

Saving Spaceship Earth by Teaching the Ethics of Environmental Stewardship

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by

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Mankind's capacity to consume the earth's resources – whether fossil fuels, soil nutrients or sea life – has overwhelmed nature's capacity to replenish itself and we are polluting – through production of green house gases, plastics, heavy metals and other materials – at a rate that nature cannot repair. This road leads inevitably to serious, and potentially fatal, consequences. It is only the timelines that are in question, and they are beginning to seem alarmingly short.

So, other than trying not to think about it or wringing our hands aimlessly, what shall we do? There are many ways to approach the issue – technology, politics, economics, sociology – but let us look at it in terms of the implications and possibilities for public education.

Environmental imperatives may finally break the stranglehold of arbitrarily fragmented subject areas and liberate students to examine real issues holistically. They also provide an ideal opportunity to infuse learning with action and thus to motivate students through relevance and personal efficacy. The real challenge, however, is not merely to enable students to understand threats to the biosphere but to prepare them for the individual and collective behavioural changes that will be required to survive them. This requires character development¹ that inculcates a commitment to the common good, in both the short and long term.

Unfortunately, models of commitment to the common good are not common², and, worse, it is considered by some to be inconsistent with basic human nature. Market economists would have us believe that people are inherently driven by self-interest and to think otherwise is a utopian fantasy. If that is true, then we are doomed.

As Garrett Hardin first illustrated through his metaphor of the *Tragedy of the Commons*, individually rational pursuit of self-interest leads to collective disaster in a closed system.³ An imaginary society of herders with open access to a common parcel of land may prosper through individual initiative until such time as the capacity of the land is reached. Then they must either find an empty field, annex a neighbouring field or voluntarily agree to limit their herds for the common good. Otherwise all will suffer as their cattle die of starvation and social chaos is liable to ensue. The “invisible hand” of competitive economics only works on an infinite field that will support endless growth, unless you are willing to accept social Darwinism as the corrective mechanism. Sustainability was not part of Adam Smith's thinking.

¹ Character development is to be understood as the process of developing in students core values, ethical reasoning ability which allows them to apply those values, and the habit of acting in a manner consistent with their known values and the results of their ethical reasoning. This definition is adapted from Vessels, G. (1998). *Character and community development: A school planning and teacher training handbook*. Westport, CT: Praeger.

² Harvard's GoodWork Project, for example, has found a declining tendency amongst ambitious young professionals to prioritize the common good.

³ Hardin, G. (1968). Tragedy of the Commons. *Science*, 162, 1243-1248. This article was accessed at <http://www.sciencemag.org/cgi/content/full/162/3859/1243>.

Buckminster Fuller described this problem using a different metaphor in his *Operating Manual for Spaceship Earth*⁴ wherein he observed that “we must first acknowledge that the abundance of immediately consumable, obviously desirable or utterly essential resources have been sufficient until now to allow us to carry on despite our ignorance. Being eventually exhaustible and spoilable, they have been adequate only up to this critical moment.” Now, like astronauts on an infinite journey, survival compels us to achieve a sustainable life style on our finite “Spaceship Earth.”

Perhaps technology will save us. Will renewable energy sources, carbon sequestration and genetically modified foods give nature a chance to recover her balance or create unanticipated consequences that further disrupt it? Technology can be helpful, but it is unlikely to be able to compensate completely for continuing habits of excessive consumption and thoughtless pollution. As long as the unsustainable behaviours that are the root cause of the problem continue, the result will ultimately be the same.

Perhaps economics can offer a solution. By commodifying life’s essentials – clean air and water, fertile soil, silence and such – we may be able to apply market economics to our benefit. Tax selfish behaviours and people may awaken to the common interest, perhaps even come to recognize *common* interest as enlightened *self*-interest. If a “green shift” in tax policy were to survive politically, and if it led to a significant broad-based transformation of attitudes and behaviours it would be a great boon, perhaps even a solution.

Probably, however, the best that technology and economics can do is to buy us some time to make the value and behavioural changes that are ultimately required. Achieving sustainability is a matter of transformation more than innovation. It will require fundamental changes in worldview and behaviour at the individual, organizational, societal and global level. This kind of change involves not only teaching old dogs new tricks but raising a new breed of dog. As it has done with tobacco and it is beginning to do with obesity, public education must take up this challenge.

Developing the wisdom required to change our behaviours and apply our creativity effectively requires at least two transformations; committing to the common good and embracing the long view. Both of these behaviours are currently rare, at least in part because our consumer society encourages the opposite – immediate personal gratification – and it is important to realize that powerful vested interests in society are committed to the status quo and will strongly resist the changes that are necessary. How to deal with that political reality is an important discussion, but my focus is on educational imperatives.

It is ironic that the small changes that we make as individuals to reduce our footprint on this Earth seem insignificant, and yet nothing else will turn the tide. Yes, it is also essential to pursue big governmental and commercial polluters, but in the end it is the lifestyle changes made by individuals that will determine whether we achieve a sustainable society. Get a smaller car, turn off your engine whenever you are stopped for more than 10 seconds, walk more, use public

⁴ Fuller, B (1963). *Operating Manual for Spaceship Earth*. New York: E.P. Dutton & Co. This book was accessed at <http://bfi.org/node/422>.

transit, insist on products with less packaging, turn out the lights, don't fertilize the lawn, water it less or not at all, pull the weeds by hand, landscape with indigenous plants, compost, hang your clothes out to dry, put a flow restrictor on your shower, eat less meat.⁵ Each of these actions seem like little more than symbolism, particularly when you neighbours are not following suit, but it is only when such behaviours reach a tipping point and become the new social norms that we will begin to make real progress. Then the restructuring of the economy will follow and politicians, sensing a parade, will rush to get out in front and embed the necessary conduct in law and policy. It takes some courageous heroes with foresight to show the way, but only the common man can make it happen. We are educating, and molding, that "common man" every day in our schools so it is our job to warn our students about the *Tragedy of the Commons* and teach them how to avoid it.

There will be political challenges within the educational work because it will be seen by some, both within the system and in the community, as value-laden and therefore an inappropriate focus for schools. This misguided notion is based on the belief that in a pluralistic society schools should leave character development to families. That, however, ignores the fact that the curriculum is inherently value laden and that choosing not to examine the ethics of an issue sustains, and thus inculcates, the values of the status quo. In the face of critical environmental challenges schools must not let this sleeping dog lie (to continue the canine metaphors).

Elementary schools have been teaching values directly and proudly for years – respect, honesty, teamwork, peaceful resolution of conflicts and so on. Secondary schools, for the most part, have only advocated and rewarded desired character traits, but even here a few brave teachers actually consider values directly. What have we learned about how this can be done effectively?

There are different opinions about the degree to which children must be actively molded or patiently nurtured in their character development. However, the professional consensus in North America seems to be that development of virtuous habits through direct instruction and external discipline is most appropriate at a young age, and an indirect approach based on ethical reasoning and self-discipline is most appropriate for older students.⁶

It is essential that character education not be misunderstood as teaching students to obey authority and conform to social rules. The purpose is to develop their inclination to, and capacity for, independent critical thought and ethical reasoning. Character education should, therefore, empower students to question authority and norms, as well as the adults that represent them, when that is necessary. The appropriate degree and nature of this questioning depends on the age of the student of course, but it is important for character education to involve not only the direct teaching of desired behaviour with expectations of compliance, but also the permission for, and expectation of, personal dissent when ethical reasoning dictates. Being willing to dissent when necessary, and able to do so in a principled manner, is a basic attribute of good character and an absolutely essential characteristic for a generation that must break set with the deeply entrenched behaviours of the past in order to survive.

⁵ See http://www.davidsuzuki.org/files/climate/10_ways_to_stop_global_warming_web.pdf

⁶ Other cultures may view this differently. In multicultural communities, that will be an important consideration.

Gordon Vessels describes seven learning modes that assist students in developing personal and social virtues that they value, understand and practice.⁷

- a supportive environment that includes relationships with parents, teachers and other “respectfully engaging” and authoritative adults (as opposed to permissive or authoritarian);
- unstructured peer group interaction and play that minimizes adult intrusion;
- developmentally appropriate discipline and reinforcement that treats students with dignity and respect;
- exposure to virtuous models with whom children and adolescents can identify;
- didactics or developmentally appropriate direct teaching about moral standards and desirable virtues;
- active participation within just, democratic and caring communities where virtuous behaviours and autonomous moral reasoning can be practiced in real and dramatized situations; and
- meaningful real-world experiences within various communities outside the school.

The Character Education Partnership identifies a compatible set of eleven principles of effective character education.⁸ It contends that effective character education:

- Promotes core ethical values and supportive performance values as the foundation of good character.
- Defines “character” comprehensively to include thinking, feeling and behaviour.
- Uses a comprehensive, intentional, proactive approach to character development.
- Creates a caring school community.
- Provides students with opportunities for moral action.
- Includes a meaningful and challenging academic curriculum that respects all learners, develops their character and helps them to succeed.
- Strives to foster students’ self-motivation.
- Engages the school staff as a learning and moral community that shares responsibility for character education and attempts to adhere to the same core values that guide the education of students.
- Fosters shared moral leadership and long-range support of the character education initiative.
- Engages families and community members as partners in the character building effort.
- Assesses the character of the school, the school staff’s functioning as character educators and the extent to which students manifest good character.

And what would this look like in practice, particularly with a commitment to the common good, now and in the long term future, as a core value? It would include instruction about the challenge and the imperative of environmental sustainability; examination of the relationship between individual and community interests, including all the difficult ethical issues of political science and economics in the local and global context; inter-disciplinary and independent directed studies; engagement in the economic and political issues that arise from the changes that must be made in order for Canadians to work and live in a sustainable manner; sustainable

⁷ Vessels, G. (1998). *Character and community development: A school planning and teacher training handbook*. Westport, CT: Praeger. pp. 48-49

⁸ For an expanded discussion of each of the eleven principles, see <http://www.character.org/atf/cf/{D9ED2C0A-D259-4C2F-8CEC-AA29F7595F40}/Eleven%20Principles.pdf>.

environmental practices in the daily life of the school; and direct action to promote environmental stewardship in students' homes and in the community. It would result in students being actively and critically engaged in classrooms and in their homes and communities, which would mean a strong student voice and active, assertive debate as they began to grasp the issues and realize that it was their future, not their parents', that was at stake. Compliance would surrender to passionate commitment, and fidelity to creativity.

Teenagers often seem like a problem to be contained until they can be civilized, but perhaps the challenge of the teen years is also the key to a dramatically different future. A revolution of sorts is called for, and teens may just be the ones to deliver it. In *The Primal Teen*, Barbara Stauch suggests that perhaps the teenage brain is "crazy by design," evolved specifically to rebel against those upon whom it was formerly dependent and break set in order to create the possibility for evolutionary progress rather than faithful replication of the parents.⁹ And that is what we need. A reaction that is strong enough to shatter conventional behaviours and allow new, sustainable values and practices to emerge.

This would be a big change for schools, albeit a good one, and probably not very comfortable for the adults. It would certainly require fundamental structural changes to the compartmentalized subject-oriented curriculum, the timetable and traditional power relationships. However, Dewey would be proud. Imagine what would happen if we did it. Imagine what will happen if we don't.

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⁹ Stauch, B. (2003). *The primal teen: What the new discoveries about the teenage brain tell us about our kids*. New York, NY: Doubleday.