crises we face. Something far more radical is required than an increase in knowledge about wisdom. What we need is a radical transformation in the aims and methods, the whole character of science and of academic inquiry more generally, so that the basic aim of academia becomes to seek and

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<sup>1</sup> Sternberg (2003, p. xviii).

<sup>2</sup> Sternberg (1990).

<sup>3</sup> See, for example, Smith and Baltes (1990), Baltes and Staudinger (1993), Staudinger and Baltes (1996), Sternberg (1998), Baltes and Staudinger (2000), Kunzmann and Baltes (2003), Le (2008); Trowbridge (2008), Yang (2008a, 2008b). See also works referred to by these papers. I am grateful to Richard Trowbridge for drawing my attention to many of these papers.

<sup>4</sup> See <http://wisdomresearch.org/>. This website has a long list of publications on wisdom that have appeared since Sternberg (1990).

promote wisdom. Instead of seeking more knowledge about wisdom, all of rational inquiry needs to become devoted to acquiring and promoting wisdom.

## What Is Wisdom?

Before I plunge into expounding my main argument – we urgently need to bring about a revolution in universities so that their basic task becomes to seek and promote wisdom and not just acquire and apply knowledge – I must first make a few comments about the approach I hold to be an inadequate response to the problems we face: improving knowledge about wisdom.

This approach may seem to require, as a first step, that we define wisdom correctly. On this point, indeed, there seems to be general agreement. Those who seek to improve knowledge about wisdom, even *scientific* knowledge, do indeed seem to take seriously the task of defining wisdom correctly.<sup>5</sup> The arête initiative, already mentioned, actually has as its title “defining wisdom”.<sup>6</sup> The first question to answer correctly, it seems, is “What is wisdom?”

All this assumes, however, that wisdom has some kind of essential nature that is capable of being captured in the correct definition of “wisdom”. But this Aristotelian idea has been devastatingly criticized and demolished by Karl Popper.<sup>7</sup> In seeking the correct answer to “What is wisdom?” the correct definition of wisdom, we are chasing a will-o-the-wisp. What “wisdom” means may, quite legitimately, depend on context and purpose. It is up to us to decide what, precisely, we choose to mean by “wisdom”, depending on what our purpose is. And indeed, those who take the task of defining wisdom seriously have come up with a great variety of definitions.<sup>8</sup> What needs to be appreciated is that there can be no such thing as *the correct* definition of wisdom: the search for it is the search for something that does not exist.

What implications does this have for the endeavour of improving knowledge – even *scientific* knowledge – about wisdom? Just this. Do not engage in the hollow task of trying to arrive at the *correct* definition of wisdom. Avoid defining wisdom in a detailed, precise, narrow way because, if this definition is taken seriously in subsequent work, it will mean results will be restricted to this narrow definition. Those who do research in the field of acquiring knowledge about wisdom would

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<sup>5</sup> In his *The Scientific Approach to Wisdom*, Richard Trowbridge asserts “Defining wisdom remains a major concern for scholars in all fields with an interest in the concept” (Trowbridge, 2005, p. 3).

<sup>6</sup> See <http://wisdomresearch.org/> (accessed February 2011).

<sup>7</sup> See Popper’s decisive critique of this Aristotelian conception of definition: Popper (1962, vol. 2, Ch. 11, Section 2, pp. 9–21).

<sup>8</sup> See Richard Trowbridge, “Definitions of Wisdom”, (<http://wisdomcenteredlife.org/definitions.aspx>; accessed February 2011).

perhaps do well to agree on a broad, loose and inclusive definition, if definition has to be formulated at all.

At this point, it may be objected that I criticize the whole notion of defining “wisdom” and yet put forward just such a definition. Should I not practice what I preach?

Let me explain. The argument I am about to expound, in the next section (about the need to bring about a revolution in the aims and methods of academia), was first developed entirely independently of the notion of wisdom.<sup>9</sup> Subsequently, having come to appreciate that the basic intellectual and humanitarian aim of the academic enterprise ought to be, not just knowledge, but rather to help people realize what is of value to them in life, I cast around for a word to stand in for this aim. It struck me that “wisdom” might not be too inappropriate (although I was aware that the word has connotations at odds with the use I intended to make of it). So, for me, “wisdom” is merely a technical term. It is just shorthand for “the capacity and the active desire to realize – apprehend and make real – what is of value in life, for oneself and others”. What really matters, in my view, is that academia should be rationally organized and devoted to pursuing that aim. That it is called “wisdom” is no more than an afterthought, a secondary matter of no real significance.

Thus I am not engaged in “defining wisdom” in any serious way, at all. I am merely using the word as shorthand for something that I do hold to be of great importance, just indicated.

Having removed myself from the enterprise of “defining wisdom”, I would, however, like to make the following remark in favour of my definition. It successfully encompasses all other serious definitions. There would seem to be one point that all those concerned with wisdom, in one way or another, agree on: wisdom is something that it is of great value to possess. This means that anyone wise in my sense (i) will also be wise in all these other senses (ii) *unless being wise in one or other of these other senses is incompatible with something realizable that is of great value in life*. If (i) is true, then these other notions of wisdom are included in the one I have put forward. If (ii) is true, then the other notions of wisdom are inadequate *if we take realizing what is of most value in life to be common to all serious conceptions of wisdom (including mine)*. The great virtue of my definition of wisdom is that, because it ties wisdom to the capacity to realize what is of value but leaves what is of value entirely open, this definition encompasses all other definitions that hold wisdom to be of value or the means to realization of what is of value.

All this is directly relevant to those concerned with *personal wisdom*, as I shall argue below.

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<sup>9</sup>The first exposition is to be found in Maxwell (1976). In that book I wrote of a “people’s rational science of delight and compassion” – a part of the subtitle of the book – and did not employ the word “wisdom” in the argument at all.

## The Irrationality of Academic Inquiry

With this interlude concerning what wisdom means over, I return to the main business in hand, the need to develop academia so that it seeks and promotes wisdom, the enterprise of improving knowledge about wisdom within the status quo being no substitute.

What the approach of seeking to improve knowledge about wisdom overlooks is the profound, structural irrationality of academic inquiry as at present constituted. It is this structural irrationality of our institutions of learning and research that is in part responsible for the creation of our current global problems and our current incapacity to resolve them intelligently, effectively and humanely. More precisely, these failures stem from the immense success of science and technology allied to their being embedded in a kind of academic enterprise that violates the most elementary requirements for rationality conceivable. It is this situation which demands that we bring about a revolution in our universities to cure them of their wholesale damaging irrationality. Academic inquiry needs to be transformed so that the basic aim becomes not just to acquire knowledge but rather to seek and promote wisdom – wisdom being, as I have said, the capacity and the active desire to realize what is of value in life, for oneself and others, wisdom thus including knowledge and technological know-how, but much else besides. Improving knowledge about wisdom is not enough.

It is not always appreciated that almost all of our current global problems have been made possible by the immense success of modern scientific and technological research. It is this success which makes possible modern industry and agriculture, modern hygiene and medicine; these in turn lead to population growth; to destruction of natural habitats and rapid extinction of species; to modern armaments and the horrific lethal character of modern war and terrorism; to immense differences in wealth and power around the globe; to pollution of earth, sea and air; and above all, of course, to global warming. All these dire features of our modern world have been made possible by the rapid growth of science and technology since the birth of modern science in the seventeenth century. Science and technology are even implicated in the rapid spread of AIDS, AIDS being spread by modern travel.

There are those who blame science, or scientific rationality, for our problems but that profoundly misses the point. It is not science that is the problem but rather science *dissociated from a more fundamental concern to help humanity resolve problems of living in increasingly cooperatively rational ways.*<sup>10</sup> Again, the problem is not too much reason, but not enough. Scientific rationality, so-called, is actually a species of damaging *irrationality* masquerading as rationality. Academic inquiry, as it mostly exists at present, devoted to the growth of knowledge and technological know-how – *knowledge-inquiry* as I shall call it – is actually profoundly irrational when judged from the standpoint of contributing to human welfare. Judged from this all-important standpoint, knowledge-inquiry violates

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<sup>10</sup>“Cooperative rationality” is discussed below.

three of the four most elementary, uncontroversial rules of reason that one can conceive of (to be indicated in a moment). And that knowledge-inquiry is grossly irrational in this way has everything to do with its tendency to generate the kind of global problems considered above. Instead of false simulacra of reason, what we so urgently need is authentic reason devoted to the growth of wisdom.

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 and 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 realize our human aspirations.<sup>11</sup>

This is the conception of inquiry which, I claim, violates reason in a wholesale, structural and damaging manner and, as a result, has an inherent tendency to help generate new problems of living.

What do I mean by “reason”? As I use the term here, rationality appeals to the idea that there are general methods, rules or strategies which, if put into practice, give us our best chance, other things being equal, of solving our problems, realizing our aims. Rationality is an aid to success, but does not guarantee success and does not determine what needs to be done.

Four elementary rules of reason, alluded to above, are the following:

1. Articulate and seek to improve the articulation of the basic problem(s) to be solved.
2. Propose and critically assess alternative possible solutions.

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<sup>11</sup> For a much more detailed exposition of knowledge-inquiry or “the philosophy of knowledge”, see Maxwell (1984 or 2007, Chapter 2). For evidence that knowledge-inquiry prevails in academia, see Maxwell (1984 or 2007, Chapter 6; 2000). I do not claim that everything in academia accords with the edicts of knowledge-inquiry. My claim is, rather, that this is the only candidate for rational inquiry in the public arena; it is the dominant view, exercising an all-pervasive influence over academe. Work that does not conform to its edicts has to struggle to survive.

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 towards a solution to the basic problem to be solved.
4. Interconnect attempts to solve the basic problem and specialized problems so that basic problem-solving may guide, and be guided by, specialized problem-solving.

Two preliminary points now need to be made.

First, granted that academic inquiry has, as its fundamental aim, to help promote human welfare by intellectual and educational means,<sup>12</sup> then the *problems* that inquiry fundamentally ought to try to help solve are problems of living, problems of action. From the standpoint of achieving what is of value in life, it is what we *do*, or refrain from doing, that ultimately matters. Even where new knowledge and technological know-how are relevant to the achievement of what is of value – as they are in medicine or agriculture, for example – it is always what this new knowledge or technological know-how enables us to *do* that matters. All the global problems discussed above require, for their resolution, not merely new knowledge, but rather new policies, new institutions, new ways of living. Scientific knowledge and associated technological know-how have, if anything, as we have seen, contributed to the creation of these problems in the first place. Thus, problems of living – problems of poverty, ill-health, injustice and deprivation – are solved by what we do or refrain from doing; they are not solved by the mere provision of knowledge (except when a problem of living *is* a problem of knowledge).

Second, 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

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<sup>12</sup> This assumption may be challenged. Does not academic inquiry seek knowledge for its own sake – it may be asked – whether it helps promote human welfare or not? Elsewhere (Maxwell, 2007, pp. 17–19, 70–5, 205–13) I have argued that wisdom-inquiry does better justice than knowledge-inquiry to *both* aspects of inquiry, pure and applied. The basic aim of inquiry, according to wisdom-inquiry, is to help us realize what is of value in life, “realize” meaning both “apprehend” and “make real”. “Realize” thus accommodates both aspects of inquiry, “pure” research or “knowledge pursued for its own sake” on the one hand, and technological or “mission-oriented” research on the other – both, ideally, seeking to contribute to what is of value in human life. Wisdom-inquiry, like sight, is there to help us find our way around. And like sight, wisdom-inquiry is of value to us in two ways: for its intrinsic value and for practical purposes. The first is almost more precious than the second.

human welfare must be to discover how conflict resolution can be moved away from the violent end of the spectrum towards the cooperatively rational end.<sup>13</sup>

Granted this and granted that the above four rules of reason are put into practice, then, at the most fundamental level, academic inquiry needs to:

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 those indicated above).
2. Propose and critically assess alternative possible solutions – alternative possible *actions, policies, political programmes, legislative proposals, ideologies and philosophies of life*.

In addition, of course, academic inquiry must:

3. Break up the basic problems of living into subordinate, specialized problems – in particular, specialized problems of knowledge and technology.
4. Interconnect basic and specialized problem-solving.

Academic inquiry as it mostly exists at present puts (3) into practice to splendid effect. The intricate maze of specialized disciplines devoted to improving knowledge and technological know-how that go to make up current academic inquiry is the result. But, disastrously, what we have at present, academic inquiry devoted primarily to improving knowledge, fails to put (1), (2) and (4) into practice. In pursuing knowledge, academic inquiry may articulate problems of knowledge and propose and critically assess possible solutions, possible claims to knowledge – factual theses, observational and experimental results and theories. But, as we have seen, problems of *knowledge* are not (in general) problems of *living*, and solutions to problems of *knowledge* are not (in general) solutions to problems of *living*. In so far as academia does at present put (1) and (2) into practice, in departments of social science and policy studies, it does so only at the periphery and not as its central, fundamental intellectual task.

In short, academic inquiry devoted primarily to the pursuit of knowledge, when construed as having the basic humanitarian aim of helping to enhance the quality of human life by intellectual means, fails to put the two most elementary rules of reason into practice (rules (1) and (2)). Academic inquiry fails to do (at a fundamental level) what it most needs to do, namely, (1) articulate problems of living and (2) propose and critically assess possible solutions. And furthermore, as a result of failing to explore the basic problems that need to be solved, academic inquiry cannot put the fourth rule of rational problem-solving into practice either, namely, (4) interconnect basic and specialized problem-solving. As I have remarked, *three* of the four most elementary rules of rational problem-solving are violated. (For a

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<sup>13</sup> For more detailed discussion of cooperative rationality, see Maxwell (1984, pp. 109–110, 156–7, 161–2, 164–6, 183–99 and 254–5; or 2007, pp. 121–2, 181, 185, 188–190, 206–222 and 275–6).



more detailed development of this argument, see Maxwell, 1980, 1984 or 2004, 2007, 2010.)

This gross structural irrationality of contemporary academic inquiry has profoundly damaging consequences for humanity. As I have pointed out above, granted that our aim is to contribute to human welfare by intellectual means, the basic problems we need to solve are problems of living and problems of action, not problems of knowledge. In failing to give intellectual priority to problems of living, knowledge-inquiry fails to tackle what most needs to be tackled in order to contribute to human welfare. Furthermore, in devoting itself to acquiring knowledge in a way that is unrelated to sustained concern about what humanity's most urgent problems are, as a result of failing to put (1) and (2) into practice and thus failing to put (4) into practice as well, the danger is that scientific and technological research will respond to the interests of the powerful and the wealthy, rather than to the interests of the poor, of those most in need. Scientists, officially seeking knowledge of truth *per se*, have no official grounds for objecting if those who fund research – governments and industry – decide that the truth to be sought will reflect their interests, rather than the interests of the world's poor. And priorities of scientific research, globally, do indeed reflect the interests of the first world, rather than those of the third world.<sup>14</sup>

Knowledge and technology successfully pursued in a way that is not rationally subordinated to the tackling of more fundamental problems of living, through the failure to put (1), (2) and (4) into practice, is bound to lead to the kind of global problems discussed above, problems that arise as a result of newly acquired powers to act being divorced from the ability to act wisely. The creation of our current global problems, and our inability to respond adequately to these problems, has much to do, in other words, with the long-standing, rarely noticed, structural *irrationality* of our institutions and traditions of learning, devoted as they are to acquiring knowledge dissociated from learning how to tackle our problems of living in more cooperatively rational ways. Knowledge-inquiry, because of its irrationality, is designed to *intensify*, not help *solve*, our current global problems.<sup>15</sup>

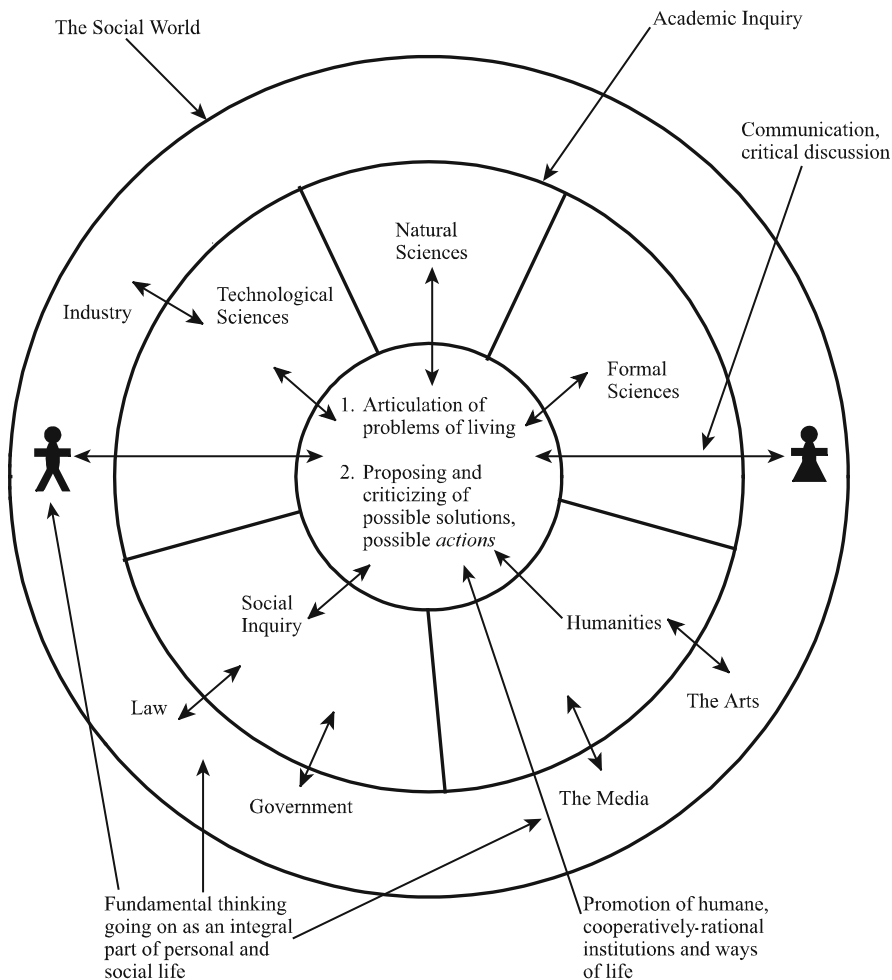
## Wisdom-Inquiry

At once the question arises: What would a kind of inquiry be like that *is* devoted, in a genuinely rational way, to promoting human welfare by intellectual means? I shall call such a hypothetical kind of inquiry *wisdom-inquiry*, to stand in contrast to knowledge-inquiry.

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<sup>14</sup> Funds devoted to military research, in the USA, UK and some other wealthy countries, are especially disturbing, see Langley (2005) and Smith (2003).

<sup>15</sup> See Maxwell (1984 or 2007, Chapter 3) for a much more detailed discussion of the damaging social repercussions of knowledge-inquiry.



**Fig. 1** Wisdom-inquiry implementing problem-solving rationality

As a first step at characterizing wisdom-inquiry, we may take knowledge-inquiry (at its best) and modify it just sufficiently to ensure that all four elementary rules of rational problem-solving, indicated above, are built into its intellectual and institutional structure; see Fig. 1.

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, neither 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 problems of knowledge, understanding and technology, in accordance with rule (3). In Fig. 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 realize 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 Fig. 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).<sup>16</sup>

## The Enlightenment Programme

So much for my first argument in support of wisdom-inquiry. I come now to my second argument, which appeals to and modifies the Enlightenment programme of learning from scientific progress how to achieve social progress towards an enlightened world.

In order to implement this programme properly, it is essential to get the following three steps right:

1. The progress-achieving methods of science need to be correctly identified.
2. 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.

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<sup>16</sup> See also my (1980; 1984 or 2007, Chaps. 4 and 7; 2004, Chaps. 3 and 4; 2010, Chaps. 2, 6 and 9).

3. 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 French Enlightenment got all three points wrong.<sup>17</sup> And as a result, these blunders, undetected and uncorrected, are built into the intellectual-institutional structure of academia as it exists today.<sup>18</sup>

First, the *philosophes* failed to capture correctly the progress-achieving methods of natural science. From D'Alembert in the eighteenth century to Popper in the twentieth (Popper, 1959, 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 seventeenth century,

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<sup>17</sup> In their lives they fought dictatorial power, authoritarianism, superstition, dogma, injustice and intolerance with weapons no more lethal than those of argument and wit. In their lives they put something close to wisdom-inquiry into practice. It was in thinking that the intellectual task was to develop social science alongside natural science that they went wrong. See Gay (1973) for a magnificent account of what the *philosophes* did, and did not, achieve.

<sup>18</sup> The blunders of the *philosophes* are not entirely undetected. Karl Popper, in his first four works, makes substantial improvements to the traditional Enlightenment programme (although Popper does not himself present his work in this fashion). Popper first improves traditional conceptions of the progress-achieving methods of science (Popper, 1959). This conception, *falsificationism*, is then generalized to become *critical rationalism*. This is then applied to social, political and philosophical problems (Popper, 1961, 1962, 1963). The version of the Enlightenment programme about to be outlined here can be regarded as a radical improvement of Popper's version, see Maxwell (2004, Chapter 3).

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 10 or 11 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 Fig. 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.<sup>19</sup> Science adapts its nature to what it discovers about the nature of the universe (see Maxwell, 1974, 1976, 1984 or 1998, 2004, 2005a, 2007).

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 – problematic because aims conflict and because what we seek may be unrealizable, undesirable or *both*. Such enterprises, with problematic

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<sup>19</sup> Natural science has made such astonishing progress in improving knowledge and understanding of nature because it has put something like the hierarchical methodology, indicated here, into scientific practice. Officially, however, scientists continue to hold the standard empiricist view that no untestable metaphysical theses concerning the comprehensibility and knowability of the universe are accepted as a part of scientific knowledge. As I have argued elsewhere (Maxwell, 2004, Chapter 2), science would be even more successful, in a number of ways, if scientists adopted and explicitly implemented the hierarchical methodology indicated here.

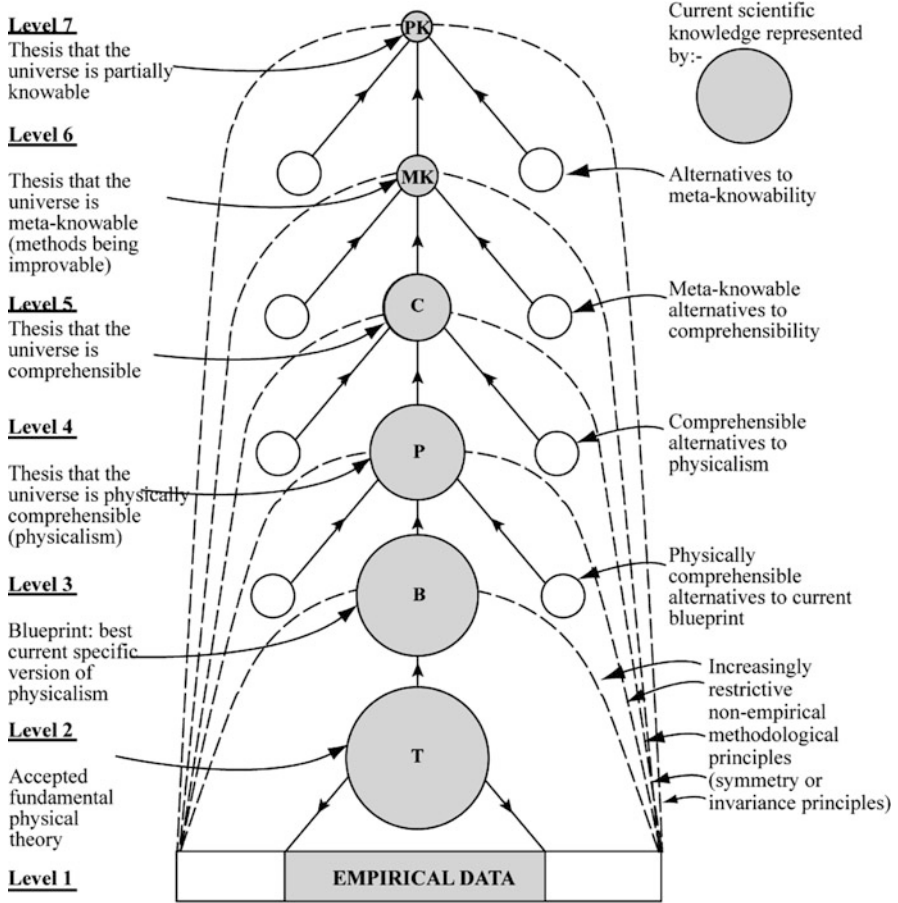


Fig. 2 Hierarchical conception of science

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>20</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 Fig. 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 the social world. 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 2007, Chapters 3, 6 and 7; 2004, Chapters 3 and 4).

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 primarily 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 and 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 learn how to resolve its conflicts and problems of living in more just, cooperatively rational ways than at present.<sup>21</sup> 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,

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<sup>20</sup> 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 single-mindedly, 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 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. 74–9). 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.

<sup>21</sup> I must emphasize that it is not just a question of reforming universities: schools need to put wisdom-inquiry into practice as well. See my (2005b).

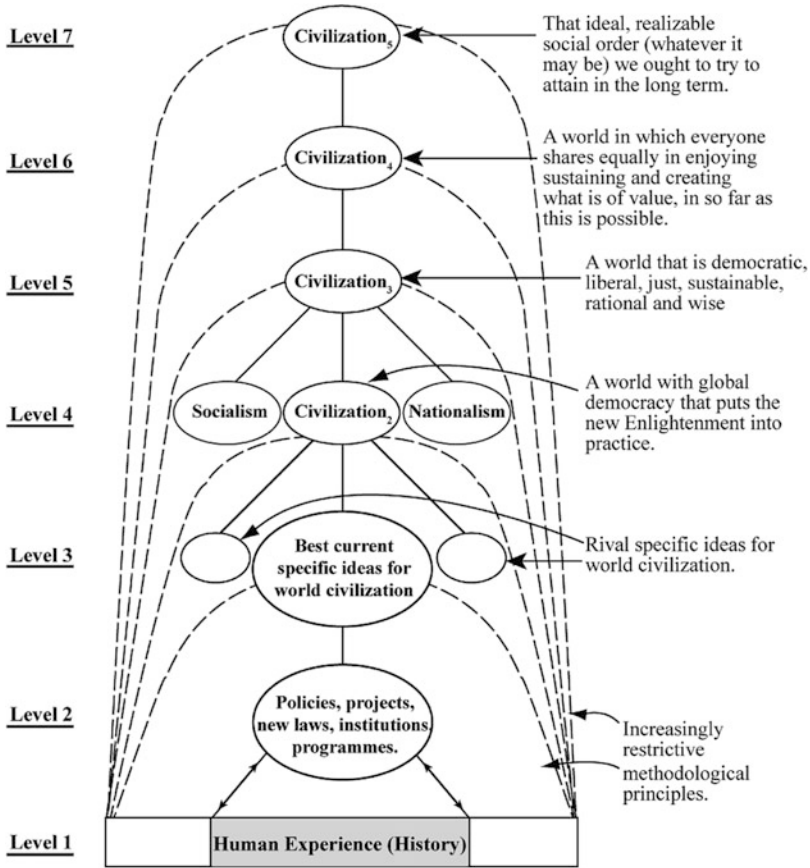


Fig. 3 Hierarchical social methodology generalized from science

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 realize (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.

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 and 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, and 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 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. 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.<sup>22</sup>

Transforming universities so that they put wisdom-inquiry into practice is, potentially, vastly more effective in helping us create a wise world than is the current programme of improving knowledge about wisdom within existing knowledge-inquiry, discussed above. For wisdom-inquiry dedicates the whole of academia to the task of creating a wiser world. Not only does wisdom-inquiry transform education so that it helps individuals acquire wisdom; perhaps even more important, wisdom-inquiry devotes itself to transforming other institutions – government, industry, agriculture, the law, the media and so on – so that they become wiser in their aims and actions, and at the same time provides the methodological means to achieve this, namely, the hierarchical methodology depicted in Fig. 3. Research that seeks to improve knowledge about the nature of wisdom should of course continue, but, judged as a response to the problem of the lack of wisdom in the world, it is no substitute for, and does not stand comparison with, the vital task of transforming academia so that it puts wisdom-inquiry into practice.<sup>23</sup>

But what, it may be asked, has all this to do with *personal wisdom*, the theme of this book?

It needs to be appreciated that the greatest obstacle to the growth of wisdom – *personal wisdom*, as well as *institutional wisdom*, *social wisdom*, and even *global wisdom* – is, quite simply, the long-standing, gross, structural irrationality of knowledge-inquiry, built as it is into the institutional structure of our schools and universities. Transform schools and universities so that they come to put more rigorous wisdom-inquiry into educational and research practice, and wisdom (personal and social) would flourish in our world.

As we have seen, wisdom-inquiry requires that values, feelings and desires are expressed and critically scrutinized within the intellectual domain of inquiry, since realizing what is of value rationally requires that this is done. But knowledge-inquiry demands that values, feelings and desires be excluded from the intellectual domain of inquiry so that objective factual knowledge may be acquired. As a result, knowledge-inquiry splits off the mind from the heart, thought from feeling and desire, with the result that thought comes to be driven by unacknowledged, unexamined values, feelings and desires, rarely of the best, and wisdom founders. The growth of personal wisdom is sabotaged. Knowledge-inquiry also fails to promote

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<sup>22</sup> For further details about wisdom-inquiry, see my (1976; 1980; 2000; 2004, Chaps. 3 and 4; 2010, Chaps. 2, 6 and 9; and, above all, 1984 or 2007). I should add that, despite the major differences between knowledge-inquiry and wisdom-inquiry, touching almost every aspect of the academic enterprise, nevertheless there are also broad areas of agreement in the two conceptions of inquiry. Both, for example, stress the great value of the pursuit of knowledge, both for its own sake and for the sake of applications; both value reason and evidence in assessing claims to knowledge; both hold that values, desires and feelings should not influence judgements about what is factually true and false.

<sup>23</sup> The two endeavours overlap in the field of education; see, for example, Sternberg Reznitskaya, and Jarvin (2008).

wisdom in failing to give priority to (i) the task of proposing and critically examining possible solutions to problems of living – possible actions, policies, political programmes and philosophies of life – and (ii) the task of articulating and critically examining problematic aims – personal, institutional, social and global. Both are central and fundamental within wisdom-inquiry.

If our concern is help wisdom to flourish in the world, at personal, social and global levels, *the* deed we need to perform is to transform our institutions of learning so that they come to put wisdom-inquiry into practice.

## The Revolution Is Underway

During the last 10–20 years, a number of developments have taken place in universities that can be regarded as the first steps towards putting wisdom-inquiry into academic practice. In what follows, I concentrate on developments in the UK.

Amongst the most significant of these are the creation of departments, institutions and research centres concerned with social policy, with problems of environmental degradation, climate change, poverty, injustice and war and with such matters as medical ethics and community health.<sup>24</sup> For example, a number of departments and research centres concerned in one way or another with policy issues have been created at my own university of University College London during the last 20 years.

More recently, UCL has organized research into four broad themes: global health, sustainable cities, intercultural interactions and well-being. On its website, under the heading Grand Challenges, UCL puts the matter like this:

The world is in crisis. Billions of us suffer from illness and disease, despite applicable preventions and cures. Life in our cities is under threat from dysfunctionality and climate change. The prospect of global peace and cooperation remains under assault from tensions between our nations, faiths and cultures. Our quality of life – actual and perceived – diminishes despite technological advances. These are global problems, and we must resolve them if future generations are to be provided with the opportunity to flourish.

In 2010, UCL's Grand Challenges Programme produced a policy document entitled "Developing a culture of wisdom at UCL".<sup>25</sup>

At Cambridge University, there have been somewhat similar developments. Here too one can see the first hints of the institutional structure of wisdom-inquiry being superimposed upon the existing structure of *knowledge-inquiry*. As we have seen, wisdom-inquiry puts the intellectual tackling of problems of living at the heart of academic inquiry, this activity being conducted in such a way that it both influences and is influenced by more specialized research. Knowledge-inquiry, by

<sup>24</sup> See Iredale (2007) and Macdonald (2009) for developments of this point.

<sup>25</sup> See [http://www.ucl.ac.uk/public-policy/public\\_policy\\_publications/UCL\\_-\\_Culture\\_of\\_wisdom.pdf](http://www.ucl.ac.uk/public-policy/public_policy_publications/UCL_-_Culture_of_wisdom.pdf).

contrast, organizes intellectual activity into the conventional departments of knowledge: physics, chemistry, biology, history and the rest, in turn subdivided, again and again, into ever more narrow, specialized research disciplines. But this knowledge-inquiry structure of ever more specialized research is hopelessly inappropriate when it comes to tackling our major problems of living. In order to tackle environmental problems, for example, in a rational and effective way, specialized research into a multitude of different fields, from geology, engineering and economics to climate science, biology, architecture and metallurgy, needs to be connected to, and coordinated with, the different aspects of environmental problems. The sheer urgency of environmental problems has, it seems, forced Cambridge University to create the beginnings of wisdom-inquiry organization to deal with the issue. The “Cambridge Environmental Initiative” (CEI), launched in December 2004, distinguishes seven fields associated with environmental problems: conservation, climate change, energy, society, water waste built environment and industry, natural hazards, society, and technology, and under these headings, coordinates some 102 research groups working on specialized aspects of environmental issues in some 25 different (knowledge-inquiry) departments (see [www.cei.group.cam.ac.uk/](http://www.cei.group.cam.ac.uk/)). The CEI holds seminars, workshops and public lectures to put specialized research workers in diverse fields in touch with one another and to inform the public. There is also a CEI newsletter.

A similar coordinating, interdisciplinary initiative exists at Oxford University. This is the School of Geography and the Environment, founded in 2005 under another name. This is made up of five research “clusters”, two previously established research centres, the Environmental Change Institute (founded in 1991) and the Transport Studies Institute, and three interdepartmental research programmes, the African Environments Programme the Oxford Centre for Water Research and the Oxford branch of the Tyndall Centre (see below). The school has links with other such research centres, for example, the UK Climate Impact Programme and the UK Energy Research Centre.

At Oxford University there is also the James Martin 21st Century School, founded in 2005 to “formulate new concepts, policies and technologies that will make the future a better place to be”. It is made up of 15 institutes devoted to research that ranges from ageing, armed conflict, cancer therapy and carbon reduction to nanoscience, oceans, science innovation and society, the future of the mind and the future of humanity. At Oxford, there is also the Smith School of Enterprise and the Environment, founded in 2008 to help government and industry tackle the challenges of the twentieth century, especially those associated with climate change.

All these developments, surely echoed in many universities all over the world, can be regarded as first steps towards implementing wisdom-inquiry.

Equally impressive is the John Tyndall Centre for Climate Change Research, founded by 28 scientists from 10 different universities or institutions in 2000. It is based in six British universities, has links with six others and is funded by three research councils, NERC, EPSRC and ESRC (environment, engineering and social economic research). It “brings together scientists, economists, engineers and social

scientists, who together are working to develop sustainable responses to climate change through trans-disciplinary research and dialogue on both a national and international level – not just within the research community, but also with business leaders, policy advisors, the media and the public in general” ([www.tyndall.ac.uk/general/about.shtml](http://www.tyndall.ac.uk/general/about.shtml)). All this is strikingly in accordance with basic features of wisdom-inquiry.<sup>26</sup> We have here, perhaps, the real beginnings of wisdom-inquiry being put into academic practice.

A similar organization, modelled on the Tyndall Centre, is the UK Energy Research Centre (UKERC), launched in 2004, and also funded by the three research councils, NERC, EPSRC and ESRC. Its mission is to be a “centre of research, and source of authoritative information and leadership, on sustainable energy systems” ([www.ukerc.ac.uk/](http://www.ukerc.ac.uk/)). It coordinates research in some 12 British universities or research institutions. UKERC has created the National Energy Research Network (NERN), which seeks to link up the entire energy community, including people from academia, government, NGOs and business.

Another possible indication of a modest step towards wisdom-inquiry is the growth of peace studies and conflict resolution research. In Britain, the Peace Studies Department at Bradford University has “quadrupled in size” since 1984 (Professor Paul Rogers, personal communication) and is now the largest university department in this field in the world. INCORE, an International Conflict Research project, was established in 1993 at the University of Ulster, in Northern Ireland, in conjunction with the United Nations University. It develops conflict resolution strategies and aims to influence policymakers and others involved in conflict resolution. Like the newly created environmental institutions just considered, it is highly interdisciplinary in character, in that it coordinates work done in history, policy studies, politics, international affairs, sociology, geography, architecture, communications and social work as well as in peace and conflict studies. The Oxford Research Group, established in 1982, is an independent think tank which “seeks to develop effective methods whereby people can bring about positive change on issues of national and international security by non-violent means” ([www.oxfordresearchgroup.org.uk/](http://www.oxfordresearchgroup.org.uk/)). It has links with a number of universities in Britain. Peace studies have also grown during the period we are considering at Sussex University, King’s College London, Leeds University, Coventry University and London Metropolitan University. Centres in the field in Britain created since 1984 include the Centre for Peace and Reconciliation Studies at Warwick University founded in 1999; the Desmond Tutu Centre for War and Peace, established in 2004 at Liverpool Hope University; the Praxis Centre at Leeds Metropolitan University, launched in 2004; the Crime and Conflict Centre at Middlesex University; and the International Boundaries Research Unit, founded in 1989 at Durham University.<sup>27</sup>

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<sup>26</sup> See Tyndall Centre (2006).

<sup>27</sup> For an account of the birth and growth of peace studies in universities, see Rogers (2006).

Additional indications of a general movement towards aspects of wisdom-inquiry are the following. Demos, a British independent think tank, has, in recent years, convened conferences on the need for more public participation in discussion about aims and priorities of scientific research and greater openness of science to the public.<sup>28</sup> This has been taken up by The Royal Society which, in 2004, published a report on potential benefits and hazards of nanotechnology produced by a group consisting of both scientists and non-scientists. The Royal Society has also created a “Science in Society Programme” in 2000, with the aims of promoting “dialogue with society”, of involving “society positively in influencing and sharing responsibility for policy on scientific matters”, and of embracing “a culture of openness in decision-making” which takes into account “the values and attitudes of the public”. A similar initiative is the “science in society” research programme funded by the Economic and Social Research Council which has, in the autumn of 2007, come up with six booklets reporting on various aspects of the relationship between science and society. Many scientists now appreciate that non-scientists ought to contribute to discussion concerning science policy. There is a growing awareness amongst scientists and others of the role that values play in science policy and the importance of subjecting medical and other scientific research to ethical assessment. That universities are becoming increasingly concerned about these issues is indicated by the creation, in recent years, of many departments of “science, technology and society” in the UK, the USA and elsewhere, the intention being that these departments will concern themselves with interactions between science and society.

Even though academia is not organized in such a way as to give intellectual priority to helping humanity tackle its current global problems, academics do nevertheless publish books that tackle these issues, for experts and non-experts alike. For example, in recent years, many books have been published on global warming and what to do about it (see: [www.kings.cam.ac.uk/assets/d/da/Global\\_Warming\\_bibliography.pdf](http://www.kings.cam.ac.uk/assets/d/da/Global_Warming_bibliography.pdf)).

## 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

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<sup>28</sup> See Wilsdon and Willis (2004).

and methods of inquiry, from knowledge-inquiry to wisdom-inquiry. Almost every branch and aspect of academic inquiry needs to change.

This revolution – intellectual, institutional and cultural – if it ever comes about, will be comparable in its long-term impact to that of the Renaissance, the Scientific Revolution or the Enlightenment. The outcome will 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, as we have seen. 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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