

Chapter 8

Social Policy Bonds, policy and politics

This chapter tries to show that the flaws in current policymaking are systemic, that they have led to serious disenchantment with politics and that Social Policy Bonds may attract wider public participation and more public buy-in to policymaking.

How is policy currently made: incremental adaptation

[N]atural selection proceeds via a narrow point-to-point pathway, not a wide all-encompassing one. In solving any given problem it can make use of only what happens to be available at that particular time. Black leaves might be superior to green, but no new structure will appear... unless it is immediately adaptive.... Thus green leaves dominate because they happen to have come along before black ones, and also because chance uncovered no route from green to black that was adaptive at every new step.¹

This process is analogous to that by which policy is currently made. Incremental adaptation and historical accident have left us with the decision-making bodies of today. These include not only government and its myriad agencies, but private sector corporations, religious bodies, interest groups, non-governmental organizations and individuals. There's no inherent reason why these bodies will somehow generate solutions to such new and global problems as climate change, or nuclear war. They have, as we saw in chapter 1, proved incapable of putting a swift end to the perverse subsidies. They have not halted such threats as nuclear proliferation. They have favoured, and in many places, imposed, an infrastructure that locks us into a development process heavily biased in favour of large corporations and against our physical and social environment.

In both evolution and society, what's missing is a long-term strategy. Take one, global, example: there is no question that the employees of the United Nations do genuinely want to see an end to (say) climate change but as an institution its focus is on the immediate: it looks at *what it thinks* is the next step forward, *taking where it is now as a given*. And why not? Evolution has not only proceeded in that direction; we, as individual products of such a process, embody the assumption that incremental adaptation is the best way of proceeding. For the most part, it is: where there is mutation and consequent diversity and sufficient time for evolution to winnow out the unfit, the fittest do survive. But the current policymaking world has little scope for the competition that sees an end to unfortunate mutations. Government and big business are dominant. They don't necessarily terminate failed policies. The vested interests are so deeply entrenched, the global challenges so urgent, the level of aggregation at which problems need to be solved is so high, and the world is so much smaller, that the Darwinian method of allowing optimal solutions to emerge from what is not that wide a range of possibilities will probably not work. There is too little time to wait for incremental adaptation to address, say, climate change or nuclear proliferation. And we have only one planet; the result of a successful policy mutation may not only be too late, but can be swamped too readily by the wrong choices. From the viewpoint of social Darwinism, we have something close to a policy monoculture. Evolution of policymaking systems has too little time to play a major role.

This contrasts with the role that evolution can play within the Social Policy Bond paradigm: when bonds are issued, people have incentives to explore, refine and try out new ways of doing things, and to exploit only the most successful approaches. There will be a hugely more abundant diversity of, for example, different – and varying – potential solutions to climate change than there is of different political systems. The combination of diversity and adaptability can succeed within an outcome-focused paradigm like a bond regime. But there isn't enough scope for it to select the paradigm itself against the entrenched existing policymaking systems.

There is also the question of what we mean by 'fittest'. In biological evolution, the fitness that Darwinism favours is reproductive fitness. Someone who leads a miserable, diseased life, has plenty of children, and dies at age 20 is more fit, in this sense, than a healthy, happy but childless person who lives to be 100. Fitness in the policymaking world may have a similarly narrow meaning: a system that is fit in evolutionary terms need not be the one that maximises the well-being of its people, especially in a world where any group of moderately well-off misanthropes can increasingly access technology that can threaten anybody else. (Present-day North Korea for instance.) It so happens that in recent decades, by and large the societies (or coalitions of societies) that were militarily most successful were also the ones that delivered the largest economic surpluses to their population, and that such surpluses were correlated with well-being as well as military success. But there is no inevitability about such correlations. The relationship between economic and destructive power breaks down if you have a regime as nasty as, say, North Korea. And the link between economic wealth and the power to threaten also breaks down, if you have regimes sufficiently misanthropic, deranged or suicidal.

This is the end point of the political monoculture (see chapter 2). It's not necessarily the domination by government and the big corporations that constitute the problem. It's the fact that together they form, in effect, one policymaking body, with little scope for creative diversity along Darwinian lines. We still have the possibility of adapting, but more and more it is brought into the service of government and big business, and the objectives of those organizations are, at best, different from those of ordinary persons and, at worst, in conflict with them.

The logic of incremental adaptation

Incremental adaptation tends to focus on narrow, quantifiable goals. One public sector manifestation has been the proliferation of micro-targets that, with the limited vision of a government agency, seem perfectly reasonable, but from the point of view of society are meaningless at best (see chapter 1 'Meaningless numerical targets'). In parallel, the private sector had developed 'enterprise systems', or ES, which 'bring together computer hardware and software to standardize and then monitor the entire range of tasks being done by a company's workforce.'² In other words, they reduce complex human activities to a series of processes that can be mapped out and programmed by a computer. It is ES that the Wal-Mart corporation has applied to the retail economy, to the great benefit of its shareholders and customers. 'It relies on electronic tags, sensors, and "smart" chips to identify goods and components at different stages of the production and distribution chain, a practice that has brought enormous gains in productivity. Such innovations allow managers to find out immediately not only that production and distribution are falling behind schedule, but also why.'³ The benefits, in the form of enhanced labour productivity, are obvious.

The health care industry in the US has seen widespread application of ES. Managed care organizations (MCOs) apply ES with the aim of standardizing and speeding up medical care, 'so that insurance companies can benefit from the efficiencies of mass production: faster treatment of patients at reduced cost, with increased profits earned on increased market share. This seems to work only from the very narrow perspective of the MCOs' accounts.' It is the narrowness of that perspective that is the relevant issue here. The patients aren't happy: they 'experience similar frustrations (and worse) to those that all of us feel when ringing a call-centre - where ES is also widely used.' Nor are the workers:

[T]he widespread use of enterprise systems has given top managers much greater latitude to direct and control corporate workforces, while at the same time making the jobs of everyday workers and professionals more rigid and bleak. The call centers of the "customer service" industry, where up to six million Americans work, provide an egregious example of how these workplace rigidities can make life miserable for employees. At call center companies ... agents must follow a script displayed on their computer screens, spelling out the exact conversation, word for word, they must follow in their dealings with customers. Monitoring devices track every facet of their work: minutes spent per call, minutes spent between calls, minutes spent going to the bathroom.⁴

There's nothing intrinsically wrong with all this. In a diverse, adaptive corporate environment, the disadvantages of ES would in the long run penalise the companies that apply them. Frustrated customers would shun them, and employees, 'dissatisfied with the destruction of a sense of community in the workplace'⁵ and with few career prospects, would look for work elsewhere. ES after all, are a tool, and if the companies that use them don't prosper, they will learn to deploy others.

But what about when there is no real competition? Increasingly ES is being applied to bureaucracies, white-collar business, and universities. And if government and the bigger corporations apply ES, or more broadly, any dysfunctional, incremental approach to achieving their limited objectives, then the result would be an entrenchment of an organizational monoculture, where there is no genuine market either for customers or employees. What works very well as an enterprise-level tool in a competitive environment, can fail spectacularly when markets are distorted and government and big business together are so dominant that they leave no room for a longer-term approach, geared toward solving broad social and environmental problems. Our policy monoculture more and more resembles that of a large corporation running Enterprise Systems, in which short-run, narrowly-focused goals predominate.

Look at [the US intervention in] Iraq. If the US said they were going to leave on a certain date, then for every week without any killings, the date would move forward, and for every week with a killing, the later and later the date would be delayed. This way those who killed would not be seen as heroes but those keeping the Americans in the country.⁶ Edward de Bono

We cannot know whether this would work, but Mr de Bono is surely correct when he says that we 'have to be open to possibilities and willing to explore'. That there is little chance of his idea being seriously considered by the decision makers is the key point. There is an urgent

need now for a policymaking system that allows the possibility of development other than along lines laid down a long time ago, and in a manner other than subordinate to short-term, narrowly-based organizational goals. What would be a sure sign that we don't have such a system; that policymaking has developed such that its goals are quite different from those of the people it is supposed to serve?

The widening gap between policymakers and people

Writing about the United States Government's perceived need to 'reframe pretexts not only for [military] intervention but also for militarized state capitalism at home', Noam Chomsky says:

It is sometimes argued that concealing the development of high tech industry under the cover of "defense" has been a valuable contribution to society. Those who do not share that contempt for democracy might ask what decisions the population would have made if they had been informed of the real options and allowed to choose among them. Perhaps they might have preferred more social spending for health, education, decent housing, a sustainable environment for future generations...as polls regularly show.⁷

They might – or they might not. But it would be better if they had the option. So even in the democratic United States people feel they have little to contribute to decision-making and their feelings are accurate. Graphic novelist Marjane Satrapi says:

If I have one message to give to the...American people, it's that the world is not divided into countries. ... You are American, I am Iranian. We don't know each other, but we talk together and we understand each other perfectly. The difference between you and your government is much bigger than the difference between you and me. And the difference between me and my government is much bigger than the difference between me and you. And our governments are very much the same.⁸

It's especially poignant ('We, the people....') that Ms Satrapi can accurately point to the gap between the American government and American citizens. Big government is not necessarily a problem in itself, but it tends to come with remote government – which probably is. We saw, when discussing perverse subsidies in chapter 1, examples of how sizable transfers from (big) government can entrench the influence of large corporations, in ways that at the very least, are not positively approved of by most ordinary people, and at times conflict with, for example, smaller businesses and the environment. Big government is self-entrenching in that way. It is comfortable dealing with (and accepting campaign funding from) big corporations, who enjoy explicit subsidies, as well as a favourable regulatory environment, and the implicit subsidies of a government-funded infrastructure and (often) economic protection. Governments confuse the fortunes of big business with those of the wider economy, and those of the wider economy with those of society. One result is that the individual citizen in most democratic western countries probably *does* feel as remote from decision making as does the average Iranian citizen. We have a policy monoculture not only within countries, but at least in terms of responsiveness to individuals' needs, between countries.

Buy-in an end in itself

One indication of the gap between policymakers and the people they are supposed to represent could be the contrast between objective measures of citizens' well-being and how people actually feel. Musing upon Britons' unhappiness with their current condition, as shown in opinion polls, books with titles like *Time to Emigrate?*, and emigration figures themselves, is *the Economist*:

Though the British have always been hypochondriacs, earlier bouts of intense self-deprecation—after the war, when bread was rationed and the empire fell apart, or the discontented late 1970s—have coincided with real hardship. By any sane measure, the current grouching doesn't. ... Even the maligned public services have improved. ... Most, for example, report that their own encounters with the National Health Service have been good. ... But these inklings [of British good fortune] tend to be submerged in the mud of disgruntlement: the same public is convinced that, in general, the NHS is a wreck. What explains this disconnect?⁹

The Economist attributes the grouching and disgruntlement to hypochondria, but it is likely that the lack of buy-in to policy is responsible. Government in Britain is extremely centralised.¹⁰ It seems likely that Britons would be less miserable about their condition – even if their health service, cultural makeup, educational achievement, and the rest were exactly the same, objectively – if they had been allowed more participation in the political processes that had brought it about.

There is solid research to back up that suggestion. Switzerland has a federal structure whose 26 cantons have use assorted instruments of 'direct democracy', notably 'initiatives' to change the canton's constitution, and referendums to stop new laws, change existing ones, or prevent new public spending. Cantons vary in the ease with which these instruments can be used. University of Zurich researchers showed that, after allowing for other variables, the more democratic the canton, the more people living there reported being happy:

Messrs Frey and Stutzer [found] that a one-point increase in this democracy index, after stripping out the effects of the other variables, increases the share of people who say they are very happy by 2.7 percentage points. What this means is that the marginal effect of direct democracy on happiness is nearly half as big as the effect of moving from the lowest monthly income band to the highest.¹¹

Is that a result of the outcomes of the process making people feel better, or is it the process itself? Participation in initiatives and referendums is restricted to Swiss nationals. Foreigners living in Switzerland aren't allowed to vote in the Swiss initiatives and referenda, so they will experience the outcomes of more consultative government but not the benefit of taking part in the process. In fact, Frey and Stutzer's data show that 'that direct democracy improves the happiness of foreigners and Swiss nationals alike—but the increase for foreigners is smaller, only about one-third of the increase for nationals.' In other words, it wasn't just the effect of the decisions made by direct democracy that led to greater well-being. The *participation in the process itself* accounted for most of the increased happiness.

Immigration to the west is one subject on which buy-in is especially important. Consultation on such a sensitive subject could make a lot of difference, not necessarily to the immigration

statistics, but to the far less quantifiable but at least as crucial matters of attitudes and trust. Lack of consultation, has not helped:

A bleak picture of the corrosive effects of ethnic diversity has been revealed in research by Harvard University's Robert Putnam, one of the world's most influential political scientists. His research shows that the more diverse a community is, the less likely its inhabitants are to trust anyone – from their next-door neighbour to the mayor.¹²

It may be that people would willingly have traded some loss of a sense of community in return for the possible economic gains resulting from large-scale immigration into the rich countries, but it is worthwhile asking where the initiative for such immigration, and why it has been allowed to occur with so little public participation. It might be that with full consultation the same number of migrants (or even more) would have been permitted entry. When it comes to hosting migrants from many different cultures and backgrounds, public participation and the buy-in it generates are essential. It's not the result of the process that is necessarily important, it's the process itself. It seems certain that immigrants would both be more welcome and feel more welcome, if their entry had been decided by the public, rather than, as appears to be the case, the short-term financial needs of big corporations.

The problem is that, with exceptions like the Swiss cantons, we don't have the machinery for such consultation, even where, as in immigration, the implications of a policy can be readily understood by everyone. Of course, in many cases policy is expressed in less accessible terms: institutional structures, spending allocations, micro-targets, or legislative or regulatory measures.

Outcome-based policy can reconnect

Social Policy Bonds, because they express policy goals in terms of outcomes that are meaningful to ordinary people, could help reconnect government with the public. If people understand what a policy is all about they can participate more in its development, refinement and implementation. Outcomes are more comprehensible to more people than the unconsidered, unstated, vague, or platitudinous goals that characterise current policymaking. If people have the chance of participating or at least understanding discussion about policy, they will also understand the limitations and trade-offs that are intrinsic to public policymaking. They are likely then to buy in to policies; to reconnect with policymakers by the sharing the responsibility for policy initiatives.

This matters hugely when government has to rein in activities to which we have become accustomed, in the face of new threats. Climate change is a prime example: a problem that demands a coherent response to an unforeseen but urgent challenge. Of course buy-in would be desirable in other areas too. The current system, because of the widening gap between policymakers and citizens, discourages buy-in. Expressing policy in terms of identifiable outcomes would help close that gap, but it is only a necessary, not sufficient, condition for engaging a wider public: our experience of immigration policy tells us that even when the meaning of a policy is comprehensible the public is rarely consulted. But this could be largely a question of habit – something that a Social Policy Bond regime would quickly break.

If the public did play a more active role in policymaking would it add anything of value apart from the substantial benefits arising from that involvement in the process?

It was in 1979 that the US Public Health Service (PHS) first set national health goals.¹³ Goals to be achieved by 1990 included a 35 percent reduction in infant mortality, a 20 percent reduction in childhood deaths, a 20 percent death rate reduction for adolescents and young adults, and 25 percent death rate reduction for adults aged 25 to 64 years. For persons over the age of 65, the aim was to reduce the number of disability days, with the goal of improving the quality of life for older adults.

These are all meaningful, clear goals, and it actually gets better. For the next stage, the PHS developed papers on 15 disease prevention and priority health promotion areas. After consultation with 167 experts, draft objectives were circulated to more than 2000 organizations and individuals for review and comment. The result of this collaboration was *Promoting Health/Preventing Disease: Objectives for the Nation*, published in 1980.¹⁴ This set 226 objectives with targets for achievement by 1990, and laid the foundation for a similar exercise ten years later. A draft of objectives to be achieved by the year 2000 was released in September 1989. Public comment was invited and used to create a consensus document, *Healthy People 2000*,¹⁵ which launched a 10-year national initiative to improve the health of all Americans. The result?

A comparison of the 1989 draft of the objectives with the final 1990 publication does show that substantial revisions were made based on public comment.¹⁶

This exercise shows that *it is quite realistic to expect valuable contributions from the public when policy is expressed in terms of broad, targeted outcomes*. Expertise will be needed to help develop and refine numerical targets but the public's contribution is extremely valuable. It overcomes the danger that targets chosen by public agencies will be influenced by the objectives of these bodies, principally self-perpetuation, which are not always in line with those of citizens. And it generates invaluable buy-in: public understanding of and support for a policy it helped to create.

More generally, getting the public to participate in setting goals for Social Policy Bonds would require more than just the government's willingness to relinquish some control. Presentation of policy options in the form of targeted outcomes will help, but there will still be a need for a better-educated public. Basic economic principles should be more widely taught, for instance. There is a strong case too for more widespread statistical knowledge, and especially for more accessible presentation of statistical facts. It is not only the public that is woefully under-educated in this respect: the usual expression of probabilities as percentages rather than natural frequencies makes them far more difficult to understand, even for the experts, in fields as critical as health care and law courts.¹⁷

Social Policy Bonds would combine efficiency in achieving social goals with transparency about exactly what these goals would be and how much they would cost to achieve. This combination of efficiency and transparency could generate its own dynamic and transform policymaking. It would take away much of government's discretion as to which bodies, corporations or interest groups receive public funding. The thrust of political debate would shift away from discussion about policy instruments and declarations of increased agency-based spending; as though these were sufficient measure of a government's contribution to achieving social goals. Instead the entire political process could shift towards:

- more consultation with citizens as to what society's social and environmental goals should be,
- exploring and articulating information about the trade-offs that are involved in achieving specified goals,
- defining society's goals in terms that people can understand and that are measurable; these goals would be explicit and would appear on election manifestos: their relative priority would be a matter for open political debate, and
- organising appropriate issues of Social Policy Bonds, and redeeming them once targeted social and environmental outcomes had been achieved.

Initially at least there would be some public services, such as defence, whose outcomes are difficult to define and quantify. And government would still have some discretionary powers to allocate finance to meet unexpected events, such as civil defence emergencies. But outcome-based policy, which would be the defining characteristic of a Social Policy Bond regime, would remove some of government's discretionary power over how it spends its revenues. Naturally then, there would be some opposition to a government-backed bond regime.

Opposition and support

There would most probably be resistance from people already in the public sector: those who currently face very limited competition in supplying services that would be made contestable under a Social Policy Bond regime, and civil servants who administer transfer and subsidy programmes. Public sector trade unions could be expected to resist Social Policy Bonds, in the same way as they have opposed privatisation, the UK's Private Finance Initiative and education voucher schemes in the US and UK.

Many of these people's jobs would probably gradually disappear during the transition to a Social Policy Bond regime, but of course there would be more, and more fulfilling jobs, created in a Social Policy Bond environment.

Politicians might also oppose Social Policy Bonds, despite the likelihood that the bonds would achieve their stated objectives more readily. This opposition would come from a natural desire to hold on to power – in this instance the powers to dictate *how* social and environmental goals shall be achieved – that a Social Policy Bond regime would, within limits, transfer to the private sector. Other opponents could be those who believe they benefit from the current array of transfers and subsidies, including those in industry and agriculture who benefit from perverse subsidies and import barriers, as we saw in chapter 1, and who would suffer from the removal of their special privileges, at least in the short term. Many of these privileges are granted only because the identity of their beneficiaries and their true costs to everyone else are not widely known, as they would be under a bond regime. Opposition to a bond regime could also come from some better-off consumers of subsidised goods or services, who might be surprised to learn exactly how much their activities benefit from lavish taxpayer subsidies. But much of this opposition would be eased by a gradual transition to a bond regime, and an appreciation of its long-term benefits.

Support for a bond regime is likely to be more muted because the benefits would probably be more diffuse. Some in government would be keen on the bonds, because they would enjoy playing to their strengths: identifying, articulating and anticipating society's goals, and raising the revenue necessary for their achievement. Government would not suffer from today's disdain and cynicism, as it would not automatically be blamed for goals that were not achieved.

In the long run, after Social Policy Bonds have been tried and refined, support for government-backed bonds should come from those who are sincere in their wish to see improvements in the position of the poorest members of society and in the provision of public goods — and many politicians do fall into this category. These people would concentrate their energies on promoting the use of Social Policy Bonds that target the well-being of their constituents. In general, the poor, and those who claim to represent them would support the bonds — if they were open-minded, and after experimental trials of the bonds had been shown to work. But most importantly of all would be the support from taxpayers once it became clear that targeted outcomes could be achieved at less cost to themselves and that they would not have to assume the risk of failed programmes.

Size of government

What would Social Policy Bond-issuing government look like? Much of the debate about government spending in the developed countries centres on its size rather than its efficiency. The two are linked, at least rhetorically. It is hard to voice the case for reducing the size of government when many so many social and environmental problems persist. Yet it is arguable that they persist because the government programmes that are supposed to solve them are inefficient. If problem-solving became more efficient under a bond regime, what would that mean for the size of government?

A government issuing Social Policy Bonds could most likely achieve its existing goals more cost-effectively, and so might lower the taxes it imposes on its citizens. A reduced tax burden would generate benefits in a number of ways:

1. Lower taxes reduce the burden to the economy by more than the taxes themselves. This is only partly because of savings in the administration costs that taxes impose. More important are the so-called deadweight costs of taxes. These arise because of the way taxes distort production and consumption behaviour. They mean that even if all tax revenue were handed straight back to producers and consumers, the economy as a whole would be worse off than if there were no taxes. Deadweight losses would be much reduced in a lower-tax environment.
2. Tax cuts have acquired something of a bad name in recent years, as their major beneficiaries tend to be wealthy, well-advised individuals and corporations. But under a bond regime the poor would benefit not only from more efficient provision of services currently supplied by government, but also from future tax cuts. In many countries low-income earners face proportionately high marginal tax rates paying, as they do, both income taxes and social security taxes. Their employers may also be paying a payroll tax. While a general cut in taxes would benefit the already wealthy, the poor would also gain significantly.

3. Facing lower tax bills, people might feel more willing and sufficiently wealthy to get together to solve social problems that are addressed badly or not at all by the current system. They might even issue their own Social Policy Bonds, perhaps to address local concerns or urgent problems in poorer countries.
4. Many people object to big government not only on the grounds that it is inefficient, incompetent or worse, but also on the grounds that it infringes the liberty of its citizens, by virtue of size alone. For these people, smaller government would be an end in itself.

But there might well be a countervailing influence in the other direction. Because government would be more efficient and its goals more transparent and subject to consensus, people might well be willing to allow it a *larger* role. New environmental concerns are bound to present themselves, and the outcome-orientation of Social Policy Bonds could make government less wary about stipulating goals too in other areas, such as crime, where there is consensus over what results are required, but little agreement on how to achieve them.

In short, Social Policy Bonds would be compatible with smaller or larger government. Either way, though, because of their focus on identifiable and meaningful outcomes, the bonds would reduce the distance between government and citizens.

¹ *Our biotech future*, letter by Raymond Firestone to the editors of the 'New York Review of Books': 11 October 2007; available online at <http://www.nybooks.com/articles/20680>.

² *They're micromanaging your every move*, Simon Head, in a review of *The Social Life of Information* by John Seely Brown and Paul Duguid, Harvard Business School Press, January 2000, ISBN 9780875847627. Available online at: <http://tinyurl.com/6foqud>.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

⁶ *Edward de Bono: 'Iraq? They just need to think it through'*, Angela Balakrishnan, 'The Guardian', 24 April 2007. Available online at <http://tinyurl.com/5su5xe>, sighted 19 July 2008.

⁷ *Failed States: The Abuse of Power and the Assault on Democracy*, Noam Chomsky, Metropolitan Books, April 2006, ISBN 0-8050-7912-2 (page 127).

⁸ *Sexual Revolutionaries*, Michelle Goldberg (interviewing Marjane Satrapi), Salon.com, April 2005. Available online at <http://tinyurl.com/5p3z3s>, sighted 19 July 2008.

⁹ *On hypochondria*, 'The Economist', 7 June 2007.

¹⁰ See, for instance, *Our regional viceroys must be answerable to voters*, Philip Davis, 'The Guardian', 29 March 2006. Available online at <http://tinyurl.com/6zlqjo>, sighted 19 July 2008.

¹¹ *Happiness is a warm vote*, 'The Economist', 17 April 1999.

¹² *Study paints bleak picture of ethnic diversity*, John Lloyd, 'Financial Times', 8 October 2006. Available online at <http://tinyurl.com/68wm3b>, sighted 19 July 2008.

¹³ *Healthy people: the Surgeon General's Report on Health Promotion and Disease Prevention*, Public Health Service, US Department of Health, Education and Welfare, 1979. Publication No PHS 79-55071.

¹⁴ *Promoting Health/Preventing Disease: Objectives for the Nation*. Washington, D.C., U.S. Dept. of Health and Human Services, 1980.

¹⁵ *Healthy People 2000: National Health Promotion and Disease Prevention Objectives*, US Department of Health and Human Services, Publication No PHS 91-50212, 1990.

¹⁶ *Objectives-Setting for Improved Health: The Public Health Service Healthy People Program*, 1990, page 4. Html version available online at <http://tinyurl.com/56qfge>, sighted 19 July 2008.

¹⁷ *Calculated Risks: How to Know When Numbers Deceive You*, Gerd Gigerenzer, Simon and Schuster, 2003, ISBN 0743254236 (pp41-3).