Leadership, the Logic of Sufficiency and the Sustainability of Education

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Abstract

The notion of sufficiency has not yet entered mainstream educational thinking, and it still has to make its mark upon educational leadership. However, a number of related concepts – particularly those of sustainability and complexity theory – are beginning to be noticed. This article examines these two concepts and uses them to critique the quasi-economic notion of efficiency, before argu- ing that the concept of sufficiency arises naturally from this discussion. This concept, originally derived from environmental thinking, has both metaphorical and practical impact for educational organizations and their leadership. An examination of three possible meanings suggests that while an embrace of an imperative concept of sufficiency seems increasingly necessary, its adoption would probably lead to a number of other problems, as it challenges some fundamental societal values and assumptions. Nevertheless, the article argues that these need to be addressed for the sake of both sustainable leadership and a sustainable planet.

Keywords

complexity, efficiency, leadership, sufficiency, sustainability

Introduction

The notion of sufficiency has not yet entered mainstream educational thinking, and it still has to make its mark upon educational leadership thinking. However, a number of related concepts – particularly those of sustainability and complexity theory – are beginning to be noticed. This article examines these two concepts and uses them to critique

the quasi-economic notion of effi- ciency, before arguing that the concept of sufficiency arises naturally from this discussion, and that this concept, originally derived from environmental thinking, has both metaphorical and practical impacts for educational organizations and their leadership. This paper then begins with an examination of the concept of sustainability, both in its environmental and educational leadership senses.

Sustainability, the Environment and Educational Leadership

While the notion of sustainability may be understood by the readership of educational leadership literature as primarily concerned with the maintenance of good leadership within an organization, it has an earlier history, being part of a debate surrounding global environmental 'sustainable development'. It is important to understand this genesis as it provides a deeper perspective on how the term might be used with respect to educational leadership. First used in a global sense with the publication of the International Union Conservation of Nature's World Conservation Strategy in 1989, it was the later Brundtland Commission, which provided the most famous definition of the term, suggesting that sustainable development occurred when it met ' . . . the needs of the present without compromising the ability of future generations to meet their needs' (UNCED, 1987: 8).

It is perhaps no surprise then, that literature on sustainable leadership in education, which has a rather shorter history, draws inspiration from this source. Hargreaves and Fink (2003: 694) have argued that 'sustainable educational leadership and improvement preserves and develops deep learning for all that spreads and lasts, in ways that do no harm to, and indeed create positive benefits for others around us, now and in the future'. In a later article (2007), they argued that in many countries precisely the opposite had happened, because ' . . . educational reform in recent years . . . has sacrificed depth of learning to the achievement appearances of standardised testing . . . ' and that this has prevented the 'ability to plan for a more

sustainable future'. In like manner Davies (2007a: 1) suggested that the current educational world consists of 'tightly focused curriculum frameworks and testing regimes', and that this raises two questions: 'are these results sustainable and are there other objectives we should be pursuing?' For Davies (2007b: 11), this would only happen when leadership is 'embedded in a culture focused on moral purpose and the educational success of all its students'. These insights are useful because they indicate that sustainability is not simply about preserving what we currently possess: it is also concerned with asking questions about the purposes of education, and how these should be achieved. Both the educational and environmental debates then ask questions about what kind of a world we want to live in, and how we should go about creating this.

Yet the Brundtland definition of sustainable development, being a product of compromise, argued that sustainability could be achieved by and through increased economic growth. Such growth is now acknowledged by many commentators to be the principal cause of environmental unsustainability (IPCC, 2007; Jackson, 2009; Speth, 2006; Stern, 2006), and, as this article argues, of sustainable leadership as well. A more helpful definition may then be that contained in a UNESCO (1997: 13, 17) report which suggested that sustainability ' . . . is not a fixed notion, but rather a process of change in the relationships between social, economic, and natural systems and processes', and that ' . . . there can be no solution to environmental problems unless the social and economic ills besetting humankind are seriously addressed . . . '. In arguing this, it suggests that an appreciation of 'sustainable development' requires an understanding of the highly complex inter- relationships between three different kinds of sustainabilities – environmental, social and economic. In educational leadership terms, this definition takes the debate further by arguing the need for an ontology and epistemology that acknowledges the complexity of the work of lead-ership, and of the need to avoid simplistic means-ends forms of causation. Sustainability – both of the environment and of educational leadership may be then described as increasingly affected by – dependent even – upon the economic,

political and social actions of human beings, and its complex interactions with them.

Institutionally, then, sustainability is a complex interdependent relationship between the organization, its leadership and its other stakeholders who could include teachers, local community, business, government policymakers or a variety of other actors and forces. Such an array of influences indicates that just as an education for sustainable development may use the shorthand of environmental, social and economic areas to conceptualize its focus, while recognizing the immense complexity of such interactions, the sustainable development for leadership needs also to recognize a complex tapestry of influences and forces, and to adopt a similarly complex conceptualization.

An under-conceptualization of global sustainable development is currently one of the main reasons why humanity faces such a grave environmental crisis; an under-conceptualization of ESD may also be one of the reasons why this area continues to have such a low priority in leadership thinking in most schools (Jackson, 2007; Ofsted, 2008.). A similar under-conceptualization of sustainable leadership is equally damaging, and is at root a product of two things. One is the capture of much educational thought and policy by simplistic economic thought, and particularly by the concept of efficiency, which introduces an over-rational and highly linear form of thinking. The second, underpinned by the first, is a reluctance to accept a much more complex view of the world in which educational leadership and schools must function. It is to these issues that I now turn.

A Misplaced Emphasis upon Efficiency

This article is not arguing that efficiency is a 'bad' thing, but rather that it has acquired over the last couple of centuries an unacceptable level of uncritical approval. What should essentially be an instrumental value (a means to some higher end) has in fact become a substantive value (an end in itself). It needs to be put back in its appropriate place,

and the concept of sufficiency elevated to replace it.

Efficiency as a concept makes much intuitive sense. If one manages to extract more resource, more money, or more time, with the same or less effort, by devising more efficient means for such extraction, then this is normally seen as a good thing. Who could question such a notion? Yet an examination of the term's conceptual history is important, for as Princen (2005: 51) points out it was only with the waning of the Middle Ages that the term became conceptually distinct from that of effectiveness. Aristotle had suggested that efficiency was not really about speed or cost, but rather 'the successful achievement of an intended purpose' – which wrapped into it concerns for social contribution. This was only to change with the coming of the industrial revolution, when it became wedded to technical notions of productivity and economic growth. For the last hundred years or so, growth has been seen as the indisputable hallmark of economic success, resting as it does upon notions of increasing wealth, and increasing consumption. As Princen (2002: 24) puts it, the argument has fairly uncritically been that 'Goods are good, so more goods are better.' With such unquestioned assumptions, economic crises are then believed to be resolvable, not by the adoption of different economic approaches, but by the increased use of resources to produce more economic growth, greater production and consumption of goods, with little regard for the effects on the environment. Efficiency is clearly an important tool in pursuit of this agenda, and both economic growth and efficiency have thus become 'hurrah' words, implicitly assumed to be beyond criticism. From F.W. Taylor onwards, efficiency has been seen by industry, and then by all forms of work, including education (see Bobbitt, 1913), as a critical standard by which to judge the quality of performance. As Princen (2002: 57) says, efficiency became the quantitative measure of how well a task was performed, and of how well measurable inputs were used to generate measurable outputs. In so doing : ' . . . it would substitute a philosopher's concerns for social meaning and purpose for the engineer's concern for mechanical precision.' However, its place in human thought was therefore removed from a concern for the richness and purpose of human activity, and

positioned instead in a much more limited universe of the economic, the calculable and controllable. It thus failed to describe the depth, the variety and, particularly, the complexity of human pursuits, generating strategies and actions which distorted and damaged the quality of human experience. This is best seen in the fact that whenever efficiency savings are mentioned, it is normally assumed that efficiencies are a ratio between two variables: for instance, if cars are made more efficient, and use less petrol, they are therefore better for the environment. Yet what this assumes – as nearly all examples of efficiency assume – is that individual factors like efficient engines, or petrol consumption, can be extracted from a much larger social context which involves many other variables. Efficiency as currently used then tends to individualize and separate out particular factors, locating them within a linear model of causality, with very limited time spans, where a affects b, without recognizing that c or d may also be affected later down the line. Yet in the real world, of course, such individualization, linearity and short-termism is highly unlikely. The engine may be made more efficient so that more savings are made on fuel, yet these savings may then be spent on more fuel, which actually harms the environment more than before. With efficiency so wedded to concepts of economic growth, it can facilitate the faster extraction of results or resources, but tends to do so without the necessary examination of the unintended costs and con- sequences of such actions. Where inexhaustible resources are assumed, and where pollution can be absorbed indefinitely, this may not be a problem: but this is not a description of the real world. Those who would use the concept of efficiency need to accept (1) that very few causations are simple and linear in nature, (2) that many consequences occur or become visible only later in time and (3) that the real world has a finite resource and absorption capacity. Any claim to efficiency therefore has to incorporate longer time scales, greater degrees of complexity, and larger frames of reference. When these are incorporated, the use of the concept as a major principle for social organization becomes much less attractive. Other approaches which recognize that reality is a complex long-term web of interactions, will

be much more accurate and useful notions. The development of this idea needs to be further examined.

Developing a More Complex View of Reality

Much everyday thought, and much policy rhetoric, tends to rest upon linear assumptions of causality. Two of the most popular assumptions over the last few years have been:

> If we firmly control and monitor a workforce from the centre, and punish them for non- compliance, we can more efficiently raise educational standards;
>
> If we constantly define and measure quality in observable ways, and punish when non- compliance to these quality standards occurs, then we will more efficiently raise educational standards;
>
> In both cases, the logic is simple: that x (firm central control and monitoring, defining and measur- ing of quality, and punishment for non-compliance) will cause y (a successful and creative work- force, and a raising of standards) and z (greater efficiency) will result. Both y and z are seen as desirable, and so the setting up of firm and punitive control and measurement systems are also seen as desirable. Yet it is important to recognize – as with the more efficient car – that this kind of thinking rests upon the crucial assumption that that there are no intervening variables, no other events, which will make y less likely, and therefore the use of x less sensible. Yet the use of central control and measurement tends to result in unexpected effects, which reduce drastically the likelihood of the original objectives being achieved. A general factor seen across many systems, is that such control results in institutions dealing with much greater volumes of paperwork, taking much time away from other activities. The English newspaper, the Independent, on 19 January 2007, for example, noted that New Labour, since coming to power, had imposed 58 new respon- sibilities on headteachers, and the present UK coalition government is intent in driving

through yet more new legislation. This tends to explain why Smithers and Robinson (2006: i) reported that sec- ondary headteacher posts in England were not seen as attractive by potential candidates in part because of increased workload; however they suggest that this reluctance was also due to ' . . . vulnerability to sacking through bad Ofsted reports'. This concern over the punitive nature of the job was also seen in primary schools, where Bottery et al. (2008) found that some headteachers were wary of encouraging creativity in their schools, particularly in SATs classes, because of the risk involved in creative approaches, and therefore of the Ofsted punishment consequent upon lowered performance when a creative approach failed to work as well as more standard attempts – an inevitable corollary of experimentation. In addition, too firm a central control and too much paperwork and inspection tend to result in the suppression of the use of local knowledge upon which success at the local level depends (Hoyle and Wallace, 2005). This is not only because of tacit central mes- sages on the value of local knowledge, but because of energy needing to be directed elsewhere. Finally, a control, measurement and punishment regime tends to lead to people feeling distrusted. This phenomenon has a long history in the general management literature, and can lead to attempts to subvert the system (Gouldner, 1954), to lowered morale and poorer performance (Sitkin and Stickel, 1996) or to less enthusiasm for leadership positions from potential aspirants (Hargreaves, 2004). While the Independent (2010) reports that there is some evidence that the number of teachers in England wanting to becoming heads increased by 10 per cent in 3 years, the focus of the article was to report on a government reaction to a potential recruitment crisis by attempting to persuade heads planning to retire to stay on – even on a part-time basis. While the NCSL's attempts to encourage schools to develop future heads much more than previously may then have found some success, it does not address the need for a less linear and

more complex view of reality advocated in this article.

Simplistic linear causality also applies to the encouragement of greater freedom of choice for schools. Here, x is greater freedom of choice and y again is the achievement of higher standards. Yet such linear purists need to be aware that the more freedom of choice is created, the more such a system favours those capable of exercising such choice, which tends to lead to a more inegalitarian, a more divided school system, leading in many cases to lowered standards. Moreover, the greater that freedom of choice is encouraged, the more that any notion of a 'system' with shared values is threatened, leading towards the same kind of divided system and probably a more divisive society. Linear thinking then can negatively affect the implementation of both ideologies.

x then does not lead simply to y: most actions do not have single effects, but are located within a web of events, actors, and their reactions, and the interactions between all of these may well lead to unexpected, and perhaps undesirable results. This at least is the essential claim of complexity theory. Yet, the theory has its critics. Wallace and Fertig (2007: 41) for instance suggest that the literature is largely concerned with instrumentalist attempts to apply the theory to management practice, and that 'proselytizing dominates over critique'. A fundamental problem for them is that this is essentially a theory derived from mathematics and natural science, and that uncritical trans- lations are made to the human social world that fail to acknowledge the 'meaning making' which human beings bring to situations. They conclude (2007: 53) that complexity theory therefore has little more than 'modest potential as a convenient metaphor'. Now I believe that these kinds of criticisms can be countered. First, they are right to suggest that there is a world of difference between the physical, the biological, and the human worlds, but this does not prohibit learning, but only that one must be very cautious in the transference of ideas. For example, the 'meaning making' that human beings engage in does make a huge difference to the impact of complexity on systems within which they operate. However, it does not

reduce but more likely exacerbates issues of complexity, because of the extra layer that it adds to the causes of actions. Second, they rightfully warn against a too-easy move to prescription, and quote Morrison (2002: 190) as saying that 'complexity theory is amoral': it only describes conditions, it does not of itself prescribe any kind of action. They also point out that any managerial prescriptions tend to be undermined by an essential part of the theory – the unpredictability of actions and reactions. The only prescriptions, then, which seem to follow logically from the theory are those which caution against too much certainty and too much arrogance in understanding the outcome of events. These are the kinds of prescriptions outlined at the end of the article.

Given these issues, it is perhaps unsurprising that Morrison (2010) points out that there are many versions of complexity theory, underpinned by a variety of assumptions and purposes, and that it may therefore be hard, or even unjustified, to claim that there is one distinct theory which can underpin an argument like this. However, as Johnson (2009) argues, the complex systems of the environmental and human worlds do seem to possess the following similar set of properties:

- they contain many interacting actors or agents;
- the behaviour of these individuals is influenced by memory or feedback;
- they can and do adapt their behavioural strategies in the light of their previous histories;
- they are influenced by the environments within which they exist. The result, as Plsek and Greenhalgh (2001: 625) suggest, is that ecospheres, cultures and organi- zations, are all complex systems comprising 'a collection of individual agents with freedom to act in ways that are not always totally predictable, and whose actions are interconnected so that one agent's actions changes the context for other agents'. This being the case, the

system will then evolve in unexpected and complicated ways, without any central direction – and paradoxically, may evolve in unexpected ways precisely because of central direction. This similarity between environmental systems and human cultures and organizations – even with the layer of 'meaning making' that humans add to this complexity – does suggest that a strong parallel rather than a loose metaphor is in evidence here. The consequence is that in such systems, certainty diminishes rapidly the further into the future one tries to predict. In human systems, such complexity, unpredictability and lack of control, have in part been the reasons for the greater bureaucratization of society and its organizations over the last two to three hundred years, yet many of the critiques of bureaucracy over the last few decades precisely implicate the result of attempting to apply simplistic linear thinking to a complex world. Either those implementing policy further down the line bring their own understandings and motivations to implementation (Fullan, 1991), attempt to build their own empires (Selznick, 1949), are alienated by a system that does not allow them to make meaning for themselves (Lipsky, 1980), or the organization fails to respond adequately to a complex and changing external environment (Kanter, 1983; Handy, 1978). Many critiques of bureaucracy implicitly or explicitly accept that attempts at reducing complexity can have damaging effects upon people within and without the organization, and of the inability of such organizations to adapt to a complex, constantly changing external world. More generally, it is a dangerous and damaging conceit to believe that actions will have the effects – and only the effects – for which they are intended. The complex interplay within and between ecological systems and networks has led many ecologists to accept that they are not able to understand how systems and ecologies will play out when they are interfered with. It is why Kay and Schneider(1994: 34, original emphasis) argue that 'we don't manage ecosystems, we manage our interactions with them'. It is an idea which urgently needs

greater application to the field of educational leadership.

Leaders at all levels of education then may need to recognize that there are many more situations than previously accepted where events cannot completely be controlled because of the complexity of the interactions around such events. Prescriptively speaking, 'better' leaders, then, would recognize this lack of control and put into place measures which help them and their orga- nizations to respond to and deal with this lack of control, as they understand that it makes more 'rational' sense to work within the limits reality imposes upon them, but also that it would be unethical to impose overambitious and ultimately unworkable plans and strategies upon people which may harm them because the nature of reality is ignored.

The need to recognize the complex nature of reality is the central point that Bore and Wright (2009) make when they argue that too often many issues and problems are embedded within com- plex webs of interactions which make their definition difficult or 'wicked'. They contrast 'such wicked' problems with 'tame' ones, which are generally much preferred by governments as they 'belong to a class of problems which can be resolved generically' (2009: 242). Such preference for the over-simple can and does lead to 'wicked' problems being wrongly classified as 'tame' ones, and the result, Bore and Wright argue, is that ' . . . illegitimate "solutions" are attempted with the result that many simply do not work ...' – with resultant inappropriate strategies, individual stress, and an inability by systems and organizations to recruit to the highest levels.

Such failure – probably the major reason for current academic interest in 'sustainable leader- ship' – is also demonstrated in Hoyle and Wallace's (2006) description of the necessary paradox and ironies of leadership. This too is essentially an argument based on complexity. They argue that because of the large number of legitimate stakeholders involved in education, there will inevitably be many incommensurable values and demands in schools. In such circumstances, a variety of 'wicked' dilemmas and ambiguities will be

generated, which may be very difficult to frame, never mind resolve. When these occur, results and consequences may be generated which are the opposite of those originally intended. In such complex situations, pressures on leaders through the mass of policies and initiatives – and the accompanying paperwork – exacerbate such ironic consequences. In particular, they argue that an over-emphasis on managerialism, or 'leadership and management to excess' – not only fails to improve schools, but generates consequences that damage such endea- vours. Moreover, any use of 'transformational' leadership rhetoric places demands on leaders which are unrealizable, in part because the championing of such a perspective adopts a simple, linear strat- egy (one person, one policy, followed by others), which tends to see tame problems and therefore to generate tame solutions . This is doubly likely if the adoption of transformational leadership is no more than a governmentally inspired way of finding more efficient means of implementing its own 'tame' policies. One then has a linear causation – government to transformational leader to docile staff – which fails to appreciate the complex nature of leadership and organizations. An embrace of a 'distributed leadership' perspective is potentially a better move as there is greater likelihood of more sources of input in the framing of problems and their solutions.

Echoing what has been argued above, Hoyle and Wallace suggest that 'successful' professionals are those who are aware of the ambiguities, dilemmas and ironies generated by the nature of organizations, and by legislative demands. They are leaders who appreciate the complexity with which they need to deal, and who develop attitudes and strategies which cope better with such realities. This normally involves a more collaborative approach in constructing a flexible form of implementation that reflects particular local circumstances, rather than the simple acceptance and replication of ideas thought up elsewhere. Such attempts to move from the linear to the complex, from the tame to the wicked, suggests that the highly planned, hierarchical and controlling approaches taken by many governments over the past two decades have been profoundly damaging, as they have exacerbated the complexities, ambiguities and ironies of

professional work rather than helping to ameliorate them. Even where they have produced a basic improvement in test scores – as with the English literacy and numeracy strategies – these have plateaued after 'tame' problems have been resolved (DfES, 2003).

Hoyle and Wallace's suggestions for a set of professional ethics anticipate much of what will be said in the next section on sufficiency. They argue that professionals need to recognize their personal, professional and contextual limitations, and therefore need to embrace an ethic of humility, and a necessary provisionality of knowledge and expertise. Given the complex environments within which such professionals operate, they require a deep understanding of how such complexity generates the ineradicable ironies and ambiguities of their work, for only such appreciation facilitates their resolution.

Yet for educational leaders, an appreciation of complexity has to be more than simply under- standing it as an adequate description of reality. They are after all people of action, and so must also develop appropriate and adequate prescriptions for action from the base of such description. It is here that the notion of sufficiency has a critical role to play.

Sufficiency as an Imperative Value

While some might see sufficiency as a rather weak term, with little more than metaphorical implications, the term possesses a number of meanings which suggest not only its considerable strength but also its application beyond purely environmental issues. It is thus seen as a key frame and focus for leadership endeavours.

A first step in developing an understanding of its power within the domain of leadership is by describing its use in environmental thinking. Forty years ago, Boulding (1968) described the possible relationships between human beings and the environment as between seeing the world through cowboy eyes and seeing it as if one were permanently on a spaceship. For the cowboy, the world seemed to be a never-ending place of inexhaustible resources, and when all the resources in one

area were consumed, one could simply move on to a new area and exploit those new resources until they too were exhausted. A person living permanently on a spaceship, however needs to recognize that there is a limited supply of resources, and that as these are used, if they are not recycled, they pollute the only environment within which existence is possible. In an age when the human population was so small that it had marginal effects upon the ecosphere, the cow- boy view may have been understandable. But in a world of seven billion, projected to rise to nine billion by the middle of this century, a cowboy approach looks positively suicidal. Boulding's sobering judgement was that we were practicing a cowboy economics in a spaceship world: the judgement seems even more justified today.

Forty years on, Princen (2005: 28–30) talks of the cowboy world as a frontier world, but he now splits the spaceship world into two in an attempt to describe different emerging understandings. So he argues that in an environmental protection world while there is a greater acceptance of the spaceship metaphor, there is still room on this spaceship for policy trade-offs between environmental protection and the pursuit of more economic growth and consumer behaviour. However he suggests – as do others (for example, Meadows et al., 2002; WWF, 2008) – that human activity on this space- ship has been unsustainable since the early 1980s, and therefore that the focus needs to move from the primacy of economic growth and consumer satisfaction to the maintenance and protection of the environment within which such human activity takes place. This is the sustainability world, where the maintenance of environmental qualities like clean water, clean air and the mainte- nance of biodiversity are no longer negotiable or tradable concerns. On this world view, societies should ensure that the environment is maintained to at least present levels, so that future genera- tions can enjoy them. This is a radical step, for it denies the primacy of the dominant societal values of economic growth, efficiency and consumerism, and suggests that these are permissible only within the limits set by such environmental stipulations.

In sum, at one end of a spectrum is the frontier world, with its non-negotiability of consumption, growth and efficiency, where resources are seen as limitless, linear causation is accepted, where there is a certainty, even arrogance in the certainty of our understanding of how the ecosphere func- tions, where caution is seen as unnecessary, even timid, and where planning only needs to be short- term. The environmental protection world occupies a varying middle ground, where policy is negotiable in a trade-off between the dominant economic and consumerism paradigms, and that of those concerned with environmental well-being. At the other end of this spectrum is the sustain- ability world, rejecting the unrestricted pursuit of consumption, growth and efficiency, resources being seen as limited and declining as simple linear causation is rejected. There is also a profound acceptance of the limitations in our understanding of what we do and what we affect, that caution is therefore seen as essential, and that planning needs to be commensurate with the life-span of the planet and its resources. This end of the spectrum views the preservation of the environmental as non-negotiable and other human desires as needing to accommodate to this.

On this spectrum, sufficiency has weak, moderate or imperative environmental implications. In the frontier world, it has a very weak environmental implication, because the natural environment is infinitely exploitable, it being assumed that there are virtually unlimited means to satisfy unlimited human ends. In the environmental protection world, sufficiency has stronger implications, for environmental resources are now recognized as being finite, and deemed worthy of consideration in policy trade-offs with human wants and values. In the sustainable world, however, sufficiency now has very strong, even imperative implications, for as the extraction and consumption of resources is occurring faster than they can be replenished, and as human wants and needs ultimately depend upon the health of the environment within which they are situated, it is now asserted that the world of growth and consumption needs to defer to environmental concerns. In this world, it is only acceptable to partake in the degree of consumption, extraction and economic growth that leaves the

environmental intact for perpetuity. If this cannot be achieved with current levels economic growth and consumption, then it is these which must change, not the environment.

In educational leadership terms, some of the policy and management in both the public and private sectors over the past few decades might well be described as frontier management. The practices of 'greedy organisations' (Gronn, 2003) have viewed their members as heavily exploitable in the search for higher standards, larger profits, greater productivity. Current agendas, with talk of work-life balances and the importance of trust, seems however to be more one of environmental protection. Human beings may be still be treated as means to ends, but the leadership sustainability agenda has to recognize that human resources are finite, and the ends are likely to be sought with more humanity.

However, a situation may now be approaching where the care of these 'resources' is seen as imperative. This is for two reasons. First, when organizational wants and needs ultimately depend upon the health of the human resources which deliver these, and yet extraction and consumption of such resources is occurring faster than they can be replaced, there are pragmatic reasons for policies prioritizing humane concerns, where it is only acceptable to partake in the degree of use which leaves these resources intact – in other words, the prioritizing of policies that put the care of individual human actors before governmental and institutional demands. And if such prioritization is not compatible with current demands for speed of implementation, or the raising of standards, then it is this speed, these standards, which must change, not those who have to achieve them.

A second reason is seen in both in the environmental and leadership literature, and suggests that in both cases such 'resources' should be viewed as beings who have value in their own right. Thus human beings should attempt to preserve other species, not because they are of value in some extractable sense to human beings, but because they have a right to existence, regardless of the contribution to human

welfare. In similar vein, human resources should be regarded as resourceful humans, who should in true Kantian fashion, be treated as ends in themselves, and not as simply means to some organizational or policy objective.

Both of these arguments suggest a wholly new mind-set. Princen (2005: 40) argues that safe- guarding the environment, is not about extraction – using every last element of a resource, every drop of water or creating record yields in a more efficient manner. Rather, it means accepting the rights of other species, understanding the limitations in the resilience and vulnerability of the complex systems with which they live, as well as our limitations in understanding these, and hence recognizing how limited the type and degree of human intervention needs to be. It means managing these interventions with an eye to their present and future impact. In like manner, safe-guarding educational leaders and the schools they lead means rejecting similar attempts to extract all available work, every last drop of effort, in order to rack up record results in a more efficient manner. It signifies instead the need to accept that human beings should be treated as ends in themselves, rather than simply as means to ends. It demands an understanding and accep- tance of the limitations in the resilience and vulnerability of both individuals and the complex organizations within which they work, and hence a recognition of the limitations in the type and degree of intervention. It means managing these interventions with an eye to their impact on the present and the future of human society, suggesting that a lowering of standards may be good, not only because of their ultimate human cost, but because these standards may be measuring the wrong things for a sustainable future society.

Sustainability, Sufficiency and Changing Leadership Values

Educational leadership and the environment then share basic underlying issues of sustainability. In both, a lack of sustainability has been due to a linear and too-certain vision of causality, an inatten- tion

to the valuing and maintenance of the resources, and an inappropriate emphasis upon a tech- nical concept of efficiency. Ecologically and educationally, this article argues that such understanding leads to the necessary consideration of an imperative concept of sufficiency. In order to operationalize this concept, a number of attitudinal changes will be required. This article suggests that there are at least six of these.

A first is an acceptance by leaders of an ethic of provisionality. This suggests that because we are limited by our historical, geographical, social and sensory positions, there are necessary limitations to what we can understand of the world that surrounds us. This is beautifully expressed by Popper (1982: 111) when he argued that:

> the empirical base of objective science has . . . nothing 'absolute' about it. Science does not rest upon solid bedrock. The bold structure of its theories rise, as it were, above a swamp. It is like a building erected on piles. The piles are driven down from above into the swamp, but not down to any natural or 'given' base; and if we stop driving the piles deeper, it is not because we have reached firm ground. We simply stop when we are satisfied that the piles are firm enough to carry the structure, at least for the time being.

In like manner, the judgements of educational leaders must be at best provisional. This does not entail an embrace of relativity, however, for in adopting rationality and logic as the means to make judgements between different claims, leaders are, as Popper pointed out, making a moral stance against accepting the unquestioning imposition of views by others. But such provisionality does suggest that a diversity of viewpoints is going to be important, as well as a tolerance of opinions different from one's own.

A second attitudinal change, following directly from an embrace of provisionality, is a humility in thought and action (Bottery, 1998: 168). An ethic of humility may be very threatening for some, appar- ently challenging the status and expertise of not just professionals, but managers and policy makers as well. Yet recognizing personal fallibility is not an acknowledgement of failure but an acceptance of being

human. It fits well with the recognition that there will never be a full understanding of how systems work, and what the final effect of actions will be upon them. This is well illustrated in Len- ton et al.'s (2008: 1792) description of tipping points, and the suggestion that one of the reasons for the slow reactions to current sustainability crises is of assumptions about the 'smooth projections of climate change'. Yet the evidence increasingly suggests that the dynamics of change involve sudden 'tipping points', critical thresholds 'at which a tiny perturbation can qualitatively alter the state or development of a system' (Lenton et al., 2008: 1786). Such environmental phenomena have been applied to human situations as well (Gladwell, 2000), suggesting once again that it is very difficult, even impossible, to predict outcomes in complex systems. In such circumstances, a need for humility in acknowledging the limitations of leadership seems essential.

Given a necessarily provisionalist position, and an accompanying personal humility, a logical third principle would be the adoption of caution in dealing with complex systems. Its clearest exemplification is probably in Principle 15 – the Precautionary Principle – of the 1992 UN Rio Conference, which argued that ' . . . where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation . . . ' (quoted in Rogers et al., 2008: 98)The same principle can be applied to human systems as well: where serious concerns are expressed about policy outcomes on the well-being of those affected, the amelioration of such damage should be made a top priority, and action should not be postponed until it becomes so serious that the damage becomes irreversible. This transfers well to concerns over sustainable leadership, for it seems unsustain- able to generate the pressure for the creation of 'greedy organisations', which demand of individual leaders – and the workforce generally – a commitment which has led to multiple cases of early retirement, and the creation of the problem of sustainable leadership in the first place.

A fourth attitudinal change derives from the environmental insight

that one needs to reflect upon appropriate time spans for properly sustainable policies. Felling a tree requires consideration of the time for a similar kind of tree to grow to maturity; understanding the long term effects on ecosystems of human actions, and of their ability to recover from such damage, is infinitely more complex, more long-term. In organizational terms, short-termism is part of the nexus of assumptions and values surrounding policies of quick economic growth, efficiency and consumption, and such assumptions and values, while beginning in the private sector, have clearly invaded the public sector. The tensions between the short-termism of the next test result, the next balance sheet, the next inspection, and the impact of such approaches on students' attitudes to learning over a life- time, and to teachers' job fulfilment over a career, are all too apparent.

A fifth change would be the approval of slack. This may seem surprising, for the term can carry connotations of the inactive or sluggish, the negligent or remiss. This, I suggest, derives from the heavily economically influenced linguistic universe we inhabit, where quick growth, productivity and consumption, are viewed as 'better' than more relaxed practices or behaviours. An ideal practice would then be hyper-efficient, highly controlled and 'just-in-time'. Yet such assumptions fit all too well with the kinds of practices which have led to not only severe environmental challenge but organizational stress as well. And 'slack' has other meanings, other underpinning assumptions. Slack can also mean being relaxed, having time for reflection and judgment, something that is not so taut that it is likely to snap. Indeed, engineering tolerance precisely captures the value of such a notion, for the specification of such tolerances in the production of machinery is recognized as essential for safety purposes, as it allows sufficient leeway for variability in performance without damaging the machines involved. If slack is antithetical to economic concerns for quick growth, productivity and consumption, it is central to engineering concerns for preventing damage to the things that produce the goods or performance in the first place.

Even though slack has been transported to organizational theory with

largely negative connotations, it actually has distinct advantages within this section. Thus DeMarco (2001: 2), writing from a business perspective, argues that a better definition of slack is 'the degree of freedom required to effect change'. Such slack, then, refers not only to 'time slack' but 'control slack' as well – and alludes to the need to individual discretion and professional judgement. Slack, he suggests, is the ' . . . natural enemy of efficiency, and efficiency is the natural enemy of slack'. His point is that the exercise of creativity need space, time and individual freedom, and efficiency by its nature is uncomfortable with these concepts. As he argues (2001: 3), we live in an age of performativity in which ' . . . organizations are effective only to the extent that all their workers are totally and externally busy . . . '. Yet when social, economic and environmental change is increasingly not a choice but an imperative for humanity, a high-stakes, highly controlled, immediate delivery mentality prevents proper consideration of such change. Slack creates the time, space and freedom for reinvention to happen. As De Marco (2001: 42) pithily remarks, when companies cannot invent, it is usually because they are too busy.

Now the argument for creativity and invention is strengthened by the earlier recognition that prediction and control in complex systems is highly problematic. In such circumstances, systems that are taut, controlled, and focused on the immediate, leave little room for adjustment and reinvention when things occur unpredictably. The result in organizations looks remarkably like a lack of engineering tolerance, for the result is worker tension, burnout, early retirement and the problems of leadership sustainability that accompany this. It suggests that professionalism is needed precisely because the expert on the ground is best suited in utilizing the 'slack' of discretion to decide on what is needed in a complex context at any particular moment in time. From an ethical point of view, if one believes in treating people fairly and well, then the recognition of the individual need for slack not only produces better organizational results, it produces more personal fulfilment as well. So more effective, more satisfying, more professional and more ethical leadership is likely to need the deliberate incorporation of slack.

A sixth and final attitudinal change follows naturally from above. The adoption of buffers – the institution of engineering/environmental/organizational tolerances – will be an essential component of the embrace of such slack because if, as is possible, unintended and unexpected harmful consequences ensue from policies, contingency plans need to have already been made to retrieve the situation. Princen (2005: 40–43) in an analysis of environmental buffers suggests two principal strategies. A first is an increase in stock, as a larger stock is more capable of absorbing pressure than a smaller stock. However, and ethically perhaps more importantly, a second strategy is an avoidance of pushing the exploitation of a resource towards its maximum. In educational terms, these strategies would translate first into an increase in the number of workers in the system, so that demands are more easily spread and absorbed between them. But second, it would mean that organizational and policy cultures would move away from being 'greedy', and move towards the adoption of a more ethical stance which accepted the need for more space, slack and tolerance within organizations.

Conclusion – More Problems Than Answers?

Yet the adoption of buffers, as with the development of other tolerance strategies, will have strong financial costs. Indeed, moves towards an imperative version of sufficiency are unlikely to be welcomed by many, for they challenge fundamental assumptions about the functioning of present societies. Three in particular stand out.

First, if the current dominant neo-liberal model of capitalist economics is one predicated on continued growth through increased consumerism (Greider, 2004, Jackson, 2009) , and that growth is harming the environment and educational systems because it has reached a point where resources in both areas are being depleted or damaged, do we need to reduce that growth, or even adopt another model of economic functioning which doesn't have such effects?

Second, if the major driver of such growth is through the

encouragement of the social value of consumerism, does the need to reduce such growth, or to adopt different values, require that the leaders of societies and their educational institutions not only consider and promote other values besides or beyond those of economic growth and consumerism, but add health warnings –'too much consumerism can damage your sense of well-being'?

Third, if the changes suggested in this article were seen as inevitable, and advanced societies embraced a model of economic functioning which more greatly respected and cared for the human beings and ecosystems upon which economic and social functioning depends, how would the transition to a more caring, less extractive and less consumerist world be made without affecting social stability? After all, most production – and hence most current employment and hence much social stability – is predicated upon the heavy extraction of materials and utilization of resources in the production of consumer goods in order to feed such economic growth. What kind of system would take its place, and what role would education and its leaders take in such a transition?

It would certainly mean a revaluing of many behaviours and practices, both within education and beyond. It would mean, for instance, that if the reason for the raising of standards is primarily for the creation of a global workforce to compete within an increasingly environmentally dysfunctional economic system, then one has to wonder at the sense of this. If it also involves the creation of controlling and punitive educational systems which affect the well-being of both students and teachers, which become contributory factors in the dearth of individuals wishing to take on lead- ership positions, then one wonders at the sustainability of such a system. Lowering stands, may then be good, because lowering standards wouldn't necessarily mean that children become less educated, teachers less professional or leaders less motivated. What it would mean is that the standards being raised may be the wrong standards for a future society that values and cares more for its resources, both human and environmental.

This article, then, is more than a simple environmental allegory for educational leadership, for both environmental and educational systems are threatened by the same forces of excessive demands for economic growth, consumerism and efficiency, and are also displaying the same kinds of problems. In both cases, the overuse and depletion of resources has led to a decline in the quality of the systems overall. Moreover, the suggestions made for their alleviation have much the same import, for it is clear that an imperative policy of sufficiency points in both cases to a reduction in what is extracted, and an increase in costs (as resources are nurtured and retained). Ultimately this requires a change in the vision of acceptable standards, for it is by setting the bar too high in the wrong activity that resources are so dangerously depleted in both areas, and the attempted attainment of present standards becomes that much more damaging.

These are very large questions for educational leadership, and some would argue, beyond its remit. Yet I would argue that this is precisely what educational leaders should be doing – devel- oping a critical view of their work within a framework that understands the context of such lead- ership. To understand the ecology of leadership – and particularly the demands both on it and on the environment which allows its society to exist at all – seems to me a very apt subject for its leaders to consider.

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