# The Critical Rationalist

**ISSN 1393-3809**

**Volume 01** **Number 01**

**26-Nov-1996**

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**The Critical Rationalist** **Vol. 01 No. 01**
**ISSN: 1393-3809** **26-Nov-1996**

# A Failed Philosopher Tries Again

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***Editors' Note***

*This is a specially invited article, from* ***George Soros****. The text was originally presented as* ***The 1995 IWM Jan Patocka Memorial Lecture*** *at the* ***Institute for Human Sciences****, 27 April 1995.*

# A Failed Philosopher Tries Again

*(1)* My philosophy can be summed up in one phrase: a belief in our own fallibility. This phrase has the same significance for me as the dictum, *cogito ergo sum*, does for Descartes. Indeed, its significance is even greater: Descartes' dictum referred only to the person who thinks, whereas mine relates also to the world in which we live. The misconceptions and misunderstandings that go into our decisions help shape the events in which we participate. Fallibility plays the same role in human affairs as mutation does in biology.

*(2)* I need to emphasise that I am articulating a belief—a reasoned belief, to be sure, which is appropriate to a philosophy but still a belief—I cannot prove it, the way Descartes claimed to prove his own existence. God knows I tried and sometimes I came quite close to it, but in the end I always got caught in a web of my own weaving. There is something self-contradictory in being able to prove your own fallibility. Equally it is self-consistent that one should be unable to do so. So I am happy to assert the truth of my statement as a belief.

*(3)* This has an important implication. It implies that we need some belief to guide us through life. We cannot rely on reason alone. Rationality has its uses but it also has its limitations. What these limits are will be one of the questions I shall ask here. If we insist on staying within the limits of reason, we cannot cope with the world in which we live. By contrast, a belief in our own fallibility can take us much further. How much further will be the main question I shall explore here, although I must warn you that I will not have time to deal with the most important point, namely the connection between a belief in our fallibility and a belief in open society. That point will have to await another occasion.

*(4)* In my case, the belief in my own fallibility has guided me both in making money and in giving it away. But there is more to my existence than money, I focused on it in my career mainly because I recognised that there is a tendency in our society to exaggerate the importance of money, to define values in terms of money. We appraise artists by how much their creations fetch. We appraise politicians by the amount of money they can raise; often they appraise themselves by the mount of money they can make on the side. Having recognised the importance of making money, I may yet come to be recognised as a great philosopher—which would give me more satisfaction than the fortune I have made.

*(5)* The prevailing bias in favour of money and wealth is a good example of what I mean by fallibility. To translate the concept of fallibility into operational terms and to sharpen the point, I will assert that all our mental

constructs with a few exceptions, are actually or potentially flawed. By mental constructs I mean the products of our thinking, whether they stay inside the recesses of our mind or find expression in the outside world in the form of institutions such as the financial markets or the varying exchange rate regimes or the United Nations, or the nation states, or the political and legal structure within states and between states. The mental constructs which stay within the confines of our mind can range all the way from simple sensory perceptions through language to elaborate belief systems which may or may not relate to the world in which we live.

*(6)* The best way to explain what I mean by flawed mental constructs is to examine the exceptions, mental constructs which are not flawed. We are capable of making statements which are either true or false. Such statements are not flawed. To the extent that we can rely on true statements, we are capable of attaining knowledge. It is only when they go beyond such "well formed" statements that our mental constructs are flawed. So we need to examine what kind of true statements we can make. There are singular statements which correspond to specific facts and there are rules by which the truth of some statements can be derived from other statements, notably in mathematics and logic. Our greatest achievement is science, where we formulate universally applicable generalisations. But as Karl Popper has shown, such generalisations cannot be verified, only falsified. They remain hypothetical in character, always subject to falsification.

*(7)* The common feature of all these forms of knowledge is that there are facts or rules which would serve as reliable criteria for judging their truth or validity if only we knew how to apply them. What makes the criteria reliable is that they are independent of the statements to which they are applied and of the people applying them.

*(8)* If you consider our position as human beings trying to understand the world in which we live, you will find that we cannot confine our thinking to subjects which are amenable to knowledge. We must make decisions about our lives and in order to do so we must hold views that do not qualify as knowledge, whether we recognise the difference or not. We must have recourse to beliefs. That is the human condition. Recognising the human condition does not quite qualify as knowledge—it would be self-contradictory if it did—but it provides a set of beliefs that is more appropriate to the human condition that any other—at least, that is what I believe when I assert my own fallibility.

*(9)* I find that my view of the world differs from the generally accepted wisdom in many ways, both large and small. Let me focus on the largest. The prevailing wisdom is heavily influenced by the phenomenal success of natural science. It seeks to imitate natural science in areas where it is not

appropriate—notably human affairs. Natural science treats events as a succession of facts. In human affairs this treatment introduces a distortion because it diverts attention from the flaws in our mental constructs. It disregards the gap between the participants' views and the actual state of affairs. Nowhere is this bias more noticeable than in economic theory, but it also colors our interpretation of history.

***(10)*** In events which have thinking participants, the chain of causation does not lead from one set of facts to the next; insofar as the participants' thinking plays a role, it leads from facts to perceptions, from perceptions to decisions and from decisions to the next set of facts. There is of course, also the direct link between one set of facts and the next which is characteristic of all natural phenomena. But this more circuitous link cannot be left out of account without introducing a distortion whenever there is a significant gap between perception and reality.

***(11)*** Economic theory has managed to disregard the gap by taking demand and supply as given and focusing its attention on the relationship between supply and demand. It has construed an elaborate interpretation of reality which is, at least in one case, namely in the behaviour of financial markets, far removed from reality.

***(12)*** By contrast I have focused on the gap between perception and reality. I notice that reality is reflected in people's thinking—I call this the cognitive function; and reality is affected by people's decisions—I call this the participating function. I notice further that the two functions work in opposite directions. In a narrow band they overlap. People think about events which are affected by their decisions. These events have a different structure from the events studied by natural science; they need to be thought about differently. I call these events reflexive. I contend that reflexivity introduces an element of uncertainty both into the participants thinking and the actual course of events.

***(13)*** I have had considerable difficulties in developing my theory of reflexivity but I need not go into them here. The point I want to make is that in human affairs there is an element of uncertainty which is missing from natural phenomena . Natural science has also encountered uncertainty—notably in quantum physics. But the uncertainty I am talking about is different. It affects not only the subject matter but also the theories which relate to them.

***(14)*** Heisenberg established the Uncertainty Principle and based on that principle quantum physics has been able to produce statistical generalisations which have significant predictive and explanatory powers. The Uncertainty Principle asserts that the observation of quantum phenomena affects their behaviour. But the Uncertainty Principle itself, or any other theory propounded by quantum physics does not affect the behavior of quantum phenomena; therefore those phenomena provide a reliable criterion for judging the validity of the theories. Suppose now that I proposed a theory which predicted the behavior of the stock market; surely it would affect the behavior of the stock market. This creates a different kind of uncertainty than the one which confronts quantum physics. It affects the criterion by which the truth of statements or the validity of theories is judged. That means that even a true theory may be false or a false theory may be true.

***(15)*** How does that fit in with our generally accepted notion of truth? It seems that we need more than the two recognized categories, true and false. The logical positivists asserted that statements which are not true or false are meaningless. I thoroughly disagree. Theories that can affect the subject matter to which they refer are the opposite of meaningless. They can change the world. They express the active role that thinking can play in shaping reality. We need to adjust our concept of truth to account for them. I propose that we need three categories: true, false and reflexive. The truth value of reflexive statements is indeterminate. It is possible to find other statements with an indeterminate truth value but we can live without them. We cannot live without reflexive statements. I hardly need to emphasise the profound significance of this proposition. Nothing is more fundamental to our thinking than our concept of truth.

***(16)*** Logical positivism was a philosophy which celebrated the triumph of natural science. It carried the principles of natural science to their logical conclusion. I contend that it went too far. It suppressed the active role that thinking can play in shaping reality. Logical positivism serves as an example in demonstrating how far our view of the world has been shaped by natural science. We need to revise thoroughly our view of the world. That is what I hope to accomplish by my proposal to introduce a third category into our concept of truth: the reflexive.

***(17)*** Let me give you an example of the difference that the recognition of the concept of reflexivity would make. There is now a widespread belief in the "magic of the market-place" which is based on the failure of government regulation. If you introduce the concept of reflexivity, it becomes apparent that the failure of regulation does not mean that free markets are perfect and *vice versa*. Both arrangements are flawed and the choice between them is reflexive.

***(18)*** Reflexive statements lack an independent criterion for judging their truth. Their truth value is uncertain. Yet they are the opposite of meaningless. We cannot do without them in coping with the world in which we live, and they are not just passive reflections of what is; they actively construct our world. To be sure, there is a reality outside our thinking, a reality that we cannot bend to our will. But our thinking, our statements, are inside that reality, they form part of that reality. Somehow we have gained the impression that thinking and reality belong to separate but similar universes, and it is possible to establish a correspondence between them where the statements mirror the facts. This picture is appropriate to scientific method and to axiomatic systems like mathematics and logic, but not to us, living and thinking human beings.

***(19)*** Karl Popper succeeded in showing how scientific method obeys the rules of deductive logic. His deductive nomological model of scientific method is brilliant in its simplicity. The model is composed of three kinds of statements: specific initial conditions, specific final conditions, and generalisations of universal applicability. Those three kinds of statements can be combined in three different ways: generalisations combined with initial conditions yield predictions; combined with final conditions, they provide explanations; and the combination of specific initial conditions with specific final conditions provides a test of the generalisations. The predictions and explanations are reversible, and generalisations are timeless.

***(20)*** Reflexivity raises questions about the relevance of scientific method to the study of human and social phenomena. Popper maintained that the same methods and criteria apply to both social and natural science. He called this the doctrine of the unity of method. I have some doubts about this doctrine. I expressed them in the title of my book *The Alchemy of Finance*. I argued in the book that the expression "social science" is a false metaphor and events in which the participants' imperfect understanding plays a significant role cannot be explained and predicted by universally applicable laws. I now believe that I carried my arguments too far, just as the logical positivists did, only in the opposite direction.

***(21)*** Abiding by the doctrine of the unity of method it is possible to apply the methods and criteria of natural science to social phenomena and they may produce worthwhile results within their terms of reference. We must merely remember that their terms of reference exclude, by definition, events in which imperfect understanding plays a significant role. Economic theory, for instance, is valid as a hypothetical construct in which some of the consequences of imperfect understanding are assumed away. A distortion is created only when we apply the conclusion of economic theory to the real world. This is particularly noticeable in financial markets. The theory of rational expectations and efficient markets yields highly misleading results.

***(22)*** One of the ways in which we cope with the uncertainties of the human condition is by carrying whatever knowledge, experience or insight we have gained to areas which it does not cover. This is true in visual perception, where we cover our blind spot without any difficulty as well as in the most complex constructs.

*(23)* In recent years, a new trend has emerged in natural science which is fundamentally different from the analytical approach described in Popper's model. This is the science of complexity, or evolutionary systems theory, or chaos theory as it is sometimes called. It studies open, evolutionary systems; it does not expect to produce deterministic predictions or explanations. All it seeks to do is to build models or run simulations. This has been made possible by the development of computer technology.

*(24)* I believe this approach is more relevant to the study of social phenomena than analytical science. But even here I find that the difference between social and natural phenomena is not sufficiently recognised. Most computer programs deal with the evolution of populations. To study the interaction between thinking and reality, we need a model of model-builders whose models in turn, must contain model-builders whose models, in turn, must contain model-builders, *ad infinitum.* To the best of my knowledge, this has not yet been done by any computer simulation. The infinite nesting of models must be brought to a close somewhere if the models are to serve any practical use. In any case, the models cannot reflect reality in its full complexity. That is another way to arrive at the conclusion that the participants' understanding is inherently imperfect.

*(25)* This is about as far as I can go in one article. I have given you the core ideas of my philosophy. I can only indicate where they have lead me in the real world.

*(26)* Once you recognise that there is a discrepancy between the participants' views and the actual state of affairs, the discrepancy itself becomes a fertile field for study. There are situations where perceptions and reality are not too far apart and there are forces at work which tend to bring them closer together. I call this a state of dynamic equilibrium. There are other situations where perceptions and reality are quite far removed without any tendency to converge. I call these far-from-equilibrium conditions. There are cases of dynamic disequilibrium where both the real world and the participants' views are in flux and there are other cases where both the prevailing data and social reality are rigidly fixed but quite far apart and out of kilter.

*(27)* I have specialised in far-from-equilibrium conditions, both in theory and in practice. I experienced them early in life as a Jewish boy of 14 under Nazi occupation in Hungary and then under Soviet occupation. I studied them in London and the ideas I formed under the influence of Karl Popper have guided me both in making money and in giving it away.

*(28)* I do not have time to explain how the belief in our fallibility leads to the concept of open society as a goal worth fighting for, although that is the message I really want to deliver. As far as money-making is concerned, I would be better off keeping my ideas to myself. But to serve a useful purpose, it is not enough for me to believe in an open society. Open society will prevail only if people believe in it as a desirable goal. That is where the open societies of the West are failing today—you only need to look at Bosnia—and that is where I have failed so far, both as a philosopher and as an activist.

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