

The Pervasive and Pernicious Effects of Neglecting Systems Thinking
(especially when combined with a disposition toward fascism).

John Raven
30 Great King St.,
Edinburgh EH3 6QH
jraven@ednet.co.uk

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Abstract

This note seeks to bring together a number of problems that are usually considered separately but which seem to have a common root in neglect of, or avoidance of, systems thinking. The note begins by reviewing a number of studies from which seriously misleading conclusions have been drawn because they uncritically adopted the perspective of reductionist science and failed to document outcomes to which attention might have been drawn had they set the problem in a systems context. It is argued that the quality of a scientific study depends more on its *comprehensiveness* than on the accuracy with which a particular outcome has been assessed. The article then moves on to note that the tendency to introduce what are essentially single-factor changes in social policy without considering their multiple unintended, and often counterintuitive, effects is not only deeply disturbing but actually destructive. Several examples are given. But how could things be otherwise given our hierarchical governance structures wherein centralised and over-loaded “decision takers” are required to govern by decree? This suggests that the most important area in which systems thinking has been neglected has been in relation to our system of governance itself. Unfortunately, these errors and oversights appear to be only one side of the problem since the tendency to avoid complex systems thinking and generate simplistic codes and regulations seems to be linked to a belief that one has a right to forcefully impose on others activities which one believes to be good and right without much regard for the consequences for the individuals concerned or the wider society. Such a world view can perhaps most accurately be described as fascist. That having been said, it is obvious that the tendency to behave in this way is pervasive and finds expression in a widespread tendency to prescribe what others must, or may not, do, think, see, or say. The article concludes by noting what seem to be a number of other traits disturbingly linked to this predisposition.

KEY WORDS: Reductionist Science, Systems Thinking, Comprehensive Evaluation, Quality of a Scientific Study, Social Policy, Fascist predisposition, Quality in science.

Reductionist, single-variable, “science”.

Acceptance of reductionist science lies behind a vast number of problems which stem from failure to recognise that single-variable intervention in complex systems almost always has counterintuitive, and usually counterproductive, effects and thus failure to recognise the need to document *all* the effects of interventions, including “experimental” interventions.

Contrary to the most widely accepted assumptions about what needs to be done to advance understanding via experimental and theoretical science (which revolve around studying the effects of varying something [a single variable] on a pre-specified outcome [assumed to be important from a theoretical or practical point of view]), to be acceptable as *scientific* assessments of the effects of experimental interventions must strive to be *comprehensive*. That is, it is necessary to strive to document *all* the short and long term, intended and unintended, desired and desirable, and undesired and undesirable effects of the interventions (which are not necessarily limited to those intended or reported¹) in different social contexts. Otherwise the reported results corrupt the advance of understanding. At a practical level, what is good in the short term may be bad in the long term; what is good for the individual may be bad for society.

Focussing only on the magnitude of *intended* effects (as legitimised by conventional, over-simplistic, images of theoretically-based “experimental” science) may lead to failure to study seriously undesirable unintended consequences.

This can not only lead to disastrous policies, it also confuses the issues ... i.e. undermines understanding ... and thus constitutes bad science.

Well-known examples of studies legitimised via acceptance of reductionist science include:

- Failure to study the effects of fertilisers and pesticides on such things as the future fertility of the soil (itself an emergent property stemming from the complex interactions between multiple complex organisms), long term effects via the food chain, and the effects on the diversity of species living in complex symbiotic relationships within human beings.
- Failure to identify and study the “side” effects of prescription drugs (with the “side” effects themselves often presenting as problems which “require” further treatment, indeed, chains of treatments). Yet even this formulation of the problem implies an acceptance of the notion that meaningful science *can* be conducted without an evaluation of *all* the effects of an intervention and, indeed, the nature of the intervention itself.
- Failure to study the potentially beneficial effects of some otherwise “undesirable” activity – for example the beneficial effects of cigarette smoke in ameliorating obesity and levels of stress ... both of which then come to be seen as isolated public health problems requiring further intervention and, often, medical treatment.
- Failure to study the serious long term effects of compulsory fluoridisation of water supplies in an effort to reduce dental decay. (Such long term effects include bone brittleness resulting in serious accidents which require hospital care and surgical treatment.)

- Failure to identify and study the effects of the full range of emissions from diesel fuels, thereby promoting subsidies for the very cars which, in the end, turn out to be the most poisonous.
- Failure to study the full range of effects of replacing lead as an anti-knock ingredient in petrol by a manufactured alternative which contributes to emissions which are much more dangerous to health than the dreaded lead.
- Failure to study the detrimental effects of conventional education. (Not only are about one third of children seriously damaged by the current system, society as a whole is deprived of a vast range of important talents.) This failure has resulted in endless meta-analyses of tens of thousands of entirely misleading studies (derived from testing millions of pupils) which claim to identify “what works” in education. The introduction of policies based on simplistic interpretation of the results must be considered nothing short of criminal.
- Failure to undertake comprehensive studies of the effects of privatisation of public services. [On the one hand, as indicated below, privatisation is, by and large, the least cost-effective (and actually organisationally most destructive) way to do anything. On the other hand, it creates endless (albeit senseless) work and thus the “employment” (especially for managers and business owners) which is necessary to keep society functioning as it does and yield the incomes that are felt by so many to be essential. And, on a third hand, it facilitates the acquisition of ownership of the world by a (very) few and thus to the evolution of a new world order.]
- Failure to study the recursive effects of “medicalisation” and “individualisation” of problems and treatments when combined with neglect of their societal “causes” on the production of very many “diseases” such as anxiety, depression, stress, dyslexia, and obesity.

More generally, a focus on reductionist, single variable, science leads to an inability to comprehend, even register, crucially important processes (as in symbiosis) wherein emergent organic sub-entities interact with each other to create further arrangements having emergent properties which are not discernible from any kind of summative arrangement of their components.

This huge “blind-spot” has had dramatic destructive effects on both “scientific” thinking and practice in the social sphere.

It would seem to follow that the quality of a scientific study is to be judged more from its comprehensiveness than from the accuracy with which it measured single variables and eliminated the effects of others.

Social policy.

The tendency to introduce what are essentially single-factor changes in social policy without considering their multiple unintended, and often counterintuitive, effects is not only deeply disturbing but actually destructive.

The changes that are introduced often include such things as the setting of targets, standards, and regulations within conceptually isolated domains whilst neglecting their social contexts. Contrary what “common sense” and simplistic thinking would lead us to expect, such policies almost always have constricting, diversionary, and destructive

effects, many of which have been well documented in the systems sciences. Targets, for example, lead to neglect of the wider goals of the organisation or activity as those concerned focus on what is measured and neglect what is notⁱⁱ. The application of simplistic – sound-bite level – formulation of problems and the route to their solution by well-intentioned “do-gooders” results in the criminalisation of a huge range of behaviours without regard for the multiple and widespread consequences of that process. More basically, however, the tendency to generate simplistic regulations and targets and seek to enforce them through punitive sanctions seems to be linked to a world view which turns on the belief that one has a right to forcefully impose on others activities which one believes to be good and right. This world view provides the basis of Fascist states and can thus itself be accurately described as fascist. Once formulated in this way, it is immediately obvious that the tendency to behave in this way is pervasive and finds expression in a widespread tendency to prescribe what others may do, think, see, or say, including prescriptions of how people shall educate their children, when, where, and how they may die, what they may read or watch in the media, what words they may not use in public utterances ... and so on.

I will return to the simplistic, non-systems-orientated, basis of this world view later.

But first some examples of failure to engage in systems thinking in relation to social policy. These include:

- 1) Failure to consider the effects of denying access to potentially fatal drugs (“to protect people from themselves”) on the level of demand that the medical profession help people to die ... (but only in circumstances that those drafting the legislation consider to be appropriate). The restriction of personal action combined with constraints on the actions of the medical profession results in both the subjection (essentially by political decree) of many people to lives in pain, poverty, and degradation (in other words, torture) on the one hand and the destruction of the quality of life of the “carers” ... who usually turn out to be the families of the individual concerned ... on the other.
- 2) Failure to consider the implications of the, ideologically-based, demand that public sector organisations put out everything possible to tender (“so that the most cost-effective way of doing it can be selected”). The reality is that this leads to a massive increase in the work required by public sector staff of to generate provider-proof specifications of the work to be done, by potential contractors to prepare tenders, by public-sector staff to sift through and attempt to assess the relative merits of the mountains of tenders submitted, to monitoring the progress of work in hand (in order to check whether commitments that have been made are being fulfilled), and, by the legal profession, to investigating claims of discrepancies between promises and outcomes. The net result of all this is decline in the resources available to provide the goods or services in question (in turn typically leading to a decline in quality) and reduction in the conditions of employment of those providing or manufacturing the goods or services in question. As with all target setting, the practice leads to a focus on the specified targets to neglect of the overall goals of the activity concerned and the developments which may be needed to reach those goals more effectively. Put another way, the product of the contracted-out activity is, in reality, very different from the product of the activity conducted in-house. As noted above, little attempt is made to document these multiple outcomes (still less to map the multiple, interacting, and recursive feedback loops involved) - and the development of the understandings

and tools required to do so would, in any case, be beyond the capacity of the “scientists” available to be recruited on contract to undertake such work.

- 3) The medicalisation of “health care”: i) Failure to acknowledge, and seek to remedy, the most widespread causes of the diseases which currently make the heaviest demands on the “health” services, ie stress (arising from employment and working conditionsⁱⁱⁱ, legislative requirements to investigate and apply for numerous potential (but non-existent) jobs in order to be eligible for “benefits”), and isolation^{iv}; ii) Routine prescriptions of endless series of tests (based on single factor understandings of the “cause” of the condition but also, in part, to avoid accusations of incompetence derived from a culture of rule-following grounded in techno-rational “knowledge” [this despite the fact that, as I have shown elsewhere^v, incompetence rarely arises from this source and, more often, from such things as lack of integrity]); and iii) failure to nurture and recognise (I deliberately choose the word “recognise” rather than “reward”) in health care professionals the disposition to engage in the systems thinking that would be required to consider the presenting problem as a whole and take the actions then seen to be appropriate.
- 4) Failure to study, and intervene in, the systemic causes of problems instead of individualising them. The neglect of the systemic causes of such things as stress and depression has already been mentioned. But there are huge numbers of others including the attribution of unemployment to lack of skills, themselves (falsely) attributed to lack of formal techno-rational knowledge^{vi}, and mental deficiency (which is mainly a problem only because communities are hierarchically organised instead of in such a way as to absorb and respect a full range of people), and, surprisingly to many, “Dyslexia” (which emerges as a rag-bag category of people “suffering” from a wide range of disabilities [and having a wide range of overlooked strengths] that are incapable of resolution by any prescriptive remedial programme whose only common “problem” is inability to read ... which turns out to be a system-generated “problem” – ie one created by a dysfunctional “educational” system that is unable to recognise and nurture the diversity of talents that are available - and only capable of solution via systems-oriented intervention^{vii}).
- 5) The craze to criminalise everything that someone in authority does not like ... without regard for the consequences for those so accused and their families, let alone the wider society. (The immediate consequences of initiating criminal proceedings include the public [and often publicised] maximally-disruptive arrival of police and “social service” workers. This results in disorientation, a dramatic increase in stress and fear for one’s future and possessions, family break up, and ostracism at work, and a nightmare-like quest for legal representation. The longer term effects, even without a successful prosecution, include disorientation, loss of self-confidence, loss of reputation, loss of many fair-weather “friends”, and difficulty recovering social and work standing. A successful prosecution, even for a relative trivial offence [like shouting an abusive comment at a supporter of an opposing football team], results in a criminal record which follows one throughout life and results in automatic relegation to low status among job applicants, exclusion by law from educational programmes leading to many professional careers, and automatic exclusion from ever entering others. The effects of all this are typically much worse than any harm the individual may have inflicted on others. And these are only direct effects. Others include fear of prosecution resulting in concealment of the very proscribed actions (which are,

indeed, often harmful to both the person concerned and others) and thus inability for either party to gain desirable help and support. [There are abundant examples of this sort of thing not only in the criminalisation of the sale or purchase of “sex” (which can itself offer some of the most cost-effective psycho- and socio- therapy available) but also, and perhaps more importantly, in the area of “rape” (which is a terminological minefield containing a network of definitional - legalistic - traps). These wider effects include diversion of enormous resources into the legal profession and away from the kinds of activity that might have been helpful in specific situations. Huge amounts of time are devoted to familiarising people with regulations (“education”), testing their knowledge of them, and finding out whether they have been followed. Teachers spend an enormous amount of time filling up forms specifying how they are going to follow government rules and demonstrating that they have done so. Social workers spend two thirds of their time in front of their computers trying to find out what the rules say about what they should do in specific situations instead of working out what should be done given the specific situations that confront them. The same applies to doctors and nurses.

- 6) Huge amounts of time and energy being devoted to activities designed to avoid the possibility of some rare (and often exaggerated) event actually happening (eg “vetting” of all those who may have contact with “children” ... ie with anyone under 18 ... “lest they may have paedophilic tendencies” and horror at eg a teacher touching a disturbed child [using the term in the common sense, not legalistically defined manner] even though this may be just what the child needs). “Health and safety” experts have rightly become the target for jokes ... but the disproportionate effort put into removing responsibility from individuals and allocating it to the state beggars belief. It may seem obvious that traffic lights, white lines, and pavement railings all promote safety ... but, in many situations, such things result in an *increase* accidents because they relieve motorists of responsibility for personally monitoring what is going on. Attention focusses on the control – the traffic lights - rather than on the overall situation - what is going on in the street.
- 7) The manufacture of destitution^{viii} via the application of “sanctions” for failure to satisfy the endless requirements needed to obtain “benefits” for failure, for one reason or another, to engage in the largely senseless^{ix} work in which it is widely believed that everyone should be compelled to engage to “earn a living” – ie to acquire access to a decent way of life.

Most of these examples illustrate the effects of failure to engage in, or perhaps a perfidious desire to avoid, systems thinking at the most basic level.

But it would be a mistake to leave the matter there.

In many situations, a social problem is created or perpetuated by a complex network of interacting, mutually reinforcing, recursive, and self-perpetuating feedback processes.

Attempts to map these in any meaningful way are rare. However, some nice examples will be found in Morgan^x, and Forrester, Meadows, and their collaborators^{xi} have, by mapping complex networks of economic and physical processes, shown, among other things, that attempts to stave off the collapse of the planet by doing such things as using resources more efficiently actually result in a pollution crisis which will kill us off more

quickly! In our own work^{xii} we have tried to map the network of social forces which perpetuate an “educational” system which conspicuously fails to reach its manifest goals.

What emerges from all these examples is that the effects of most common-sense based interventions intended to remedy obvious problems within a system one at a time will be negated by (indeed often translated into their opposites by) the reactions of the rest of the system.

Put more memorably, common-sense based intervention into complex systems almost invariably has counterintuitive, and usually counterproductive, effects.

Multiple systems-*oriented* rather than centrally-decreed system-*wide* changes are usually required to deal with a problem.

Yet it is difficult to see how these could be implemented via our current hierarchical governance structures.

In reality, multiple interacting feedback loops are not only rarely discussed, let alone mapped, even by those specialising in the study of such things (sociocyberneticians^{xiii}).

What is more, most of those who do construct such systemogrammes (eg those presented at *Business Studies Laboratory* conferences) themselves tend to end up pointing to things which they think some authority, some manager, “should” do to remedy the problems (ie command a number of single-factor interventions) rather than the multiple systems-oriented interventions to which their results point.

In other words, these self-styled systems thinkers are themselves trapped into conventional thoughtways and neglect three of the most basic conclusions to emerge in the systems thinking area: (a) the effects of single factor interventions are rarely those intended; (b) command-and-control arrangements rarely work effectively because they neglect most of the most important feedback needed to function effectively and survive over the longer term; (c) behaviour is mainly determined by the constraints of the system in which people find themselves rather than by some characteristic of the individual him or herself. As a result, it is a mistake to expect managers and politicians to respond to reports which suggest that they do anything much different from what they are already doing. For the same reason, it does little good to shout at those in authority – be they politicians, managers, public servants or teachers. They have far fewer degrees of freedom than is commonly supposed.

To be clear. *What these observations illustrate is that one of the most important effects of our pervasive failure to engage in systems thinking is our failure to rethink and re-design our governance (management) systems themselves^{xiv}.*

Although not so obviously a direct effect of failing to engage in systems thinking as those discussed earlier, the following more general processes seem to stem in part from an absence of a motivational predisposition to habitually examine the claims of others from a systems perspective.

- Investment of undue confidence in “scientifically-based” pronouncements despite what common sense and everyday observation would tell one if those results were set in a systems context. It should, for example, be obvious to all who have eyes to see that, if the smoking crusaders were right, most of us old people who have spent our lives smoking and working in smoke filled offices should not be here. But we are here. (And the burden we impose on the health services as a result of our smoking is insignificant compared with the burden stemming from road accidents, drinking (or even such dietary choices as eating butter let alone food poisoned by fertilisers, pesticides, and preservatives), let alone pollution and current employment practices and policies.)
- More generally, an inability to interpret everyday “statistics” - what do such statements as “there is a highly significant relationship between A and B” ... and, more basically, assessments of risk ... actually mean in practice? For example, the actually trivial risk that I will be killed by a “terrorist” or die if I smoke have been used to justify enormously intrusive policies which are vastly destructive of liberty and cost huge amounts of money, while the incomparably greater risks of my being damaged by the “educational” system, the legal system, the “health care” system, the “security” system, or employment and transport policies are virtually ignored.

The last two observations prompt the thought that the problems we are trying to grapple with here inhere, not so much in science and statistics as in the predisposition to seize on a single variable ... smoking, ethnicity, religion, non-PC remarks, paedophilia, “child rape”^{xv} ... as a basis on which to mount a crusade. In other words, they stem from a basic desire to seek a *cause* to embrace and vehemently pursue. Or, in yet other terms, from a need to seek out and seize an opportunity to self-righteously persecute others.

If there is a predisposition to underestimate the levels of social responsibility that human beings are able to exercise in appropriate circumstances, there also seems to be an even more pervasive failure to appreciate the role of ... and the potential to capitalise upon ... self-organising, organic, social arrangements having multiple feedback loops. Instead there seems to be a widespread predisposition to seek authoritarian, hierarchically-organised, Fascist-type, arrangements.

The two are linked. It is virtually impossible to exercise social responsibility ... to intervene on the basis of personal observations ... in authoritarian organisations or regimes where one is, for example, commanded through regulations to prosecute those who have stolen a few sweets from a shop (actually a shop counter precisely designed to evoke the desire to acquire them), or experimented with some recreational drug, or looked at “child” pornography (ie sexually explicit pictures relating to under 18 year olds). It would seem that such authoritarian organisations have largely been brought into being by individuals who are incapable of getting the minds round the complexity of social issues and who have come to believe that they have a right to force other people to do whatever they (simplistically) believe to be good and right regardless of the consequences for those concerned or the wider society. Such people come, not merely to disparage others who have alternative values, not only consign them to prison, but actually kill them.

And this brings us back to the question of Governance. The notion that one must have binding rules decided by majorities calculated from the accumulation of single votes orchestrated around sound-bite length “motions” yet binding on all is a clear expression of simplistic, non-systemic, (or possibly very complex and devious) thinking. The alternative would be to recognise and encourage toleration of uncertainty, diversity, and experimentation associated with comprehensive evaluation of the benefits and disbenefits of alternatives followed by debate and progressive evolution.

In the end, therefore, it emerges that an inability to engage in the kind of systems thinking which takes account of multiple connections and statistical, probabilistic, not invariant, relationships, and diversity is inimical to the evolution of more effective forms of governance.

And this is why it is, in the end, so important to focus for a while on the pernicious effects of what seems to be a pervasive tendency toward fascism (“fascism” with a small f) understood as the desire to impose anything one believes to be good and right on others by force.

Pervasive and pernicious fascism.

Although generally discussed in connection with extreme political movements (see eg the Wikipedia entry: <https://en.wikipedia.org/wiki/Fascism>) fascism has at its heart the desire to make arrangements to impose what one person or sub-group believes to be good and right on others by force. As such, it may itself be regarded as an outcome of failure to engage in systems thinking associated with an inability to cope with, let alone see the benefits of, diversity.

The notions of what is good and right that are embraced are often loosely associated with vague and simplistic, if often extreme, notions of morality and overwhelming respect for unquestionable authorities. Thus they include many aspects of sexuality, social living, and religion.

The impositions are generally made with little concern about the consequences for the individuals on whom they are imposed and the means whereby they are imposed. Indeed it is commonly accepted those imposing them that one is entitled to kill those who espouse alternative viewpoints: Muslims, Christians, Catholics, heretics, non-believers, homosexuals, gypsies.

Viewed in this way, attempts to impose child rearing behaviours^{xvi}, forms of education and assessment, limitations on what one may read, look at in magazines, or watch on TV (so-called^{xvii} “pornography”), arrangements relating to when and how one may die, requirements to engage in senseless work (“in order to contribute to the economy”), to contribute to or be subjected to medicalised health care, to avoid the use of mind-altering drugs, to avoid “politically incorrect” forms of speech (so-called “racist remarks” etc.) all emerge as essentially fascist undertakings.

The tendency, or predisposition, to introduce or enforce what are essentially prescriptive and proscriptive actions thus emerges as something which is not only pervasive throughout the population but inimical to liberty.

But this is not the end of the matter. As we have explored these issues, we have come across a related human predisposition which, on the face of it, is even harder to understand than personal fascism itself. Given a rule (eg to eliminate Jews, to ensure that mothers bring up their children in certain ways, to eliminate paedophiles, to make sure no one watches “child pornography”) many of those charged with their enforcement seem to have an extraordinary predisposition, not only to avoid taking personal responsibility for exercising judgment and discretion when it can be seen that their actions are patently immoral or counterproductive, but to actively and self-righteously invent ever more intrusive and abusive ways of enforcing or enacting the rules or commands. The existence of the rule seems to unleash enormous self-righteous energy. Thus police seem to go to unnecessary lengths to initiate such things as dawn attacks on those suspected of looking at computer-generated images of “children” and personally invent ever more intrusive and destructive means of wrecking the lives of those concerned (and their families) even though no prosecution ... let alone actual harm to children ... is ever brought or demonstrated^{xviii}.

Conclusion.

The conclusion I myself draw from this discussion is that it is vital to the survival of our species to promote systems thinking by drawing attention to the consequences of failing to engage in it and to resist pervasive fascism at every possible opportunity. The two seem to be psychologically linked in some very fundamental way. From a systems point of view, it would seem important to find ways of preventing those who fail to show evidence of systems thinking and those prone to what may be called personal fascism from entering positions from which they can have a major effect on society.

ⁱ Actually, even actual the nature of the “intervention” needs to be scrutinised. For example, experimental variations in health care in different contexts (homes, hospitals pervaded by different policies) may bring with them overlooked variation, eg patients involved in experimental trials get more attention than those to whom the drug is administered routinely.

ⁱⁱ This processes has been formalised by Campbell as the following law:

The more any quantitative social indicator is used for social decision-making, the more subject it will be to corruption pressures and the more apt it will be to distort and corrupt the social processes it is intended to monitor.

Campbell, D.T. (1979). Assessing the impact of planned social change. *Evaluation and Program Planning*, 2(1), 67-90.

Campbell in fact discusses several of the issues raised in this article from a different perspective.

ⁱⁱⁱ Given current beliefs about “necessary” living and working conditions (and their effects on “health”) it is worth mentioning that, when I started work 50 years ago, we were supposed to work 8.35 to 4.55 Monday to Thursday and to 3pm on Friday. In fact what happened was that people would roll up more or less any time between 7.30 and 9, start by reading the newspapers, and then, around 9.30 to 10 get out their kettles and form “tea groups” for 15 to 30 minutes. Then, around 12, they would either set off for 2 hour lunch breaks or join “lunch clubs” ... sporting, dancing, foreign affairs, planning holidays (with maps from the library) or repairing their cars in the on-site workshops. Around 3, they would get out their kettles again. And start setting off for home any time from 4.15. In another job in the early 70s, more or less everyone I was associated with was working on “job creation” money doing research, building walkways, etc. etc. It was only later, with the arrival of Mrs. Thatcher, that job creation came to mean the creation of endless frenetic work via privatisation ... which, besides destroying community, created endless jobs for accountants, lawyers, financial advisors etc. etc. In due course, even this got further and further out of control with many people involved in “creating” jobs doing such things as conducting demeaning inquisitions into why people were unemployed and compelling them to destroy their families by travelling across communities in the hope of being taken on for a pressurised job which, in all probability might not “need” them that day. My point is

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- that this destructive way of life, with all its manifold implications for health, is far from being a necessary way of life. Appropriate “health care” may thus involve something very different from more surgeries, hospitals, and drugs.
- ^{iv} Of course, given the state of the social sciences, it would be much more difficult to come up with policies to address these social causes, but that is a direct outcome of enthrallment with reductionist science.
- ^v See Part II of *Competence in the Learning Society*, http://eyeonsociety.co.uk/resources/fulllist.html#competence_in_the_learning_society
- ^{vi} Competence (see book cited above) mainly depends on *tacit* knowledge (ie knowledge of *ways of doing things* ... ie knowledge grounded in feeling-based sensitivity to hard-to-identify cues) and unique combinations of up-to-date specialist knowledge ... ie a very different knowledge base to the kind of, generally low level, knowledge bases found in schools and colleges.
- ^{vii} See *Dyslexia: Getting it Wrong* <http://eyeonsociety.co.uk/resources/Dyslexia.pdf>
- ^{viii} Webster, D. (2016) *Beyond I, Daniel Blake* <http://eyeonsociety.co.uk/resources/Beyond-Daniel-Blake.pdf>
- ^{ix} Most work in modern society is not only senseless in the sense that neither the work itself nor the resulting products and services contribute much to quality of life, the manufacture, marketing, and distribution of those products and services inflict enormous destruction on our habitat and thus our chances of survival as a species.
- ^x Morgan, G. (1986). *Images of Organization*. Beverly Hills, CA: Sage.
- ^{xi} Meadows, D. H., Meadows, D., & Behrens, W. W. (1972). *The Limits to Growth: A Report for the Club of Rome's Project on the Predicament of Mankind*. London: Macmillan.
- ^{xii} The best illustration I have of the importance of doing this relates to the question of why, as is widely recognised, the so-called "educational" system does not do what most people think it should do. The results of our research were summarised via a systems diagram (which we would now call a systemogramme) showing how the system perpetuates and extends itself. Unpacking this takes some time and is therefore not included in most of my discussions of that diagram ... but is included in the “summary” at the end of chapter 7 in my book *Managing Education for Effective Schooling* <http://eyeonsociety.co.uk/resources/MEFESChap7.pdf>. The "educational" system's role within an external system (ie contributing to, legitimising, and perpetuating hierarchy) is represented in the diagram but in a somewhat isolated box on the right hand side. In my later writings I have tended to focus on these external constraints rather than on the "internal" self-perpetuating feedback cycle within the system. A shorter contextualised summary will be found in Raven, J. (2012) *Advances in Mapping, Measuring, and Harnessing the network of social forces which control the “Educational” System ... and Have the Future of Humankind and the Planet in their Grip*. http://www.eyeonsociety.co.uk/resources/SCiO_newsletter_V2.pdf
- ^{xiii} Cybernetics is field of study concerned with understanding the guidance and control systems in animals and machines ... and the design of better ones. It is not just concerned with man-made mechanical systems. Thus *socio-cybernetics* becomes the science concerned with studying and mapping the feedback loops which govern the functioning of society and the design of better systems.
- ^{xiv} The results of my own attempt to do so will be found in: Raven, J. (1995). *The New Wealth of Nations: A New Enquiry into the Nature and Origins of the Wealth of Nations and the Societal Learning Arrangements Needed for a Sustainable Society*. Unionville, New York: Royal Fireworks Press www.rfwp.com; Edinburgh, Scotland: Competency Motivation Project. http://eyeonsociety.co.uk/resources/fulllist.html#new_wealth. But a more specific comment is that the guidance and control systems of organisms, ie their *governance* systems, are *embedded in* (rather than in some sense outside) them and are dependent on multiple interacting feedback loops.
- ^{xv} Not only does (undisclosed) use of the legal definition of the word “child” ... ie anyone under 18 unless the law in question specifically specifies otherwise ... result in utterly confused media discussion (where this definition does not correspond with common usage of the word – which is typically used in connection with a [much] younger age group, the discussion proceeds as if it can be accepted that most of the young people involved in these activities object to the (sexual) behaviour of the “adults” in question. This is far from being the case: many young people seek out and encourage such contact, and such contact can indeed be very beneficial. It therefore seems that the quest for an emotionally-based crusade which can be self-righteously embraced plays a much more important role than the effects of whatever behaviour it is that it is desired to eliminate. And the (often extreme) negative effects of that crusade are almost entirely overlooked in public discussion.

^{xvi} The Scottish government's **Children and Young People (Scotland) Bill** mandates State intervention in the lives of every child and family. Justified on the basis of offering every family a "first point of contact" with the plethora of "care" agencies nominally available to "help" families and children, this Bill actually provides for the state to appoint a single state servant "to ensure the well-being" of every "child" under 18. That person will have access to all family health, criminality, and educational records. He or she will be required to visit the family for hour-and-a-half long assessments 11 times, 8 of them in the child's first year and 3 more between 13 months and 5 years. In the course of these visits he or she will monitor, not just the health and development of the baby, but also a range of aspects of parental attitudes and family life, including finances and mental health. The assessments include two sets of tightly-printed 16-page Questionnaires. The selection and wording of the questions is permeated by "middle class" thought-ways, biases, and values, embody unquestioning endorsement of the doubtful benefits for all children of the so-called "educational" system, and acceptance of the misleading popularised interpretations of the (actually meagre and mostly seriously flawed) research into the "importance of the first three years". The "named person" has/will have the right to initiate procedures to compel parents attend parent-"education" courses and, in the last resort, send them to prison for failing to follow state-prescribed guidelines.

^{xvii} It is significant that most of that which is directly or indirectly designed to "corrupt and deprave" ... namely most advertising and the portrayal and glorification of war and the killing of "offenders", non-believers, infidels, and the "uncivilized" ... is not regarded as pornographic. Indeed most explicitly fascist governments directly promote and glorify such activities.

^{xviii} See <http://eyeonsociety.co.uk/resources/Madness.pdf> for a discussion of this process.