Why (education) policy can't be implemented these days: some philosophical considerations

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Abstract

The natural sciences (most of us would agree) are progressively discoverable and at least potentially open to clear statements concerning what is true or false if, for instance, Newton is not to be entirely discredited. The human sciences would, on the other hand, seem to be inherently relativistic, given that human thought and action are essentially unpredictable. What is true or false here cannot, we imagine, be so precisely stated. This contention – a truism in sociological terms – appears to need rigorous defence at the moment in the light of various theoretically dominant positions that suggest that there is no difference between these two ways of knowing. 'Cognitive science' (dealing with the individual) and economics (dealing with social collectives) are increasingly seen as 'hard' sciences amenable to analysis and prediction. In this situation social policy, including education policy, becomes the province of 'expert' scientists and economists. I argue that the effect of this is to undermine the standing of social policy as conscious, democratic, political and ethical action planning.

Rationalist thinking

For more than two millennia Western society has been strongly wedded to the philosophical idea of the 'excluded middle' (Margolis, 1991, p. xi). This is the idea that there can be just two truth values – true and false, that something must be either 'A' or 'not A'[1], and therefore that nothing indeterminate can exist in between. Add to this the nineteenth century understanding of science as physical, material and mechanical, and that there can be no more in the effect than there is in the cause, and you have the kind of rationalism that

[1] This idea originated with Aristotle in the 4th century BC.

flourishes just now, even in core aspects of the human sciences. And this is despite an apparent philosophical retreat from positivism.

Cognitive 'science': rationally determined individuals

Let us consider first something of immediate concern to educators – the nature of the developing 'science' of cognition. This broad field of theory, which encompasses biology, psychology and philosophy, assumes that since only material substances and identifiable processes can exist (genes and neurons in this instance) our 'folk psychological' ideas of (non-material) mind are mistaken. This approach is significant enough to have acquired a philosophical term for itself – eliminativism[2] – suggesting that we can eliminate conceptions of 'mind' or 'consciousness' as separable phenomena. Its proponents see the brain as simply the end point of a mechanistic evolutionary process and psychology as parallel, also evolutionary, and also increasingly 'scientific'. Joseph Margolis quotes as representative of these widespread views, Steven Pinker in *How the mind works*:

> The biologist Richard Dawkins called natural selection the Blind Watchmaker; in the case of the mind, we can call it the Blind Programmer … the brain is destined to be an organ of computation. … Every part of the body from the toenails to the cerebral cortex takes on its particular shape and substance when its cells respond to some kind of information in the neighborhood that unlocks a different part of the genetic programme (Margolis, 2002, pp.1-2).

Cognition, in this conception, is 'algorithmic' involving complex stimulus-response mechanisms concerned with rules of calculation, about which we are learning more and more, and all of which allow us to move towards the position where we no longer have to assume a mind that 'does the thinking'[3]. (In this vein, a series of lectures given in 2002 at the University of Natal, Durban, was entitled 'Thinking without a mind'). Note that if our responses are rationally predetermined, we cannot ultimately be seen as agents, and if we are not in the last instant agents, we cannot logically be seen as responsible for our actions. Significant proponents of this view 'insist that our folk

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2 These ideas are particularly associated with Wilfrid Sellars, whose philosophy of mind has been developed through this concept of 'eliminativism' which is supported in different ways by two other significant contemporary philosophers – Richard Rorty and Daniel Dennett.

3 This computational approach to cognition is associated particularly with Paul and Patricia Churchland.

psychological apparatus for interpreting people, including ourselves, as conscious agents, is a theory and one almost certainly false, at least in its fine details'(Ross, 2000, p.7). In this conception the tendency that may be noted in the human male towards rape, for instance, would have to be treated as a condition to be re-programmed if possible – rather than an issue of moral responsibility.

Now these and related developments clearly represent an up-to-date version of behaviourism, with serious implications not only for ethics but also for teaching and learning. They would leave educators with the primary task of understanding the underlying neural and genetic codes in order to provide appropriately designed stimuli to make learning happen. But the fact that we as educators might feel alarmed by this idea is neither a good scientific, nor a good philosophical, reason for rejecting it. We will need to look for the logical flaws in the theory if we want to challenge it successfully. To recap before considering them: these cognitive theories, as they stand, assume (a) that nothing immaterial exists; (b) that human reactions, however complex, are the result of a mix of genetic preprogramming and neural activity, and (c) that this mix is only the sum of the parts: our assumptions about consciousness as an independent state are mistaken. Thus these 'naturalisers', for their theory to hold, must be able eliminate consciousness as something that differs in kind from the mechanisms that allow it to operate.

Interestingly, compelling arguments against these positions were made almost eighty years ago by two very different thinkers – both South African: the statesman and scholar Jan Smuts, and the natural scientist Eugene Marais. Writing in 1926, Smuts points out that:

> Nineteenth-century science went wrong mostly because of the hard and narrow concept of causation that dominated it. It was a fixed dogma that there could be no more in the effect than there was in the cause; hence creativeness and real progress became impossible (Smuts, 1936, p.1).

But the really significant thing about evolution, Smuts points out, is that it *disproves* conclusively that there can be no more in the effect than there is in the cause.

> 'If evolution is right, if life and mind have arisen in and from matter [not from supernatural causes] then the universe ceases to be a purely physical mechanism … We are in effect endeavouring to go forward with two inconsistent sets of ideas, that is to say, with the idea of Evolution (not yet adequately realised) and the pre-Evolution physical ideas (not yet quite abandoned)' (Smuts, 1936, p.10).

Smuts would have been amazed no doubt to find that the upshot of this seventy-six years on is the continuation of 'pre-Evolution physical ideas' not yet at all abandoned – indeed reinforced!

Smuts' contemporary, Eugene Marais, was also passionately interested in evolution, and after four years studying a whole range of species in the wild, from the level of ants up to the intelligent social adaptations of chacma baboons, he came to a parallel conclusion. The really significant evolutionary development, Marais believed, was *the onset of consciousness itself* – a development he saw as necessarily neither organic nor material but rather a development of the pre-conscious, instinctive, psyche. He was led to his conclusion by considering the limitations that are inherent in most evolutionary adaptations. A bodily adaptation developed to fit a species to one environment could lead to its extinction if this environment changed. But 'no bodily specialisation ever so surely confines an animal to a limited environment as the attendant instinct … An instinct is in this respect tyrannous!' (Marais, 1973, p.85). For instance an amphibious lizard, whose predators were all aquatic, had over millennia developed a reaction to any danger by making for land. When men arrived in its environment it instinctively continued to react to this new danger by going inland where it was now most at risk. Therefore, Marais suggests, 'would it not be conducive to preservation if … a species could suddenly change its habitat to meet any new natural conditions thrust upon it by means of immediate adaptation?' That is, the most valuable adaptation would entail that an animal could think its own way out of trouble. It was only when instinctual behaviour was *superceded* by conscious thought ('through a modification of the brain and its functions … the attributes selected had necessarily to be psychic' (Marais, pp.87-88)) that sentient creatures were in a position to take conscious decisions about their own habitat. And an adaptation designed to overcome the limitations of pre-programming cannot itself, we assume, be subject to pre-programming, however complex[4]. This reinforces Smuts's notion that physical materiality was followed by life and life was followed by mind, each evolving from the other and all being present together in sentient beings. Life is therefore not to be understood as *the same* as the inert substances that produced it, and nor is consciousness *the same* as pre-consciousness. To approach the, as yet unthreorised, nature of life and mind as if they are no

[4] The idea of immateriality is viewed with the deepest suspicion by contemporary naturalisers – and yet it has the most acceptable scientific credentials including endorsement by Newton (gravity) and Einstein (the dispelling of the need to posit an 'ether' through which light travels).

different from their physical and mechanical progenitors is potentially very dangerous. In genetic modification we sense this danger without being able precisely to quantify it.

Clearly the phenomenal nature of consciousness is that it does something different and a lot cleverer than merely unlocking parts of genetic programmes. It would be useless if did only that. Consciousness does not merely 'compute' – it discriminates, and so becomes the programm*er*. It allows us to take into account and assess a range of contingent facts and circumstances – logical, ethical, political, economic – to weigh and balance them and then to come up with an appropriate response, or a range of potentially appropriate responses, in any context. Logical computation is clearly an integral part of this process, but the different elements in decision-making cannot be prised apart. The logic is not separable from the context that gives it meaning.

Therefore it would seem plausible to argue against the naturalisers (a) that the immaterial must be acknowledged to exist (b) that human responses cannot be seen simply as the result of genetic preprogramming and (c) that consciousness is an independent faculty or capacity that has evolved from, but beyond, pre-consciousness. These two approaches to epistemology entail important differences in our understanding. The mind as an organ of computation (as 'naturalisable') assumes the existence of sets of correct answers, but the mind as an organ of conscious discrimination allows for infinite possibilities. Sets of answers algorithmically determined exclude fuzzy answers, answers that will change according to circumstance, and the fact that there may exist a whole range of answers, all potentially valid. They therefore exclude (or ought to exclude) answers determined on the nuanced and context-specific grounds of ethics and politics. The materialist understanding of mind as a computer of determinable truth, would therefore appear to be very problematic for an appropriate handling of social policy.

Game theory/ decision theory: rationally determined societies

Society, seen as the simple aggregation of these potentially computable components, becomes, of course, just a larger mathematical problem. For instance Robert Nozick argues in his book *The Nature of Rationality* that 'rationality provides us with the (potential) power to investigate and discover

anything and everything' (Nozick, 1993, p.i). However, he fails to point out that to calculate why a plane stays in the air in normal circumstances (a natural scientific truth) and why it stays in the air when there is a shoe-bomber on board (a social one), will require quite different kinds of rational assessment. His claim about the power of reason would therefore appear to need further elaboration. Does he mean rationality as logical computation or as social reasoning? When he goes on to discuss 'the sleek theory of rational action – decision theory' as 'providing the framework of rational strategic interaction … the formal theory of social choice and welfare economics, the theory of microeconomic phenomena and elaborate theories of the political realm' (p.xiii) this suggests that he in effect fails to make any such distinction. A 'formal theory of social choice' in welfare, in politics or even in economics, assumes that the logic involved can be separated out and applied independently from its context.

A discussion of the 'Prisoners' Dilemma' is instructive here as it provides an exception to the decontextualisation that Nozick (and others who adopt this understanding of reason) generally adhere to so strictly. The dilemma concerns a puzzle as to whether confessing to a crime is the rational thing to do for a pair of prisoners who are not in communication with each other but who know that particular lengths of prison sentence depend on their joint decisions to confess or not. The outsider's reaction might be to ask: 'Well, were the prisoners guilty? – which one was guilty? – did the law provide an appropriate sentence? what was their crime after all?' – and finally: 'Shouldn't the one who did it be the one to have owned up?' But we know of course that the scenario is only constructed the better to examine the logic involved. It concerns itself (ostensibly) exclusively with rationality as logic, but actually of course with logic as self-interest – and as profit-maximisation, exclusive of ethics or legality. What the 'Prisoners' dilemma' in effect proves is that any attempt to consider what would be purely rational in policy terms necessarily reduces itself to this minimalist point – it indicates that decontextualised social logic is meaningless. Worse, that it is potentially illegal and unethical. And this makes one very uneasy to think that the advice of philosophers, statisticians and economists who employ this kind of thinking are, as Nozick says, relied upon so widely by policy makers.

Nozick admits that decision theories in particular and the decision theoretical approach in general, have proven of little use in practical applications.

> An elaborate theory of rational decision has been developed by economists and statisticians, and put to widespread use in theoretical and policy studies. This is a powerful,

> mathematically precise, and tractable theory. *Although its adequacy as a description of actual behavior has been widely questioned*, it stands as the dominant view of the conditions that a rational decision should satisfy: it is the dominant normative view' (emphasis added) (Nozick, 1993, p.41).

Here, although social policy in general is seen as the potential (and often actual) province of this rational theory, the emphasis is on its use in statistics and economics. Failing applicability in other contexts, it has found its niche in these apparently computable fields. But just how appropriate is it that economics should be seen in the same light as statistics – that is, as computable in the first place[5] ? Given the huge power of economics over our lives, this question becomes particularly pertinent.

Common sense suggests that economics, being a behavioural science, must be contextualised and open to feed-back situations, that it must be just as unpredictable and just as vulnerable to outside forces of innumerable kinds as any other human activity. The decisions that people make about their spending and saving and investing patterns, let alone their working lives, are inextricably linked to contingent circumstance and history. They are bound to emotion and steeped in imperfect knowledge. It is even more implausible that it will be possible to aggregate economic behaviour in order to derive facts from this aggregation, and then assume these to be applicable to *future* situations. Of course, neo-classical economists are fully aware of contingent circumstances and their various models are designed to take these into account as far as possible. But the core understanding is based upon a determinist conception of economic theory that ignores many of the kinds of predictability to which human beings *can* be subjected. It ignores, for instance, sensitivity to justice and community and an ability to take contingent circumstances intelligently into account – and opts rather for fear, greed and profit maximisation as the staple human predictors. Recent international research by Samuel Bowles (a progressive economist well known to educators) confirms for instance that altruism and justice may be at least as significant as profit maximisation in influencing human economic behaviour (Bowles *et al*, 2000). Current forms of economic analysis are an extreme example of the problem that Smuts sees in all analysis and generalisation that 'in the original analysis something may have escaped, so that in the reconstruction we have no longer all of the original elements present but something less'(Smuts, 1936, p.14). In

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5 Note that the great value of statistics for enriching our understanding of social phenomena is not in dispute.

economic modelling whole continents escape! This is the problem with inappropriate epistemologies.

Here it may be interesting to note that the mathematician John Nash, the hero of the film 'A Beautiful Mind', was awarded the Nobel Prize for Economics for his contribution to decision theory. Those who saw the film will remember his wilder states of mind when he was trying to discover complex patterns of rationality across whole walls plastered with newspaper clippings. This should, I believe, excite our concern not so much for that single confused state of mind – but rather for a whole society's. All of us these days tend to go mad looking for logical codes where none exist! In this regard it might be useful to remember those other winners of the Nobel Prize for economics, Robert C. Merton and Myron Scholes whose idea of 'option pricing', was based on similar 'rationalist' premises. They were later to put this into practice when they created a company called Long-Term Capital Management (LTCM). But because the theory on which it was based was unable to take into account the contingent possibilities of both a banking crisis in South East Asia and the Russian default on international payments happening together in 1998, its 'long-term' calculations succumbed to contingency that the theory cannot allow for. Ignoring this, the company kept going until it went bankrupt and had to be bailed out by the Federal Reserve to the tune of $130 billion. Just think of that figure for a moment. It translates into some twenty South African arms procurement deals – that is, enough to make a significant difference to addressing poverty sustainably in twenty smaller countries. That the collapse of LTCM nearly brought down the whole current financial system, based on this kind of rationalist market thinking, was largely overlooked by an American public more concerned at that moment with Bill Clinton and Monica Lewinsky! (Hampden-Turner and Trompenaars, 2000, pp. 66-67). Enron's and Worldcom's business, also based the logic of 'market forces' and unwarranted faith in the predictability of future events[6], added false accounting to assumptions of decontextualised rationality.

The political upshot of all of this is serious. The present attempt to see consciousness as algorithmic and thus designed to achieve rational analysis is, as we have seen, unconvincing – but it should not be seen as politically innocent. If people are (even only potentially) predictable, it makes sense to give over policy concerning their actions to the experts. If not, policy options

6 Worldcom believed that the demand for increased bandwidth would keep increasing at a determinable (fast) pace against the social logic implied by wider contingent issues (and based on inaccurate research in the first instance).

can logically only be thrashed out in the political arena. Most significantly, when a particular understanding of economics is accepted very widely as a natural science, then this not only assumes that people are in the last instance predictable, but it also entails that all social policy will be materially constrained by economic dictates. In the current era, economics, as science, dictates that we practice 'fiscal discipline' and 'inflation targeting' and *this* in turn entails that unemployment will rise, and that there will be less money for social spending. But if we refuse to see people as predictable, or economics as a 'hard' science, we will be free to believe that other economic policies would lead to other, more socially acceptable, outcomes. It will then appear that economists *of this particular persuasion* may be holding both society and governments to ransom.[7]

Relativist thinking: recovering the middle ground

It is interesting in this regard that probably the greatest economist (and one of the greatest thinkers) of the twentieth century, John Maynard Keynes, saw economics as a moral and not a natural science. All of his theories took contingent reality and the immediate welfare of the population into account in the first instance. Economics involved for Keynes a weighing of contingent issues in the light of the needs of society and a thorough knowledge of the ramifications of how economic phenomena *tend* to operate in various social contexts, closely observed. Hence his recommended economic responses varied with the historical circumstances, so that he was often seen as inconsistent. Wherever he could persuade bankers, treasury officials and governments to accept his ideas (a formidable task even in his day) the results were extraordinarily successful.

It may be interesting for South Africans to see Keynes speaking on behalf of the Macmillan Committee on Finance and Industry at the height of the Great Depression in Britain in 1930 (Harrod, 1951, p.422). Keep in mind here Tito Mboweni's orthodox approach to 'inflation targeting' during our somewhat comparable current period of chronic unemployment and threatening global

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7 This is explored in the context of Tony Blair's government in Britain, by G Monbiot in his book *Captive State: the Corporate Takeover of Britain*. The situation of a 'Labour' government becoming captive to narrowly-defined business interests underpinned by 'Washington consensus' economics is a parallel situation to the current ANC government in South Africa accepting similar constraints – both must be seen to undermine the interests of the majority who elected them to power.

depression. Here Keynes is in contention with the Governor of the Bank of England (Britain's Reserve Bank), Mr Montagu Norman, and a representative of the British Treasury, Sir Richard Hopkins. *Keynes* : 'So it is of the essence of the case that the bank rate should have an important effect; that when it is raised it should have an effect in the direction of unemployment. That is what you want. Am I right?' *Mr Norman*: 'Yes, I should think it was'. Again, as in our case, existing facilities for capital issues by banks were inadequate to meet the needs of small businesses and new businesses. Mr Norman was not concerned. The Committee also suggested that rationalisation schemes would lead to problems with labour. Mr Norman replied that that was not their business: 'they looked to private enterprise to deal with that'. Hopkins for the Treasury then came into contention with Keynes over the issue of government funded capital works schemes. Hopkins was opposed to the kind of large scheme that Keynes had in mind. 'If these works were not to divert capital from private employment, where was the extra capital to come from?' This is exactly the argument for 'crowding out' of private enterprise that weighed so heavily with the constructors of GEAR in 1996. Keynes had convincing answers as to why the idea of direct government spending on public works would in fact lead to a 'crowding in' or the stimulation of private enterprise. This proved itself in the case of the New Deal in America on which Keynes had some influence – and the falsity of 'crowding out' was starkly demonstrated in the case of GEAR. Real private sector investment growth had been targeted at 11.7 percent but only achieved 1.2 percent. And 'annual change in … employment was projected to achieve 270 000 new jobs per year, while in fact 125 200 jobs were being lost per year by 1999'(Padayachee and Valodia, 2001). Despite his feeling that in a perfect world protectionism was a bad thing, in conditions of severe unemployment, Keynes recommended it. When spending was needed to stimulate growth, inflation could take a back seat, when employment was full, as in wartime, he advocated saving. For Keynes, context should always inform economic theory, and be taken into account when determining policy.

Keynes in philosophical mode – it should be remembered that he numbered Ludwig Wittgenstein and Bertrand Russell amongst his close friends at Cambridge – wrote a *Treatise on Probability* which adopts a theoretical position endorsing indeterminacy and rejecting any 'excluded middle', a

philosophy broadly in accord with his economic perspective[8]. In response to a book (*Prices and Production*) by the economist Freidrich von Hayek, much of whose work would be endorsed by contemporary economists[9], Keynes said: 'The book as it stands, seems to me one of the most frightful muddles I have read … and yet it remains a book of some interest, which is likely to leave its mark on the mind of the reader. It is an extraordinary example of how, starting with a mistake, a remorseless logician can end up in Bedlam'(Harrod, 1951, p.435)!

Education policy between rationalist restrictions and democratic rights

The ANC was persuaded to buy into orthodox contemporary economic thought even before it came to power, with consequent restrictions on all its social programmes. The issue of budgetary constraints on policy is dealt with at some length in all the new Government's early education policy documents, and in no instance is an understanding of economics suggested, other than orthodox approaches compatible with an IMF or World Bank vision. This would seem to have a significant bearing on Jonathan Jansen's contention that (education) policy should be seen as largely symbolic. It is surely the case that only when economic constraints can be seen as impinging *in an unavoidable way* upon government that an administration elected on a mandate of social justice could have this convenient excuse for non-delivery. Before the current era political parties whose policies proved to be purely 'symbolic' generally found themselves out of office at the next general election!

A framework of fiscal discipline combined with provincial ineptitude put a severe strain on educational provision in the new South Africa from the beginning, as we are all aware. But there are clearly other factors at work beyond this that are needed to explain the extent of non-delivery. The figure of

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8 The contemporary philosopher Joseph Margolis's ideas of a 'robust relativism' are compatible with this short thesis of Keynes. Margolis explores these ideas particularly in his 1991 publication *The Truth About Relativism* 1991 (Oxford: Blackwell). [Margolis's philosophical thinking on relativism underpins the ideas in this paper].

9 Even von Hayek's enthusiastic biographer admits that this particular book was not one of Hayek's greatest contributions to economic knowledge, but the remorseless logic of the market, precluding our conscious intervention remains Hayek's legacy to contemporary economic orthodoxy.

over twenty percent of the budget earmarked for education is higher than in the majority of countries (1995 White Paper, p.23), and there was therefore no likelihood of an increased general allocation. However, unlike other governments that have followed this 'disciplined' fiscal stance, the South Africa has not generally reduced its allocations to social projects (Skinner and Valodia, 2001, pp.79-80). That there has been no significant economic growth clearly indicates the failure of the 'structural adjustment' macro-economic model for developing countries. But, in the absence of 'real economic growth and increased revenues' envisaged by the legislation, the Government in fact disburses conditional grants and special project funding over specific periods on top of normal allocations. The limitation of funds would not therefore seem to be so severe as to impede *any* success in policy implementation. The goodwill on the ground amongst educators and their capacity for, and interest in, democratic change are also fairly well established[10].

The problem seems to have involved, beyond simply finance, a more general instrumental understanding of the kind of policy options available to government, and their restriction within a fairly narrow range of rational orthodoxies uninformed by considerations of contingent reality. The prevalence of rationalist epistemologies tends, it would seem, towards an acceptance of expert 'truths' more generally. Private-public partnerships are understood to bring the efficiencies of a competitive market approach to inefficient and inexperienced public sector initiatives. But this is to ignore the additional fact that the private sector will not want to get involved in such partnerships *at all* unless there is money is to be made. In the case of South African transformative educational projects this was likely to be significant. Local government is understood to be 'better' (more democratic, more in touch) than central government, but this will not be the case if your pool of good personnel has been taken by central government and if local administration is inexperienced, obstructive, or both. And providing (sometimes quite generous) additional allocations in the belief that these will allow for the expected efficiencies in the system to take effect when the systems themselves are faulty[11] cannot be expected to deliver. These are all

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10 Enthusiastic and well considered responses from educators across the country were received in 2000 by the Review Committee of 'Curriculum 2005', replicating the kind of response achieved by NEPI in 1993 and the ongoing social and educational engagement demonstrated at successive Kenton Conferences since 1972, suggest that there is no dearth of policy research.

11 This was pointed out by Bobby Soobrayan in an article quoted in the *Quarterly Review of Education and Training in South Africa* (Vol. 8, No.1, pp. 14-15).

examples of the 'universal, abstract instrumentalism' (Castells, 1996, p.508) which Manuel Castells points to as so central to our current global experience, indicating more significantly I believe, our current general abandonment of critical thought.

Policy decisions, deriving from nameless 'experts' and dominant theories (both generally from overseas) bypass conscious thought. The consequences are particularly disastrous in a situation such as South Africa's, where each of the factors to be addressed is extraordinarily complex, bears little resemblance to other 'models' to be found in other parts of the world, and where the magnitude of the social problems to be addressed is particularly great. For instance, a nineteenth-century Protestant work-ethic approach dominates the argument of labour economist Haroon Bhorat of UCT's Development Studies Policy Unit against a Basic Incomes Grant – that giving people R100 per month will discourage them from working! Again the idea that 'you only value what you pay for' underpins the current orthodoxy that the rural poor should pay for services, and for school fees. This ignores that the proportion of families with no income at all runs at more than fifteen percent in South Africa; and is blind to the fact that the numbers attending rural schools in KwaZulu-Natal have dropped by more than fifty percent in some cases (Vumase, 2002). Again the costs of coping with the recent cholera outbreak in KwaZulu Natal disproves the theory of 'cost recovery' for services, even on its own economic grounds (McDonald and Page, 2002).

The educationalist Salim Vally is conducting significant research at the moment into the failure of the current system of policy making to allow for access to basic education as required by the South African constitution and by international conventions to which South Africa is a signatory. Through four issue papers dealing respectively with: the constitutionality of school fees, infrastructural provision, transforming farm schools, and sexual harassment and sexual violence in schools, Vally and his co-researchers are systematically building up this evidence. This will allow civil society legally to confront a government whose prioritising of fiscal discipline over social spending has already put it in breach of the constitution in a test case over the provision of basic services to the impoverished community of Wallacedene. In such confrontations, the linear logic of a version of economic and social thinking understood as science meets, head on, the messy reality of society as a community of communities, battling with the *artificially imposed reality* of ever-diminishing resources. But all the big guns, literally and figuratively, are presently on the side of economic orthodoxy and linear thinking.

Conclusion

In 1949 in the wake of the defeat of one totalitarian regime and as a warning against the still looming threat of others, George Orwell published a novel which he called *Nineteen Eighty-Four*. Perhaps only now can we understand how interesting was this choice of date. In the Western World this was the high point of the power of Reagan and Thatcher – champions of free market capitalism against an 'Evil Empire'. But the crux of Orwell's message in the novel was the danger to democracy stemming from tyranny over thought itself: 'Stones are hard, water is wet … Freedom is the freedom to say that two and two equal four. If that is granted, all else follows' (Orwell, 1990, p.84). And Soviet officials visiting America in the 1980s were amazed not so much at the freedom they experienced as at the evidence that repression was simply not necessary. People everywhere believed what they were told (Chomsky, 1989). It might therefore be interesting to consider just how well we are doing now in respect to Orwell's test of freedom of thought, in a world dominated by ideas first prevalent in the West around 1984. In light of the evidence of this study, the tally appears to be:

1 We don't have the power to think independently.
2 Money-making machines and rational social systems can be calculated and made to operate long-term.
3 We should give up our democratic rights to those who have persuaded us of the truth of these marvels.

If we South Africans, as the nation responsible for the only real advance in democracy achieved this last quarter of a century, can't think our way out of this one, then probably nobody can!

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