

The Urgent Need for an Academic Revolution

From Knowledge to Wisdom

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Global Problems

1. Global Warming
2. Lethal character of modern warfare
3. Threat from modern armaments, conventional and nuclear
4. Destruction of natural habitats and rapid extinction of species
5. Depletion of natural resources, such as oil
6. Rapid population growth
7. Pollution of earth, sea and air
8. Vast inequalities of wealth and power around the globe
9. The Aids epidemic
10. Annihilation of languages and traditional ways of life

The Role of Modern Science and Technology

Modern science and technology have brought great benefits to humanity, but have also made all our current global problems possible.

For science and technology make possible modern industry and agriculture, modern medicine and hygiene, which in turn make possible global warming, pollution and depletion of natural resources, population growth, habitat destruction and extinction of species, modern armaments and the lethal character of modern war, inequalities of wealth and power, and even the Aids epidemic (Aids being spread by modern travel).

Some blame science for our problems, but this profoundly misses the point.

What we suffer from, rather, is science and technological research pursued in a way that is dissociated from a more fundamental concern to help humanity solve problems of living in increasingly cooperatively rational ways.

Basic Claim

We have a long tradition of academic inquiry devoted to the pursuit of knowledge, with science and technological research at its core.

Judged from the standpoint of promoting human welfare, this is damagingly irrational. It has made our current global problems possible.

We need a new kind of more rigorous inquiry devoted to the pursuit of wisdom – wisdom being the capacity to realize what is of value in life, for oneself and others, thus including knowledge and technological know-how, but much else besides.

We urgently need to bring about an intellectual revolution in our universities and other institutions of learning and research.

Outline of the Argument

1. Two Kinds of Inquiry:-

Knowledge-inquiry and Wisdom-inquiry

2. Knowledge-inquiry is what we have at present

3. It is profoundly and damagingly irrational, in a wholesale, structural way.

4. Wisdom-inquiry results when knowledge-inquiry is modified to cure it of its irrationality.

5. Two arguments in support of the claim that we need to put wisdom-inquiry into academic practice.

These appeal to:-

(i) Problem-solving rationality

(ii) Aim-pursuing rationality

6. Conclusion: We urgently need to bring about an academic revolution

What do I mean by Rationality?

As I use the term, rationality appeals to the existence of methods, strategies or rules which, if put into practice, other things being equal, give you the best chance of solving your problems, achieving your aims.

The rules of reason do not tell you precisely what to do, and do not guarantee success. They help you discover and decide what is really in your best interests, and do not decide for you.

They are meta-methods. They presume you can already put a wide range of methods successfully into practice, and tell you how best to marshal what you can already do in order to solve new problems.

Knowledge-Inquiry

In order to help promote human welfare, academic inquiry must, in the first instance, acquire reliable knowledge and technological know-how. Academia must devote itself to solving problems of knowledge. Once knowledge is acquired, it can be applied to help solve social problems.

Values, political ideas and programmes, policies, philosophies of life, must all be excluded from the intellectual domain of inquiry – which is restricted to the acquisition of knowledge.

This is the kind of inquiry we have inherited from the past. It still dominates academia today.

Four Basic Rules of Rational Problem-Solving

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, break it up into easier-to-solve, preliminary, specialized, subordinate problems, in an attempt to work gradually towards the solution to the basic problem to be solved.
4. But in this case ensure that basic and specialized problem-solving interact with one another, so that each influences the other.

Two Important Preliminary Points

- (a) In order to achieve 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, that really matters. Even when new knowledge is needed, as it is in medicine or agriculture, it is what this knowledge enables us to *do*, that achieves what is of value, not the knowledge as such (except when knowledge is itself of value).

- (b) In order to realize 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 *cooperatively rational ways* than we do at present.

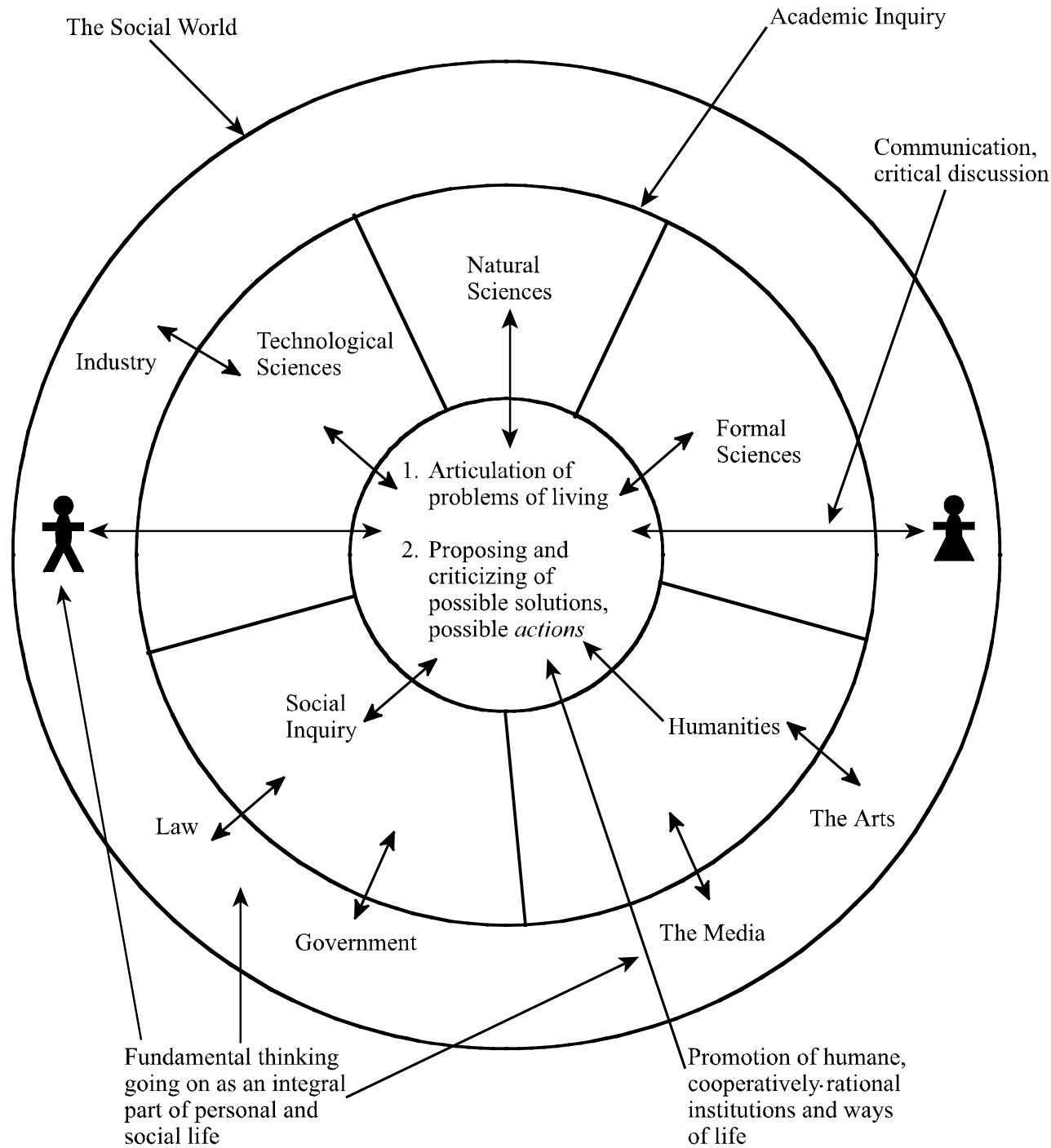
Damaging Irrationality of Knowledge-Inquiry

Knowledge-Inquiry puts rule 3 into effect splendidly, in creating and pursuing the multitude of specialized disciplines of modern academic inquiry.

But, in giving priority to solving problems of knowledge, knowledge-inquiry violates rules 1, 2 and 4.

Knowledge-inquiry violates three of the four most elementary rules of rational problem solving one can think of.

It is this structural irrationality that has helped create our global problems – in enhancing our power to act as a result of acquiring knowledge and technological know-how, without enhancing our power to act **wisely**.



Second Argument

The Enlightenment Programme:- To learn from scientific progress how to achieve social progress towards an enlightened world.

Three Steps

1. Correctly identify the progress-achieving methods of science.
2. Generalize them so that they become fruitfully applicable to any worthwhile, problematic human endeavour.
3. Apply these generalized progress-achieving methods to the task of trying to make progress towards an enlightened (wise, good, civilized) world.

Standard Empiricism

In science, claims to knowledge must be assessed impartially with respect to evidence alone. Considerations of simplicity, unity or explanatory power may influence what theory is accepted as well, but not in such a way that the universe itself is presumed to be simple, unified or comprehensible.

Science must not make any persistent assumption about the world independent of evidence, let alone against the evidence.

Basic Objection to Standard Empiricism

In physics, only unified fundamental theories are ever accepted, even though endlessly many empirically more successful, disunified rival theories can always be formulated.

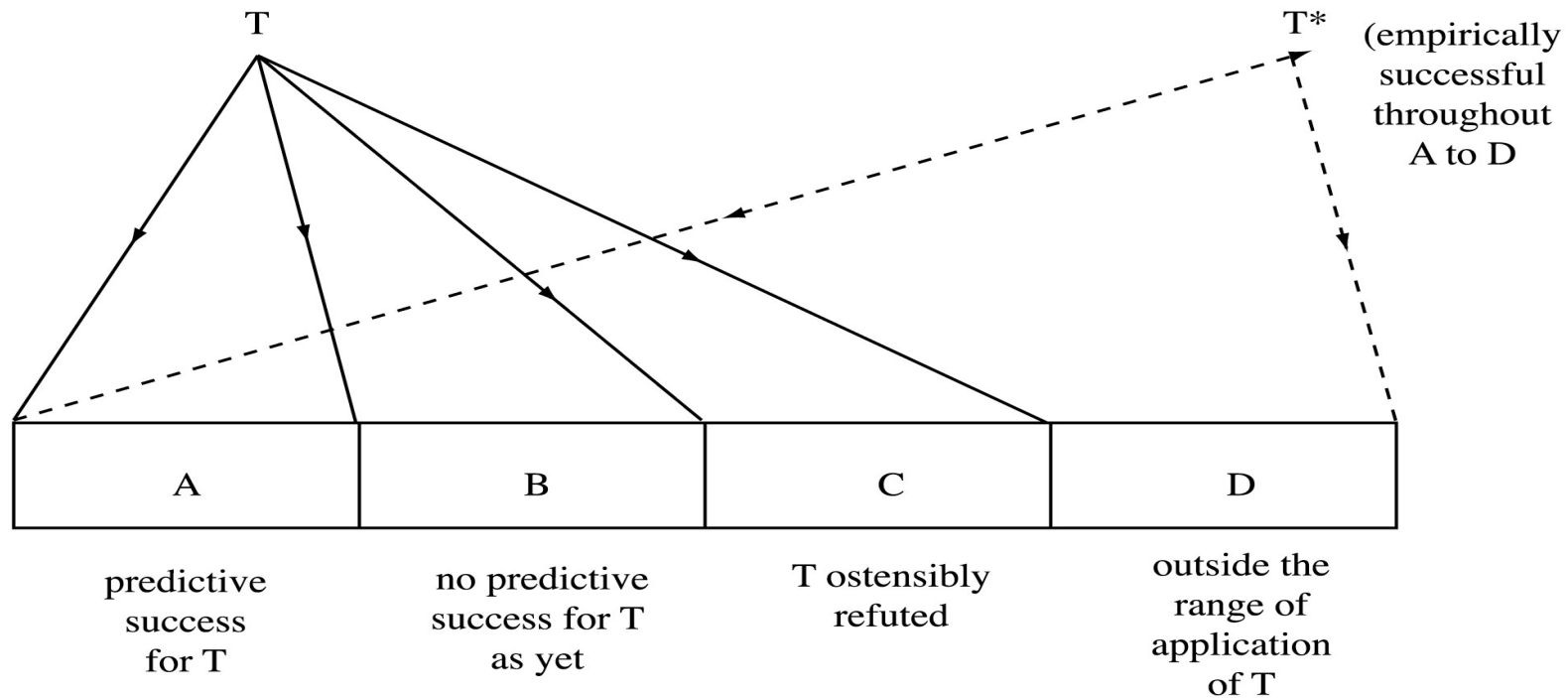
This means physics makes a big, implicit assumption about the universe: all disunified theories are false. The universe is, in some way, *unified*.

But in what way? Because this assumption is substantial, influential and problematic, it needs to be made explicit in physics, so that it can be critically assessed, so that alternatives can be developed and assessed, in an attempt to *improve* it.

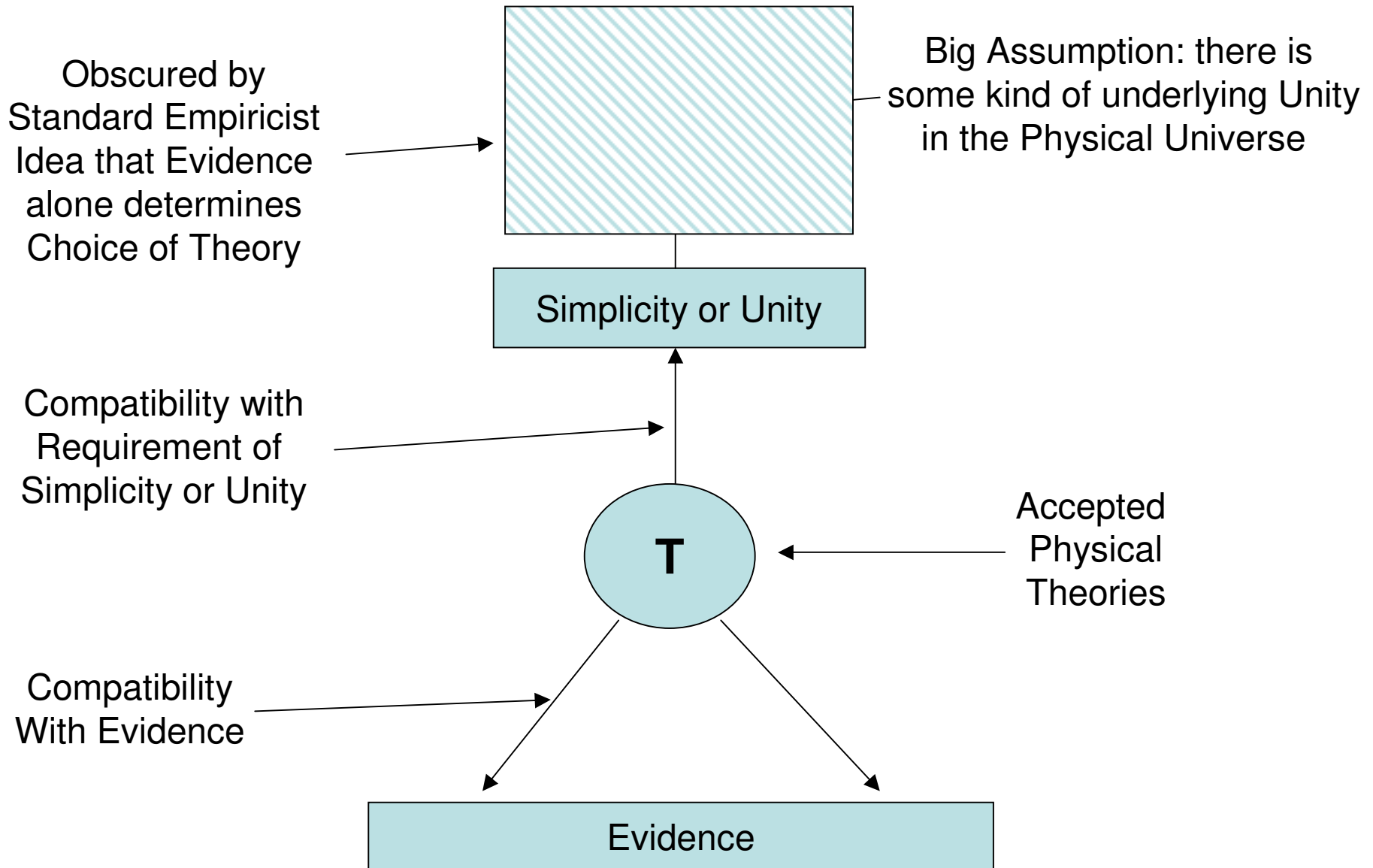
The outcome is a conception of science I call **aim-oriented empiricism**.

[A theory is unified if it attributes *the same* laws to all the phenomena to which the theory applies. It is disunified if it attributes *different* laws to some ranges of phenomena.]

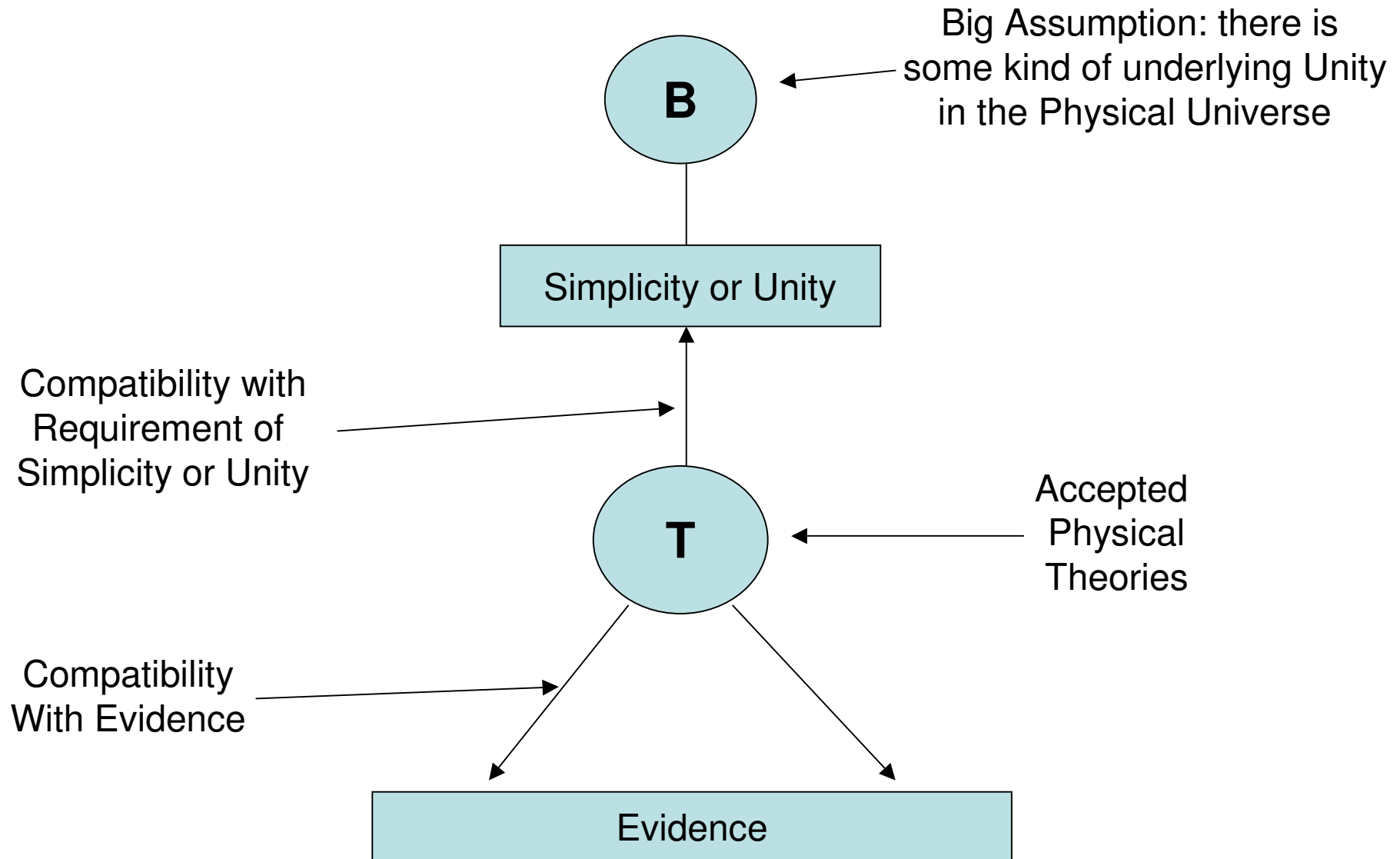
Refutation of Claim that Evidence alone Determines what Theory is Accepted in Science



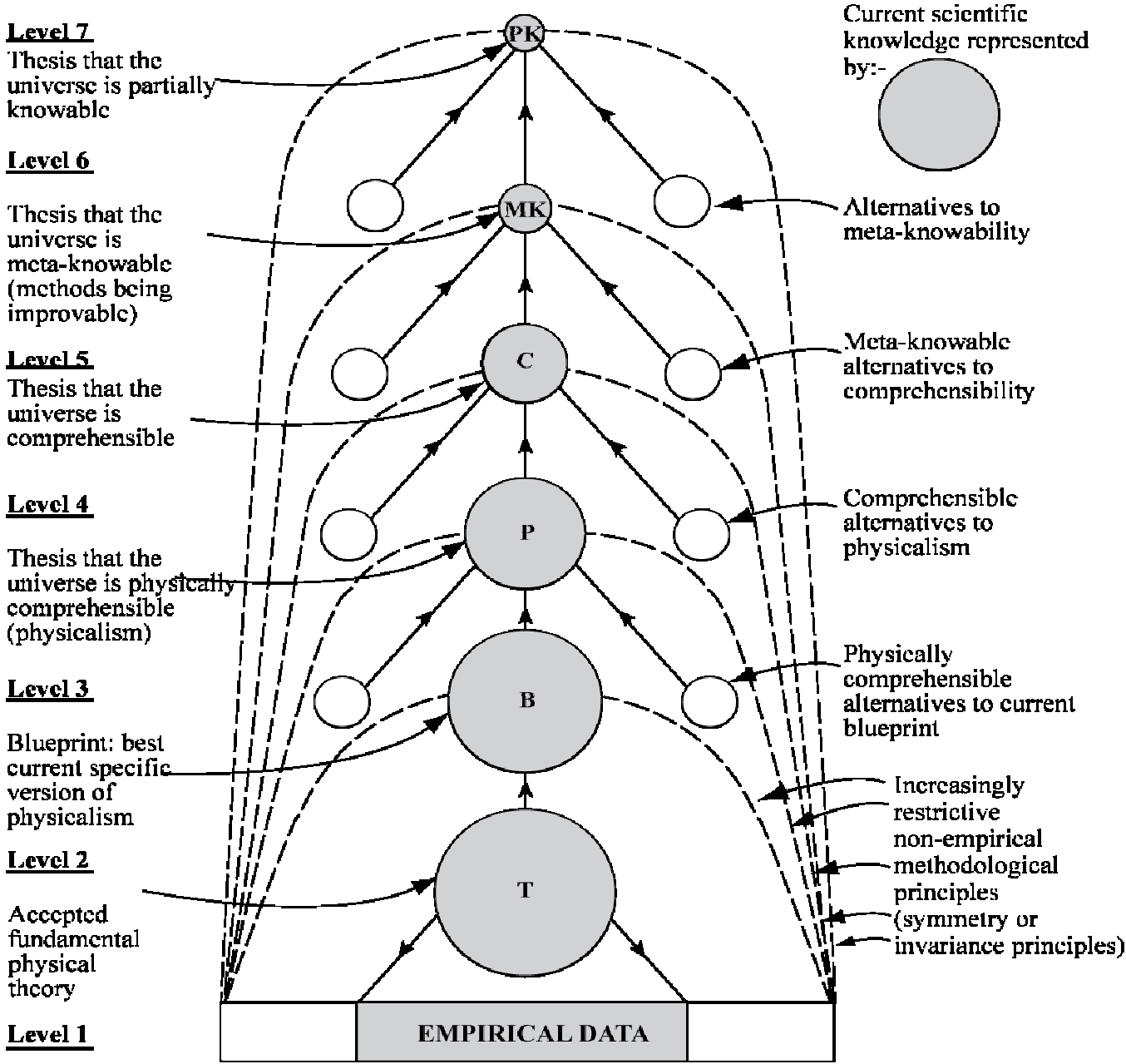
Step One: From Standard to Aim-Oriented Empiricism



Step One: From Standard to Aim-Oriented Empiricism



Step One: Aim-Oriented Empiricism



Aim-Oriented Empiricism: Further Implications

Science seeks, not *truth* merely, but rather the highly problematic aim of *truth presupposed to be explanatory* – the universe being presupposed to be physically comprehensible in some way or other.

More generally, science seeks truth that is, in one way or another, *of value* – an even more problematic aim. Furthermore, it seeks to make what it discovers available to help promote human welfare, even more problematic.

There are, in short, highly problematic metaphysical, value and political assumptions built into the aims of science.

We need a new, more rigorous and valuable kind of science that recognizes *three* domains of discussion: (1) Evidence (2) Theory, and (3) Aims.

Different sciences have different specific aims, often incorporating results from a more fundamental science. These specific aims, and associated methods, may evolve as scientific knowledge evolves. In this way, aim-oriented empiricism does justice to evolving and diverse aims and methods of the various branches of natural science, while at the same time specifying common aims and methods for all of natural science. The problem of scientific method is solved.

Step Two: Generalize Aim-Oriented Empiricism to Form:-

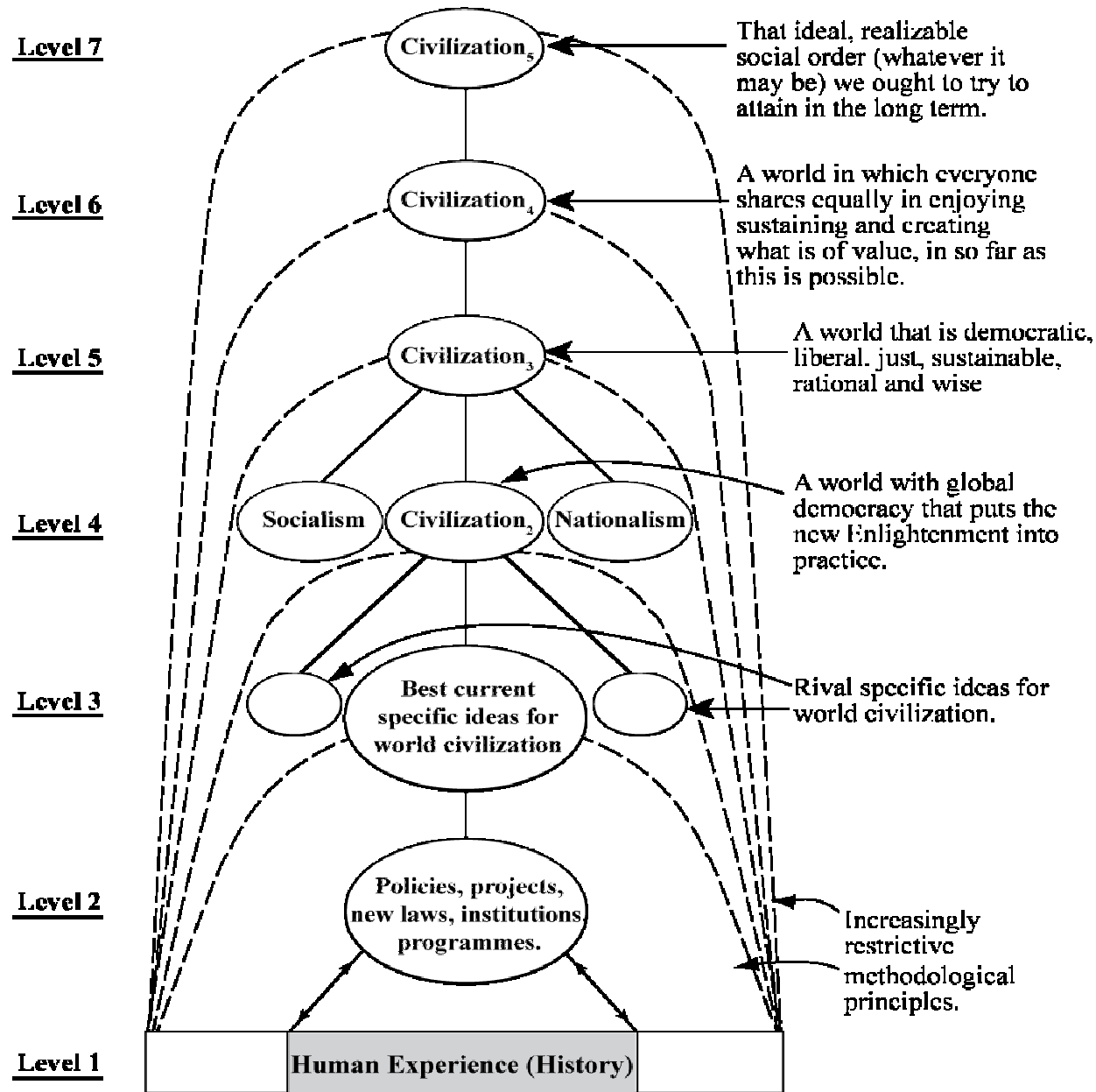
Aim-Oriented Rationality: Given any worthwhile endeavour with a problematic aim, represent the aim in the form of a hierarchy of aims and associated methods, aims becoming increasingly unspecific, and so increasingly unproblematic, as one goes up the hierarchy, in this way forming a framework of unproblematic aims and methods within which much more specific and problematic aims and associated methods may be imaginatively explored and critically assessed, in the hope of *improving* aims and methods as one acts, as one lives.

Aim-oriented rationality offers the hope that we may be able to get into personal, social, political and global life something of the kind of progressive success achieved by natural science.

Step Three: Feed Aim-Oriented Rationality into Social Life

Granted that, as far as academia is concerned, this is the task of social inquiry, this means social inquiry is social **methodology** or social **philosophy** not, primarily, social **science**.

Aim-Oriented Rationality Applied to Creating a Wise World



Wisdom-Inquiry Does Better Justice to Inquiry Pursued for Its Own Sake

1. Problems of living include problems of seeing, experiencing, apprehending, becoming a part of, what is of value. Analogy between inquiry and seeing.
2. Change of basic aim, from truth to realization of what is of value, means values, feelings and desires, which have no rational role within knowledge-inquiry, do have such a role within wisdom-inquiry. As a result, wisdom-inquiry encourages the development of the passion to understand whereas knowledge-inquiry tends not to. Wisdom-inquiry “puts mind and heart into touch with one another so that we may develop heartfelt minds and mindful hearts”.
3. Wisdom-inquiry, a synthesis of rationalistic and romantic ideals of integrity, would discourage hypocrisy about aims, and would do better at distinguishing training and education.
4. Wisdom-inquiry, in pursuing education as problem-solving, encourages and does not crush, Einstein’s “delicate little plant” of “holy curiosity”.
5. Aim-oriented empiricism does better justice to the search for explanation and understanding in physics than does standard empiricism.
6. Wisdom-inquiry social inquiry does far better justice to the development of mutual understanding between people than does knowledge-inquiry social science.

From Knowledge to Wisdom: What Needs to Change

1. Intellectual Aim of Inquiry
2. Academic Problems
3. Academic Ideas
4. Intellectual Progress
5. Location of Thought
6. Social Inquiry
7. Natural and Technological Sciences
8. Mathematics
9. Priorities of Research
10. Relationship between Natural Science and Social Inquiry
11. Relationship between Academia and Society
12. Role of Values, Emotions and Desires
13. Status of Political and Religious Ideas, and Art
14. Pure Science and Scholarship
15. Education
16. History
17. Literature
18. Psychology
19. Philosophy

Conclusion

We urgently need to bring about a revolution in our schools and universities so that their basic aim becomes to help us learn how to create a better world.

For further information see:-

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N. Maxwell, *From Knowledge to Wisdom*, Pentire Press, 2007, 2nd extended edition.

What Needs to Change

1. There needs to be a change in the basic intellectual *aim* of inquiry, from the growth of knowledge to the growth of wisdom — wisdom being taken to be the capacity to realize what is of value in life, for oneself and others, and thus including knowledge, understanding and technological know-how (but much else besides).
2. There needs to be a change in the nature of academic *problems*, so that problems of living are included, as well as problems of knowledge – the former being treated as intellectually more fundamental than the latter.
3. There needs to be a change in the nature of academic *ideas*, so that proposals for action are included as well as claims to knowledge – the former, again, being treated as intellectually more fundamental than the latter.
4. There needs to be a change in what constitutes intellectual *progress*, so that progress-in-ideas-relevant-to-achieving-a-more-civilized-world is included as well as progress in knowledge, the former being indeed intellectually fundamental.
5. There needs to be a change in the idea as to where inquiry, at its most fundamental, is located. It is not esoteric theoretical physics, but rather the thinking we engage in as we seek to achieve what is of value in life. Academic thought is a (vital) adjunct to what really matters, personal and social thought active in life.

6. There needs to be a dramatic change in the nature of social inquiry (reflecting points 1 to 5). Economics, politics, sociology, and so on, are not, fundamentally, *sciences*, and do not, fundamentally, have the task of improving knowledge about social phenomena. Instead, their task is threefold. First, it is to articulate problems of living, and propose and critically assess possible solutions, possible actions or policies, from the standpoint of their capacity, if implemented, to promote wiser ways of living. Second, it is to promote such cooperatively rational tackling of problems of living throughout the social world. And third, at a more basic and long-term level, it is to help build the hierarchical structure of aims and methods of aim-oriented rationality into personal, institutional and global life, thus creating frameworks within which progressive improvement of personal and social life aims-and-methods becomes possible. These three tasks are undertaken in order to promote cooperative tackling of problems of living — but also in order to enhance empathic or “personalistic” understanding between people as something of value in its own right. Acquiring knowledge of social phenomena is a vital but subordinate activity, engaged in to facilitate the above three fundamental pursuits.
7. Natural science needs to change, so that it includes at least three levels of discussion: evidence, theory, and research aims. Discussion of aims needs to bring together scientific, metaphysical and evaluative consideration in an attempt to discover the most desirable and realizable research aims. It needs to influence, and be influenced by, exploration of problems of living undertaken by social inquiry and the humanities, and the public.

8. There needs to be a dramatic change in the relationship between social inquiry and natural science, so that social inquiry becomes intellectually more fundamental from the standpoint of tackling problems of living, promoting wisdom.
9. The current emphasis on specialized research needs to change so that sustained discussion and tackling of broad, global problems that cut across academic specialities is included, both influencing and being influenced by, specialized research.
10. Academia needs to include sustained imaginative and critical exploration of possible futures, for each country, and for humanity as a whole, policy and research implications being discussed as well.
11. The way in which academic inquiry as a whole is related to the rest of the human world needs to change dramatically. Instead of being intellectually dissociated from the rest of society, academic inquiry needs to be communicating with, learning from, teaching and arguing with the rest of society — in such a way as to promote cooperative rationality and social wisdom. Academia needs to have just sufficient power to retain its independence from the pressures of government, industry, the military, and public opinion, but no more. Academia becomes a kind of civil service for the public, doing openly and independently what actual civil services are supposed to do in secret for governments.
12. There needs to be a change in the role that political and religious ideas, works of art, expressions of feelings, desires and values have within rational inquiry. Instead of being excluded, they need to be explicitly included and critically assessed, as possible indications and revelations of what is of value, and as unmasking of fraudulent values in satire and parody, vital ingredients of wisdom.

13. There need to be changes in education so that, for example, seminars devoted to the cooperative, imaginative and critical discussion of problems of living are at the heart of all education from five-year-olds onwards. Politics, which cannot be taught by knowledge-inquiry, becomes central to wisdom-inquiry, political creeds and actions being subjected to imaginative and critical scrutiny.
14. There need to be changes in the aims, priorities and character of pure science and scholarship, so that it is the curiosity, the seeing and searching, the knowing and understanding of individual persons that ultimately matters, the more impersonal, esoteric, purely intellectual aspects of science and scholarship being means to this end. Social inquiry needs to give intellectual priority to helping empathic understanding between people to flourish (as indicated in 6 above).
15. There need to be changes in the way mathematics is understood, pursued and taught. Mathematics is not a branch of knowledge at all. Rather, it is concerned to explore problematic *possibilities*, and to develop, systematize and unify problem-solving methods.
16. Literature needs to be put close to the heart of rational inquiry, in that it explores imaginatively our most profound problems of living and aids personalistic understanding in life by enhancing our ability to enter imaginatively into the problems and lives of others.

- 17 Philosophy needs to change so that it ceases to be just another specialized discipline and becomes instead that aspect of inquiry as a whole that is concerned with our most general and fundamental problems — those problems that cut across all disciplinary boundaries. Philosophy needs to become again what it was for Socrates: the attempt to devote reason to the growth of wisdom in life.
- 18 Academic contributions need to be written in as simple, lucid, jargon-free a way as possible, so that academic work is as accessible as possible across specialities and to non-academics.
19. There needs to be a change in views about what constitute academic contributions, so that publications which promote (or have the potential to promote) public understanding as to what our problems of livings are and what we need to do about them are included, in addition to contributions addressed primarily to the academic community.
20. Every university needs to create a seminar or symposium devoted to the sustained discussion of fundamental problems that cut across all conventional academic boundaries, global problems of living being included as well as problems of knowledge and understanding.

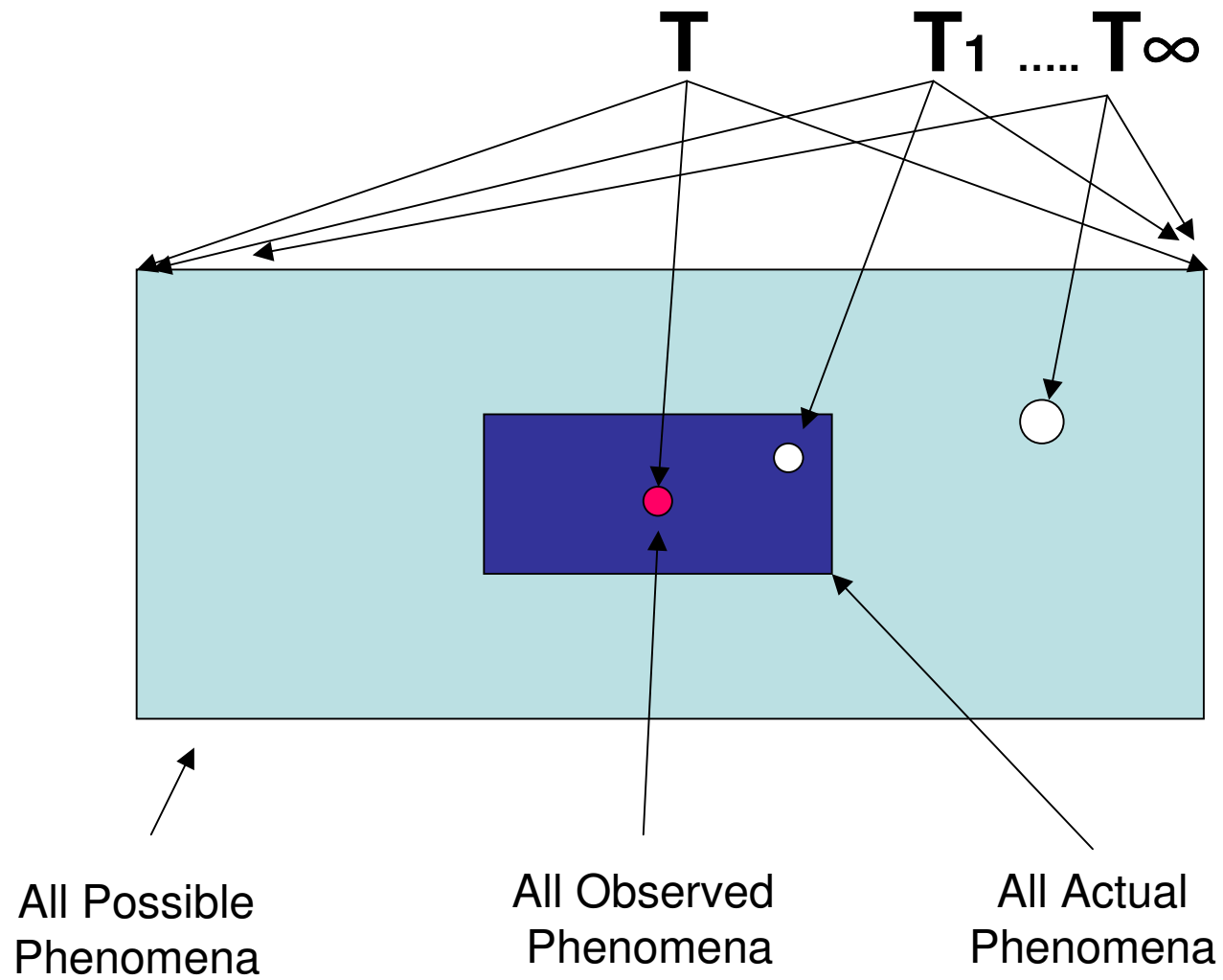
In addition, the following three institutional innovations ought also to be made to help wisdom-inquiry to flourish:

21. Natural science needs to create committees, in the public eye, and manned by scientists and non-scientists alike, concerned to highlight and discuss failures of the priorities of research to respond to the interests of those whose needs are the greatest – the poor of the earth – as a result of the inevitable tendency of research priorities to reflect the interests of those who pay for science, and the interests of scientists themselves.

22. Every national university system needs to include a national shadow government, seeking to do, virtually, free of the constraints of power, what the actual national government ought to be doing. The hope would be that virtual and actual governments would learn from each other.

23. The world's universities need to include a virtual world government which seeks to do what an actual elected world government ought to do, if it existed. The virtual world government would also have the task of working out how an actual democratically elected world government might be created.

Refutation of Standard Empiricism



Aberrant Versions of Newtonian Theory

1. $F = G \frac{M_1 M_2}{d^2}$

2. Up until the end of this lecture $F = G \frac{M_1 M_2}{d^2}$

and thereafter $F = -G \frac{M_1 M_2}{d^2}$

3. $F = G \frac{M_1 M_2}{d^2}$ for all bodies except for gold spheres,

each weighing over 1,000 tons, in outer space within a spherical region of 1 mile, in which case:-

$$F = G \frac{M_1 M_2}{d^4}$$