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**Creating a Future for Homo Sapiens:
Transforming the Educational System and Society.**

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For almost half a century, it has been widely recognised that our survival as a species requires fundamental change in the way we live. Yet the destruction of the soils, the seas, and the atmosphere proceeds exponentially. Increasingly, long-term survival of the human race is seen as something that is in doubt. Five back up planets, engaged in nothing but agriculture, would be required for everyone alive today to live as we live in the “West”. It cannot be done, but vast billions of people are hell-bent on trying.

Changing the subject somewhat, over the same period it has been widely acknowledged that the educational system is itself in need of radical reform.

In both cases, it has been widely recognised that the primary obstacle to change is that *systems level* transformation is required. This is because any effort at piece-meal change is counteracted or negated by reactions from other components of the system¹. Typically, recognition of this need for systemic change results in demands for some centrally-decreed, system-wide (as distinct from systems-oriented) transformation.

To many, it has become increasingly clear that attempts at such system-wide change usually fail to achieve their objectives, and typically create more problems than they solve. In many cases they have the opposite effect to that intended. Thus, most mandatory testing programs in schools have the effect of deflecting teachers’ from considering pupils’ idiosyncratic needs and, since the tests are norm-referenced, end up labelling some children as educationally “challenged” in an even more comprehensive and damaging way than was previously the case. Because it is felt that it will promote the invention of more alternative ways of dealing with these problems, such observations have led to strident calls to “turn things over to the market”. Unfortunately, the fundamental fact that teachers teach and students work toward whatever outcomes are assessed in the certification and placement process – with the corollary that reform of this process - outside “the market” though it is - is crucial to school improvement - somehow escapes attention.

In reality, “the market process” not only generally fails to solve the problems it is called upon to address (because, as in education, those problems usually have roots at an entirely different level) but also creates endless further work.

Speaking generally, one of the most fundamental problems with “the market mechanism” is that major costs - such as the destruction of community, like destruction of the soils, seas, and atmosphere (which may be collectively referred to as “the commons”) - are not included in market calculations of cost prices (unless, paradoxically, mandated by public management arrangements!). In the jargon, they are “externalised” ... passed on to the “Third World” or left for future generations to deal with. Even more often the “side effects” of one action are remediated by another and both counted as contributions to Gross National Product ... which is often treated as synonymous with both “wealth” and “quality of life”.

The “tragedy of the commons” – the destruction not only of the soils, seas, and atmosphere (by, among other things, dumping of industrial waste in the seas and the destruction of the rain forests) but also of such things as the social fabric on which well-being depends - has become pervasive and endemic. This is because all manner of things which directly and indirectly determine the quality of our lives and our future cannot be commoditised and bought and sold on an individual basis. These collective provisions include not only freedom from plague and such things as global warming but also such things as living and working arrangements which facilitate high quality of life, and, indeed, the whole network of public management that is required to ensure that the planet as we know it will survive and thus that we will have a future. (Absence of security for the future being one of the main contributors to low quality of life.)

“Market processes” as currently implemented (and legitimised by the educational system) also create unconscionable divisions within society. This division then compels vast numbers of people who would prefer to do otherwise to participate in the manufacture, marketing, and delivery of junk foods, junk toys, junk cars, junk health care, junk education, junk research, junk insurance, and junk “defence” systems.

Yet the central tenant of those who promoted the market mechanism in the first place (Adam Smith and Fred Hayek) is correct – centralised, system-wide, change depends on decisions by “committees of ignoramuses”. There can be no such thing as a wise man or wise woman because information on what will happen as two unrelated developments converge, key though it is to effective decision taking, simply cannot be available.

If “the market mechanism” does not - and cannot - work, what is an alternative answer to Smith and Hayek’s question about how to design a society that will innovate and learn without anyone having to know anything very much?

Re-phrasing the question perhaps makes it easier to answer. Put the other way round, the question becomes “How do we design a *learning society* – one which will make use of all the expertise located in the hearts, heads, and hands of billions of people?”.

As it happens, this also turns out to be the central question that the “educational” system itself needs to answer to put its own house in order.

One of the fundamental barriers to the reform of the so-called “educational” system is that much of what happens at schools is not about education *per se*, but rather has to do with the execution of sociological functions which contribute to the network of mutually reinforcing and self-perpetuating – autopoietic – social processes that are driving us, seemingly inexorably, toward the extinction of our species.

The way in which a single-factor concept of ability legitimises social division which then compels many who would prefer to do otherwise to participate in the make-work, junk-and-pollution-creating-and-delivering, activities of which modern society is so largely composed has already been mentioned.

But the way in which attempts to prescribe ways to meet the incessant demand for higher and higher norm-referenced “educational” “qualifications” renders invisible, and stunts the development of, the very competencies required to facilitate social change (such as the multiple talents [such as initiative, ability to work with others, and the ability to understand and intervene in societal processes] required to create climates of innovation and enterprise) is even more insidious.

In short, neither of the commonly proffered solutions to our societal problems (viz “the market” and “central planning”) actually hold out much hope of delivering solutions to either our wider societal problems or the narrower problems of the “educational” system itself.

What, then, can members of the “educational” profession do, first, to gain some control over the situation in which they find themselves and, second, to promote the development of the talents, understandings, and competencies that are required if we, as a species, are to have a future – *any* future?

For many, if not most, people, vague awareness of the issues discussed above has led to feelings of despair and hopelessness—perhaps even resignation and cynicism. We find ourselves at the mercy of forces we cannot hope to understand or influence. Many people feel that our best hope lies in the election of a “good, strong”– or at least less bad – “leader” ... who is then required to present him or her self as a kind of “saviour” who knows clearly what should be done.

At this point it is useful to discuss the analogous situation that existed in connection with sailing boats prior to Newton.

Before Newton, ships could not sail into the wind ... only run with it. As a result, shiploads of soldiers could arrive at a destination and conquer the foe ... but they could not get home again until the wind changed. Sometimes they had to wait for as long as 7 years for a favourable wind. The same feelings as we see today prevailed among ships’ captains, the sailors, and their wives. The only hope lay in praying to the gods for a

favourable wind. And the priests of the time - like our politicians and economists – gladly proffered solutions like making sacrifices to the gods to curry divine favour. Based on theories as mystical as those of economists and experts on public administration they proved to be equally ineffective.

But what actually made the problem soluble? Principally, the conceptualisation and measurement of physical force. Before Newton there had only been the wind, the waves, and the gods. These destructive agents crashed our boats against the rocks. With Newton, came a new way of thinking. A common property – physical force – was seen as lying behind the wind, the waves, falling apples, and the movement of the planets. These invisible physical forces could be made visible, mapped, modelled, measured, and ultimately, harnessed.

We have, as yet, no parallel way of thinking about – let alone measuring and mapping – the, currently invisible, *social* forces that primarily determine our destiny (and, as it turns out, our everyday behaviour).

Nevertheless, much to our surprise, what we found ourselves doing after some 40 years research into the educational system was attempting to map the network of mutually reinforcing feedback loops that not only prevent it achieving its manifest goals but also undermine attempts to introduce step wise change.

But there is something else to be learned from the sailing boat analogy. At least as important as scientific advance was a network of activities the need for which could not have been centrally recognised or decreed. This included preparation of charts of the seas and the hazards to shipping, the building of lighthouses and means of funding lighthouse keepers, and chronometers so that ships' captains knew the time at home and could work out where they were on the high seas. These complementary developments emerged from a deep seated climate of concern with innovation which acknowledged the need for pervasive experimentation in the context of full recognition that most of those experiments would fail in financial terms.

And so what to do in education? Choice and the market mechanism on its own is of no avail if, in the end, all students have to clear the same centrally decreed hurdles to avoid the degrading and dehumanising treatment meted out by penny-pinching “welfare” agencies.

There is little formal understanding of how to nurture diverse high level talents – such as initiative, self confidence, the ability to adventure into the unknown, the ability to capitalise upon chance observations, and the ability to think about, place, and develop the talents of students, colleagues, and subordinates. There is little understanding of how to give people credit for these diverse talents and help them to capitalise upon them. There is little understanding of how to assess all the short and long term, personal and social, desired and desirable and undesired and undesirable consequences of alternative educational programmes so that parents and pupils can make informed choices between demonstrably different options which have demonstrably difference consequences. There

is little support for the notion that what is needed is widespread experimentation, diversity, and choice between comprehensively evaluated options. There is little support for the notion that information is to flow outward from public servants to the public (so that people can make informed choices between options) and not upward in a bureaucratic hierarchy to politicians who are expected take decisions binding on all. There is still less support for the notion that it is the job of public servants to create this climate of innovation, to create this pervasive experimentation, to feed information outward to the public, and to provoke public debate.

Let us summarise what we have said. We have said that finding a way forward is centrally dependent on (1) scientific advance in the realm of sociocybernetics²; (2) the creation of a pervasive climate of innovation to promote change in every nook and cranny of the educational system; (3) the development of new job descriptions for public servants (including teachers); and (4) that we need a new supervisory structure – a new form of democracy – whose central task is to ensure that our public servants perform their redefined jobs effectively.

In the end, therefore, we find ourselves with new understandings of public management and the supervision of the public service, that is to say with new concepts of bureaucracy and democracy.

Contrary to widespread belief, our public servants are the key actors in the process of orchestrating innovation. Contrary to received opinion, they are not there to do the bidding of politicians (“committees of ignoramuses”). Contrary to public belief, the function of representative assemblies is, as Mill put it, “not to govern, a task for which they are eminently unsuited”, but to “make visible to everyone who did everything and by whose default anything was left undone”.

And so, in the end, it emerges that, if we were to be able to find new ways of putting our own house in order, we would have evolved the very societal management arrangements that are required to provide an alternative answer to Smith and Hayek’s question of how to design a genuine learning society – a society which innovates and learns without anyone having to know anything very much ... or which, importantly, can be described as its apparent opposite – a society which harnesses the expertise currently locked up in the hearts, heads, and hands of billions of people.

If we can do this – ie evolve an educational system in which there is a pervasive climate of innovation and commitment to experiment with ways of tackling the myriad of interrelated problems which exist and learn from those experiments - we will not only have a working example of how to get out of the (global) mess we are in. We will also be able to offer our students role models of an alternative concept of citizenship and alternative ways of living.

Notes

1 I have been asked to give an example. But that is difficult precisely because it is a systems problem. Thus it is obvious that one cannot reasonably introduce experimental educational programs designed to achieve alternative goals – and, especially programs intended to nurture students' *diverse* talents – unless one changes the nationally mandated assessment tests. But one cannot change the assessment procedures in such a way that they will give students credit for the talents they have developed unless one has created, within schools, developmental environments which nurture those talents. But one of the most fundamental reasons why one cannot change these centrally mandated tests is precisely that they render these multiple talents invisible and thus reinforce a single-factor concept of ability which in turn performs the sociological function of legitimising the rationing of privilege – which in its turn has the effect of compelling many people to engage in the largely unethical activities of which modern society is mainly composed – and more generally to participate in a social system of which they strongly disapprove - in order to avoid the degrading and dehumanising treatments wished upon those who seek to “drop out”. And even this is not the end of the matter because this network of feedback processes turns out to be just one sub-set of a wider network of mutually supporting feedback loops (sociocybernetic processes) which perpetuate a sociologically useful (in the short term) but educationally dysfunctional system.

2 Cybernetics is the study of guidance and control systems in animals and machines – and the design of better ones. It is important to mention the animals to emphasise that cybernetics is concerned with the study of *natural* systems, not just man made ones.

Evidence documenting and supporting the assertions made in this brief note, together with descriptions of the educational processes that some teachers use to nurture diverse high level competencies and the frameworks needed to think about and assess them, together with a fuller discussion of the issues involved, will be found in:

Raven, J. (1994). *Managing Education for Effective Schooling: The Most Important Problem Is to Come to Terms with Values*. Unionville, New York: Trillium Press.

Raven, J. (1991). *The Tragic Illusion: Educational Testing*. Unionville, New York: Trillium Press.

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.

Raven, J., & Stephenson, J. (Eds.). (2001). *Competence in the Learning Society*. New York: Peter Lang.

Marks, N., Simms, A., Thompson, S., and Abdallah, S. (2006). *The (Un)happy Planet Index: An Index of Human Well-being and Environmental Impact*. London: New Economics Foundation. Downloadable from www.neweconomics.org and www.happyplanetindex.org

Many other papers relating to its theme will shortly be available at www.eyeesociety.co.uk