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"EVIDENCE-BASED" POLICY - A GENERAL CRITIQUE [1]

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Abstract: I provide a general critique of evidence-based policy and the untenable concept of a value-free social science which underpins it. This is illustrated using specific theoretical and policy applications in social science, with a focus on economics, which include: economic theories of social class and exploitation; causes of unemployment; drugs policy; sex education and health policy; choice and competition in public education provision.

Keywords: evidence, policy, value-free, normative, positive, class, exploitation, unemployment, drugs, sex, education, choice, competition

1. INTRODUCTION

The ideal of "evidence-based" economic and social policy has a strong *prima facie* appeal. I shall nonetheless attempt to show that (at least in the usual naive form in which it is presented, especially by politicians and popular media) it is based on deeply flawed philosophical foundations which when applied to policy issues can fundamentally threaten the moral fabric of a free society and its respect for individual autonomy. This tendency is, I believe, encouraged by a widespread failure of social scientists to properly understand and discuss the issues I will be raising.

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I shall, in the first part of this article, consider the relevant arguments from a philosophy of social science perspective. I shall then illustrate the general argument by considering a number of contemporary theoretical and policy controversies. On some of these I personally hold strong opinions on one side or the other, whilst on others I subscribe to a more nuanced and equivocal view. I shall be open about this. I shall try to show however, on the basis of the general principles laid out, that certain *types* of argument both for and against such positions should not be accepted as legitimate ones in public discourse in an open and free society.

When one believes strongly, as I do for instance, that socialist economic ideas are incoherent and self-defeating, or that recreational drugs should be legalised, it is tempting to emphasize factually-based arguments which seem overwhelming in their logic. "Just look at what happened to workers' civil rights and living standards after all power went to the Soviets under the Bolsheviks. It is self-evident that such policies lead to economic disaster and political repression." "Just look at the number of deaths caused by use of ecstasy compared to those caused by alcohol. It is obvious to anyone with an open mind which of the two drugs represents the far greater threat to public health." We have all, on the other hand, had the experience of arguing against those with whom we disagree and coming up against arguments of this form which are difficult to retaliate against but in fact completely miss the point as far as we are concerned. Usually the debate reaches a deadlock and we must move on to other ground or give up the discussion entirely.

I define "evidence-based" approaches to public policy-making as those which are based on the principle that there can be a clear separation between the aims of policy and the empirical question of how best to achieve such aims. Karl Popper called this a "piecemeal social technology" (Popper, 1957). Milton Friedman drew the distinction between positive and normative economics (Friedman, 1953). (I mention these two as eminent thinkers, with whom I agree on many issues, to illustrate how widely held this view is. I believe it nonetheless to be a conceptual error.) Contemporary political platforms often use a similar framework to oppose, for instance, abstinence programs for the control of sexually transmitted diseases (because they do not, on the basis of the evidence, achieve the proposed goal) or voucher schemes introducing competition into state monopolies in education and healthcare (because they either have no detectable effect, or a negative one, on measurable outcomes).

2. PHILOSOPHICAL GROUNDWORK

Let us first consider the arguments in favour of such a positive/normative separation. Firstly, economic and social policy can be effectively implemented only if there is a fair degree of consensus. Will it not be easier to achieve

such consensus if we can find *aims* of policy that all (or at least most) agree upon, and then let the evidence determine scientifically which policies will best enable these goals to be achieved? Secondly, surely such a scientific approach to policy will also make it much more likely that the commonly held goals will in fact be achieved by the policies we implement, rather than if we choose policies on a "knee-jerk" basis? Thirdly, as Karl Popper famously argued (Popper, 1957), policies aiming at a revolution of the social order and promising beneficial consequences can have no such scientific basis, in the sense that their utopian predictions are unfalsifiable by any piecemeal "experiments" that we are able to run in the presently constituted social order. (The Marxist revolutionary can always maintain that all current social ills are due to capitalism, and that socialism will cure them after the revolution, regardless of the observed consequences of any currently or previously imposed socialist policies.) This offers an appealing way to justify the rejection of extremist ideologies and their policies as pseudo-scientific.

Despite the attraction of the positive arguments made above, I will outline a series of philosophical objections to evidence-based policy which I believe to be decisive. I will after this proceed to consider if and how we can salvage the above considerations in a more adequate theory of the relationship of the social sciences (and particularly economics) to democratic discourse and decision-making in an open and free society, whilst avoiding the pitfalls of pursuing evidence-based policy-making. In the process, I will return to some of the policy debates already mentioned, and introduce a few others, in order to see how the principles may be elucidated and applied in practice.

The starting point for the modern philosophy of science and social science lies in the work of Karl Popper and Thomas Kuhn. Popper argued (Popper, 1959) - against the ideas of the logical positivists who were his philosophical predecessors - that scientific theories could not be conceptualised as inductive generalisations built up progressively and solely from empirical observations. Crucially, theories are logically prior to their predictions (and thus to the evidence that supports them). This is because only once a particular theoretical framework has been adopted can empirical observations be given a coherent structure. (For example, we must have theoretical concepts such as mass or energy in place before we can even start taking measurements in physics.) On the other hand, a truly scientific theory must be falsifiable in that there must be conceivable potential experimental results which would show it be be untrue. Popper drew the stark distinction between unfalsifiable pseudo-scientific Marxist social and economic theories and Einstein's Theory of General Relativity, which generated predictions which were directly testable by experiments in which it was clear in advance which potential results would, and would not, corroborate the theory.

Although Kuhn claimed to be in agreement with Popper on many issues, especially the inherently theory-laden nature of empirical observation, he emphasised, in contrast to Popper (Kuhn, 1962), that in fact the process of "falsification" can never be a cut-and-dried procedure in which all scientists could be expected to agree. There are always some anomalies which cannot be explained by a given network of theories (or paradigm, in Kuhn's now widely-followed terminology). As these mount, a paradigm will become progressively weaker and less tenable. However, scientists will only actually abandon it when a *new* paradigm becomes available which offers superior potential for resolving the remaining anomalies. The judgement whether and when this has occurred involves the weighing of *conflicting* scientific values such as accuracy of prediction, breadth of prediction and internal theory coherency (Kuhn, 1977).

Although these values are shared by scientists, the precise way in which they should be weighed in a particular case cannot be laid down in advance and for all scientists. Also, it is inevitable, given that scientists are human beings, that their individual interests, history and idiosyncrasies will play a key role in the judgements they make. This has important implications for the crucial role of academic freedom in the optimal governance of scientific institutions. As Friedrich Hayek has pithily summarised:

> Most scientists realize that we cannot plan the advance of knowledge, that in the voyage into the unknown - which is what research is - we are in great measure dependent on the vagaries of individual genius and of circumstance, and that scientific advance, like a new idea that will spring up in a single mind, will be the result of a combination of conceptions, habits and circumstances brought to one person by society, the result as much of lucky accidents as of systematic effort.
>
> (Hayek, 1960)

There follow, I would contend, some essential principles for the beneficent governance of the natural and social sciences in a society which seeks progress in human knowledge and intellectual capacities. Firstly, there must be many multiple sources of academic funding, both public and private, so that such "accidents" can be given their maximum potential to happen. Secondly, science (whether natural or social) cannot be coherently expected to be "value-neutral". It is illegitimate, for instance, to dismiss research conducted into genetically modified crops purely because such scientists are employed by corporations with a vested financial interest. *All* scientists will inevitably have such vested

interests (whether financial or psychological). The key check and remedy is that there be competition and pluralism in the system. Freedom and progress would be equally threatened if all scientists were employed by the state, or if all were employed by private corporations.

It is worth pointing out one of the key objections that must be faced by the broadly Kuhnian view of scientific governance I have outlined. This is the one most famously espoused by Paul Feyerabend (Feyerabend, 1975) that there can be no distinction between science and pseudo-science since "pseudo-sciences" such as astrology also embody scientific values such as explanation and prediction. My own response would be a pragmatic Hayekian one in that, as long as independent private wealth and competing sources of funding exist, then it is legitimate for the state to only judge certain sciences worthy of public funding (e.g. astronomy but not astrology). It is important to recognize, as Kuhn clearly argued, that to contend that all evidence is theory-laden and that all theory is value-laden does not imply a complete relativism - that "anything goes". The natural and social world does really exist, and in the end does give a verdict on which theories will survive. It is just that this is by an inherently *social* process of competition and discourse between intellects rather than one in which a single rational individual intellect (or the view of the bureaucracy in a unitary planning authority) can be sovereign.

For Hayek, as for many other thinkers (a few of whose ideas we will visit shortly), the combination of an incorrect view of the underpinnings of progress in the natural sciences, along with a slavish attempt to imitate them, has often lead to the impoverishment and corruption of the social sciences. Much human misery has been caused by the well-meaning but unreflective application of the resulting flawed theories. In the end, such a mistaken philosophy of social science threatens the foundations of natural science, along with the rest of the moral fabric of society. The most extreme example of this, of course, was the attempt by National Socialist and Communist regimes to control and pervert natural science in order to bolster their ideologies. The idea that "the evidence can speak for itself" when we are considering the correct policy for control of drugs, provision of contraceptives or the structure of public sector services is another prime example of such an error, however, because it will inevitably mean that what are in reality *moral* debates about the fundamental values of human life are misleadingly dressed-up and mutilated by their pseudo-scientific presentation in the (wrongly) perceived form of the natural sciences.

Besides the untenability of the idea that evidence exists independently of theory, which is central to the philosophy of both the natural and social sciences, there are other crucial issues which are peculiar to the social sciences and which cast further doubt upon on the concept of "evidence-based" policy. A key consideration here is the *reflexive* nature of social reality. Unlike in

a natural science such as physics, the reality described by a social scientific theory must include agents' actual or potential consciousness of the social scientific theory itself. The implications of this idea have been explored by many thinkers - but one of the most prescient, and highly relevant to my current contention that the philosophical ideas behind evidence-based policy are intellectually and morally dangerous, is C.S. Lewis.

In "The Abolition of Man", (Lewis, 1943) Lewis argued that the attempt to build a naturalistic "science of man" using the philosophical method of the natural sciences would, far from crowning humanity's ability to control the natural world for human benefit, in fact lead to the surrender of human moral faculties to nature and their resultant destruction. Whereas traditional moral theories, such as the Christian idea of natural law, gave human moral values an existence that was not dependent on naturalistic scientific explanation, Lewis was alarmed by the rapidly spreading acceptance of the secular "humanistic" ideal that human social and moral nature could be reformed and improved in a "scientific" manner. To attempt to debunk and "explain away" some traditional human moral ideals would inevitably, if consistently followed, lead to a complete moral vacuum:

> There never has been, and never will be, a radically new judgement of value in the history of the world. What purport to be new systems or...'ideologies', all consist of fragments...arbitrarily wrenched from their context and then swollen to madness in their isolation...If my duty to my parents is a superstition, then so is my duty to posterity. If justice is a superstition, then so is my duty to my country or my race. If the pursuit of scientific knowledge is a real value, then so is conjugal fidelity.
>
> (Lewis, 1943)

It is open to humanity, or social science on behalf of humanity, to treat its moral intuitions "scientifically" as a purely natural phenomenon resulting from evolution and capable of "technological" change. However, such an approach will mean that the conditioners who use social science and the "social technology" it generates to shape other men's nature will have to do so entirely on the basis of their own evolved instincts, with no reference to absolute moral values. Neither the conditioned nor the conditioners will any longer exist within a human moral universe. Hence man will be "abolished".

Like Hayek, Lewis was extremely influential in showing that superficially appealing but ultimately shallow and incoherent social scientific ideals will in the end lead to a moral abyss. This is in spite of (and rendered all the more terrifying and subversive because of) the fact that they are generally

promoted by individuals of undoubted good will and intelligence. The problem is that such "Pied Piper" intellectuals (my term, not Hayek's or Lewis') have been seduced by a vision which claims that the whole of social reality can be conquered by "scientific reason", but which - highly tragically and ironically - if consistently acted upon will lead to the destruction of scientific reason itself (along with all other moral values):

> The process which, if not checked, will abolish Man goes on apace among Communists and Democrats no less than among Fascists. The methods may (at first) differ in brutality. But many a mild-eyed scientist in pince-nez, many a popular dramatist, many an amateur philosopher in our midst, means in the long run just the same as the Nazi rulers of Germany.
>
> (Lewis, 1943)

> The rationalist who desires to subject everything to human reason is thus faced with a real dilemma. The use of reason aims at control and predictability. But the process of the advance of reason rests on freedom and the unpredictability of human action. Those who extol the powers of human reason usually see only one side of that interaction of human thought and conduct in which reason is at the same time used and shaped. They do not see that, for advance to take place, the social process from which the growth of reason emerges must remain free from its control.
>
> (Hayek, 1960)

A social scientific approach which is compatible with and capable of promoting human freedom and dignity must take into account the human intellectual capacity to understand and act upon the theory as an inherent part of the theory itself. Otherwise it will ultimately be implicitly promoting the normative approach of treating human individuals as mere objective automata. It must also be a *moral* science in that it takes seriously the ontological status of our moral perceptions as well as perceptions of the observable social reality. Any attempt to define, explain and reform a social reality independently of human moral judgements about it will be incoherent and will be in danger of leading us into the trap of which Lewis warned us.

Rather than reading this conclusion as meaning - as some philosophers such as Peter Winch have argued (Winch, 1958) - that the very idea of a social science is incoherent, I prefer to say that truly scientific values (such as, for instance, mathematical and logical modelling or the idea that there may be

hidden processes operating under the surface of observable phenomena) do have as important a place in the social sciences as in the natural sciences. However, reductionism (the idea that there are no emergent properties of complex systems that cannot be explained by the interaction of the component parts) (Cartwright, 1983), naturalism (the idea that all scientific explanation must be in terms of empirically observable external phenomena) (Lewis, 1947, 1943), positivism (the idea that evidence "speaks for itself" and is logically prior to theory explaining that evidence) (Popper, 1959) and historicism (the idea that there are laws of history which operate completely independently of human free will and agency) (Popper, 1957) are all (in different but related ways) *mistaken* philosophies of both natural and social science. When applied to issues such as governance of science or other policy issues, they will lead to pseudo-scientific social *and* natural "science" (and thence often to dehumanising and repressive policies).

Most directly in relation to the central argument of this paper, I contend in light of the above discussion that a reasonable and workable definition of "pseudo-science" is the *misuse* of methods of scientific enquiry (such as mathematical modelling and statistics) to obscure or "dress up" the normative assumptions which are unseparably intertwined with any positive assumptions being made and which should instead be up-front and explicit. Clearly such criteria can also be applied in biology (such as theories of race) or physics (more extreme, but we can consider the Nazi attempt to debunk the Theory of General Relativity primarily because Einstein was Jewish and a declared political opponent of Nazism).

3. APPLICATION TO DRUGS POLICY AND SEXUAL HEALTH POLICY

We can now apply these principles to the debates over public policies on contraception and drug control. Clearly a whole complex of human moral values are at stake in both of these cases. Are those on the hard right who argue for limitation of contraception, abstinence programs and harsh criminalisation of all recreational drugs taking an anti-scientific position? On the contrary - as much as the arguments made by such reactionaries may be flawed - the *real* pseudo-scientists are the "progressive" secular "humanists" who identify a few particular arbitrary normative objectives - for example, minimize recorded cases of sexually transmitted diseases (STDs), unwanted pregnancies and deaths from drug use - and then, when these turn out on an evidential basis to conflict with other traditional moral values, debunk such values and attempt to exclude them from the public sphere as "irrational". This is not to say that evidence can play no part in a legitimate argument against the reactionary - for instance, pointing out that restriction of contraceptive availability is likely to increase the incidence of STDs and unwanted pregnancies - but the morally

conservative position *cannot* be condemned as "unscientific" if other moral values are believed to take precedence despite these facts. I myself take an intermediate nuanced position in this case, and believe that charitable and religious organisations with varying moral positions should be able to operate in this sphere with access to government support and assistance.

Moving on to the issue of drug control, I am by instinct a firm libertarian. Clearly, the actual medical evidence of the relative harm done by different drugs, and the poor correlation with the actual classifications in most contemporary societies is a relevant one.[2] However, it is not crucial. For me, the central argument is the hypocrisy and incoherency of a society which allows individuals the right to drink alcohol and smoke tobacco (when there is incontrovertible evidence that it is often very bad for their health in the long run) but not to use other recreational drugs. Why should the state allow certain altered states of consciousness but not others? The best chance of influencing me to change my mind would be to show that certain altered states are morally or psychologically dangerous in a way that the ones induced by alcohol are not (although even this would not be conclusive since it is also questionable whether prohibition works on a practical basis). However, as things stand, I find such a contention singularly unconvincing. The key point is that I have no right to judge the views of those who disagree with me as unscientific. Our disagreement is fundamentally one of moral values, and I would seek to persuade them of my position on this basis.

4. APPLICATION TO REFUTATION OF MARXIST THEORY

Although the concept of pseudo-science in distinction to true science can be formulated in the manner discussed above, can Karl Popper's criterion to judge radical utopian theories as necessarily pseudo-scientific be similarly rescued? I think not. Although the lack of opportunities for actual events to disprove (or even revise) the Marxist's faith in the coming revolution may be a relevant consideration in judging the tenability of Marxism relative to other theories, the idea of utility-maximising agents in neoclassical economics, or evolution in Darwinian biology, or conservation of energy in physics, occupy a similarly protected position in that they are core assumptions (Mastermann et al., 1970) which will almost always be protected by dropping auxiliary assumptions instead (e.g. we must have *measured* something incorrectly in this apparent empirical counterexample to the theory). We cannot reasonably expect the Marxist to take seriously and engage with the argument that Marxism is pseudo-scientific, and must attempt to show the untenability of his or her views in some other way.

[2]For a comprehensive analysis, see Nutt et al. (2007).

Given the argument already made that theory is logically prior to evidence, I would argue that we can do this by showing that Marxist *theory* is incoherent. (Such considerations, rather than any empirical evidence, led me to abandon the Marxist views I held in my youth.) I will now give the objections to Marxist economics and the vision of revolutionary socialism which I find persuasive. They are completely *a priori* and do not rely upon any particular empirical evidence on what has in fact happened when such ideas have been implemented historically (although such facts are of course relevant in illustrating my counter-points).

Let us firstly take the "labour theory of value", which is central to the Marxist theory of the capitalist system (Marx, 1867). The Marxist claim is that there is a "true value" to any commodity determined by the amount of labour embodied in it. Actual observed prices of commodities will tend to oscillate around this value and converge to it over time. Profit can only occur because the value of labour (the value of the goods needed to keep the worker alive and able to work) is less than the value of the goods produced by the labour. This surplus value is thus effectively collectively extracted or "stolen" from the workers because the capitalists own the means of production. (Although *some* of the value of manufactured goods comes from the value of the machinery which "rubs-off" and is incorporated into the value of the commodity, this *cannot* be the source of profit since the proceeds will only pay for the lost value of the "depreciated" capital and thus cannot produce surplus value.)

Put in these terms, the Marxist economic theory at first appears to be sound. It is understandable why it convinced many intellectuals in the late nineteenth and early twentieth centuries. The fact that it was taken over from Adam Smith, the grandfather of all modern economic thought (whether Marxist, neoclassical or otherwise) and then taken to its logical conclusion by Marx, made it all the more persuasive at the time. However, the apparent lucidity of the labour theory of value conceals some fatal difficulties. I believe that a rational rebuttal of Marxist theory must begin with these, since the central Marxist doctrine of the exploitation of the proletariat by the bourgeoisie depends organically on the labour theory of value.

The first difficulty is the question of whether all labour produces equal value. Marxist writings are unclear and contradictory on the issue. It seems clear however, that to hold that one actual hour of labour from any worker produces the *same* amount of value would lead to the absurd conclusion that an identical commodity produced by a more productive worker (either because they have more physical capital, or better training, or just worked more diligently during the hour) is less valuable than that produced by a less productive worker. Thus it seems we must hold that different workers' actual labour translate into different levels of some more fundamental unit of value

embodied in commodities (e.g. *average* labour required to produce it given the current level of technology). Note that this already somewhat threatens the doctrine of the proletariat having a common class interest in that different workers' labour now has different value, which is likely to be reflected in different rates of pay.

The second difficulty is whether commodities in the sense used by the labour theory of value must be tangible, or can also be intangible goods. Marx sometimes wrote as if commodities must be *physical* crystallisations of labour. However, if we interpret the theory in this manner then in modern service based economies the *majority* of the working population are in fact now living off of the surplus value extracted from the manufacturing workers. This leaves the idea of a small exploiting bourgeosie and large exploited proletariat in tatters.[3] Suppose we instead allow that commodities can be intangible as well as tangible. In that case, surely the design of a factory, the products it produces, and the structure and methods of its management are crucial intangible goods which are central to the productivity of the workers in the factory? In consequence, however, the classical (and neoclassical) economic theory that the entrepreneur's profits represent the value of these intangible goods in the production process cannot be coherently denied.

I turn now to the Marxist ideal of socialism. Marx was quite vague about this, and different shades of Marxism have of course emphasised quite different visions. I will consider the version which I personally find most appealing, and show why it is nonetheless on deeper reflection a totalitarian ideal which will destroy individual freedom. This is the Trotskyite program (shared in a similar form by anarcho-syndicalists) that common ownership of the means of production, combined with a patchwork of workers councils ("Soviets") would enable a workable non-repressive and non-exploitative economic system.[4] The critical objection is on the grounds of individual freedom. Any "frivolous" minority economic interest (e.g. reading certain forms of literature) would be totally at the mercy of what the majority on the workers' council was willing to permit. I will, in the interest of brevity, not flesh out this argument any further except to point out that arguably one of the greatest achievements of twentieth century economic thought was to prove that there is a *logical* contradiction

[3]Some neo-Marxist thinkers have nonetheless been willing to take this escape route. Erik Olin Wright has probably provided the most famous theory of this form (Wright, 1997) (Wright, 2000). For a detailed critique, see Tittenbrun et al. (2014). Even Olin Wright himself has recently admitted that such an approach is not ultimately distinctively Marxist (Wright, 2009).

[4]The most persuasive arguments I have read for this viewpoint were given by Paul Foot (Foot, 1977).

between democratic decision-making mechanisms (under the assumption that all decisions are made democratically and that all individuals are unconstrained in the formation of their individual policy preferences) and the requirement that all individuals have some minimal input into the decision-making process (Arrow, 1950) or possess some minimal individual rights (Sen, 1970). In light of this, Marxist criticisms of "bourgeois" representative democracy as "hampered" or "sham" democracy fall wide of the mark. Or, as Hayek, who in his most highly influential works (Hayek, 1944, 1960) showed convincingly why ultimately all individual liberty depends upon economic liberty, put it:

> A true "dictatorship of the proletariat", even if democratic in form, if it undertook centrally to direct the economic system, would probably destroy personal freedom as completely as any autocracy has ever done.
>
> (Hayek, 1944)

5. APPLICATION TO CAUSES OF UNEMPLOYMENT AND CONSEQUENCES FOR MACROECONOMIC POLICY

Having shown how I believe incorrect radical social scientific theories such as Marxism can be rationally refuted and defeated without the appeal to their non-falsifiability (or indeed without the appeal to empirical evidence at all), I would now like to claim that other radical theories promising a qualitative systemic transformation of the social world *can and should* be seen as legitimate social science, despite similar falsifiability issues (which, as I have already pointed out, are shared by all scientific theories anyway). I will take as an example the economic policies implemented by Margaret Thatcher's conservative governments in Britain in the 1980s.

Mrs Thatcher argued that restriction of the growth of the money supply in order to reduce inflation was the only policy which in the longer run would reduce unemployment. This is because a sizeable chunk of the current employment was the result of a labour market distorted by previous economic policies, and only sustainable by continued growth of the money supply (and thus, in fact, not sustainable at all, since as inflation "catches up" with monetary growth it requires an even faster rate of growth in the money supply to get the same stimulatory effect on employment and output).

In terms of the actual observable empirical data, however, unemployment increased massively in the early 1980s, and remained stubbornly high throughout the 1980s and early 1990s. On the principles of evidence-based policy, it is thus extremely difficult to make a plausible case that Thatcherite policies did in fact reduce unemployment, even though Britain did eventually succeed in

reducing unemployment from European to American levels over the following 15-20 years, with unemployment falling from 10.3% in 1993 to 5.1% in 2002 (Pissarides, 2006). However, I would argue that we are again running into the philosophical problems we have already discussed. Returning to a low inflation economy will cause a massive *systemic* change in the labour market. Unions will no longer be able to push up money wages and expect the government to expand the money supply in order to prevent this from creating unemployment. The consciousness of economic agents will change in a *reflexive* way once they understand the economic theory underlying the government's policy. Observations based on small piecemeal changes to the money supply in a high inflation situation therefore have no relevance whatsoever. (For international studies of how labour market institutions impact upon unemployment, see Blanchard and Wolfers (2000) and Nickell (1997).)

We must instead be guided by the correct economic theory, and this must be judged on a similar *a priori* basis to the ideas of Marxism. We cannot have any information about the alternative course of British unemployment over the subsequent, say, 25 years. Thus no story we can tell about inflation having being increased or decreased by the policies is really either verifiable or falsifiable. Economists and others may disagree with Mrs Thatcher's policies and the coherency of the economic theories underlying them, but they cannot claim that her approach was unscientific or that it can be scientifically proven that her policies *caused* higher unemployment in the deep sense that it could otherwise have been ultimately avoided.

6. APPLICATION TO CHOICE AND COMPETITION IN PUBLIC EDUCATION PROVISION

Similar considerations apply to the use of quasi-market or voucher scheme systems in the delivery of public services currently provided by state monopolies. If implemented wholesale, such policies will (if the economic theories which justify them are correct) cause a *systemic* transformation as "receivers" of public services become active consumers. This is not of course to say that *all* conceivable reform schemes will work equally well, or even work at all. The devil is in the detail (Hoxby, 2000) (Hoxby, 2003).

Weaknesses in particular proposed structures (for example, the problem of stratification or "cream skimming" where the best pupils end up competing for the best schools instead of the best schools for the best pupils) can often be pinpointed by theoretical analysis. I am also not of course denying that empirical studies using instrumental variables techniques or particular small scale experimental schemes are useful. However, to claim that the validity of the theory in favour of voucher schemes and the desirability of such policies can be decided in a "scientific" manner purely on the basis of such evidence is a

philosophical error. Deciding upon the merits of particular uses of competition will inevitably involve balancing competing values (Dearden, 1972) - to take one instance, evidence suggests that allowing selection by schools improves grades of those selected but worsens the performance of those "left behind". This is perhaps due to the demoralisation of those who feel "second-best" after failing the entrance exam. Whether this is or is not a price worth paying to enable the opportunity of the highest level of education to some intelligent children of modest means is an inherently subjective normative judgement which cannot be settled on the basis of evidence alone.

7. FINAL NOTE ON IMPLICATIONS

I will now offer some concluding remarks from my analysis. The most obvious and important moral of the story is that for a democracy to delegate the responsibility for policy to particular scientific or social scientific "experts" - who will assess the evidence and prescribe the best policy in order to achieve the agreed normative objectives of the populace - is a fundamentally misguided and potentially disastrous approach. To return to one of the examples discussed, those who criticise the Bush administration's funding for anti-AIDS programmes being made contingent upon the use of abstinence approaches are playing a dangerous game. It would, in fact, be fundamentally anti-scientific to grant monopoly privilege to the particular paradigm held by the United Nations bureaucracy in the delivery of such global health programmes. Democratic representatives have a legitimate right and responsibility to be the guardians of the moral values of the people.

I have so far said nothing about religious faith, since none of my arguments depend on discussing it directly (they should, I believe, have equal validity in a world with or without religious faith). However, I hope it will be fairly obvious from the rest of the discussion that the debunking of traditional religiously-inspired moral values as "unscientific" and having no place in the public sphere is a primary (probably *the* primary) contemporary example of the arrogant *pseudo-scientific* thinking which underpins much of evidence-based policy.[5] It

[5]Here is an extract from Hayek's excellent discussion of this issue:

> We owe it partly to mystical and religious beliefs, and, I believe, particularly to the main monotheistic ones, that beneficial traditions have been preserved and transmitted at least long enough to enable those groups following them to grow, and to have the opportunity to spread by natural or cultural selection. This means that, like it or not, we owe the persistence of certain practices, and the civilisation that resulted from them, in part to support from beliefs which are not true - or verifiable or testable - in the same sense as are scientific statements, and which are certainly not the result of rational argumentation... Even those among us, like myself, who are not prepared to accept the anthropomorphic conception of a personal divinity ought to admit that the premature loss of what we regard as nonfactual beliefs would have deprived mankind of a powerful support in the long development of the extended order that we now enjoy, and that even now the loss of these beliefs, whether true or false, creates great

is the adherents of this philosophy (rather than the religious fundamentalists in the other corner who believe their texts to be literally true, and can be far more easily refuted by reason) who (often unwittingly) threaten individual freedom and autonomy.

References

Arrow, K. J. 1950. A difficulty in the concept of social welfare. *Journal of Political Economy*, 58(4):328–346.

Blanchard, O. and Wolfers, J. 2000. The role of shocks and institutions in the rise of european unemployment: the aggregate evidence. *The Economic Journal*, 110(462):1–33.

Cartwright, N. 1983. *How the Laws of Physics Lie*. Cambridge University Press.

Dearden, R. 1972. Competition in education. *Journal of Philosophy of Education*, 6(1):119–133.

Feyerabend, P. 1975. *Against Method: Outline of an Anarchistic Theory of Knowledge*. Atlantic Highlands, NJ: Humanities Press.

Foot, P. 1977. *Why You Should Be A Socialist*. International Socialists.

Friedman, M. 1953. The methodology of positive economics. In *Essays in Positive Economics*. University of Chicago Press.

Hayek, F. A. 1944. *The Road to Serfdom*. Routledge & Sons.

Hayek, F. A. 1960. *The Constitution of Liberty*. University of Chicago Press.

Hayek, F. A. 1988. The fatal conceit: The errors of socialism. In *The Collected Works of Friedrich August Hayek*, volume 1.

Hoxby, C. M. 2000. Does competition among public schools benefit students and taxpayers? *American Economic Review*, 90(5):1209–1238.

Hoxby, C. M. 2003. School choice and school competition: Evidence from the united states. *Swedish Economic Policy Review*, 10:9–65.

Kuhn, T. S. 1962. *The Structure of Scientific Revolutions*. University of Chicago Press.

Kuhn, T. S. 1977. Objectivity, value judgment and theory choice. In *The Essential Tension: Selected Studies in Scientific Tradition and Change*, pages 356–367. Chicago: University of Chicago Press.

Lewis, C. S. 1943. *The Abolition of Man: Reflections on Education with Special Reference to the Teaching of English in the Upper Forms of Schools*. Oxford University Press.

Lewis, C. S. 1947. *Miracles: A Preliminary Study*. New York NY: Macmillan.

Marx, K. 1867. *Capital - A Critique of Pure Economy*.

Mastermann, M., Lakatos, I., and Musgrave, A. 1970. *Criticism and the Growth of Knowledge*. Cambridge University Press.

> difficulties... Perhaps what many people mean in speaking of God is just a personification of that tradition of morals or values that keeps their community alive. The source of order that religion ascribes to a human-like divinity - the map or guide that will show a part successfully how to move within the whole - we now learn to see to be not outside the physical world but one of its characteristics, one far too complex for any of its parts possibly to form an 'image' or ' picture' of it.
>
> (Hayek, 1988)

Nickell, S. 1997. Unemployment and labor market rigidities: Europe versus north america. *The Journal of Economic Perspectives*, 11(3):55–74.

Nutt, D., King, L. A., Saulsbury, W., and Blakemore, C. 2007. Development of a rational scale to assess the harm of drugs of potential misuse. *The Lancet*, 369(9566):1047–1053.

Pissarides, C. A. 2006. Unemployment in britain: a European success story. *Structural Unemployment in Europe: Reasons and Remedies*, 9:209–236.

Popper, K. 1957. *The Poverty of Historicism*. London: Routledge.

Popper, K. R. 1959. *The Logic of Scientific Discovery*. London: Hutchinson.

Sen, A. 1970. The impossibility of a paretian liberal. *Journal of Political Economy*, 78(1):152–157.

Tittenbrun, J. et al. 2014. Some problems in Erik Olin Wright's theory of class. *International Letters of Social and Humanistic Sciences*, (33):20–40.

Winch, P. 1958. *The Idea of a Social Science and its Relation to Philosophy*. London: Routledge.

Wright, E. O. 1997. *Class Counts: Comparative Studies in Class Analysis*. Cambridge University Press.

Wright, E. O. 2000. Class, exploitation, and economic rents: Reflections on Sørensen's sounder basis 1. *American Journal of Sociology*, 105(6):1559–1571.

Wright, E. O. 2009. Understanding class: Towards an integrated analytical approach. *New Left Review*, 60(November–December):101–16.

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