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David Selby

Global Education as Transformative Education

Zusammenfassung: David Selby stellt ein Modell Globa-len Lernens, das von vier Säulen getragen wird. Globale Erziehung im Sinne Selbys vollzieht sich nicht allein durch die Beschäftigung mit globalen ökologischen oder ökono-mischen Problemen, sondern muss von einer grundlegenden Veränderung unseres (industriellen) reduktionistischen Blickwinkels und Bewusstseins - hin zu einem holistischen Selbstverständnis begleitet werden.

Varieties of Global Education

Towards the close of the first regional conference on Glo-bal Education organised by UNICEF MENA (Middle East and North Africa) and held at Broumana, Lebanon, in July 1995, I was asked, as conference consultant, to prepare a short notice a transparency conveying the essence of global education. For better or worse, I presented delegates with the following:

Global education is an holistic paradigm of education predicated upon the interconnectedness of communities, lands, and peoples, the interrelatedness of all social, cultural and natural phenomena, the interpenetrative nature of past, present and future, and the complementary nature of the cognitive, affective, physical and spiritual dimensions of the human being. It addresses issues of development, equity, peace, social and environmental justice, and environmental sustainability. Its scope encompasses the personal, the local, the national and the planetary. Congruent with its precepts and principles, its pedagogy is experiential, interactive, children-centred, democratic, convivial, participatory, and change-oriented.

It needs to be made clear at the outset that there are multi-ple interpretations and many varieties of global education and that the term has experienced the same kind of "semantic inflation" that has beset terms such as "sustainable development" and "sustainability" (Sauvé 1999). For some, global education is akin to a world affairs course in a high school curriculum, offering an all-too-rare timetable slot for students to consider global issues and international relations in a systematic way (Heater 1980). For others, it is a project to infuse the social studies curriculum particularly, but not exclusively, at intermediate and senior grades with a "global

perspective" (Petrie 1992; Werner/Case 1997). Significantly the national vehicle for the promotion of global education in the U.S.A. is the National Council for the Social Sciences. For yet others, global education seeks to promote the study of global issues and themes, such as sustainable futures, qua-lity of life, conflict and security, and social justice, across the curriculum within an integrated, interdisciplinary or trans-disciplinary framework (Lyons 1992). Implicitly, or in some cases explicitly, the "buck" stops at the curriculum (and its associated learning and teaching methodologies). A further school of thought, in which I include myself, argues that global education is nothing less than the educational ex-pression of an ecological, holistic or systemic paradigm (Capra 1996; Capra/Steindl-Rast 1992) and, as such, has implications for the nature, purposes, and processes of learning and for every aspect of the functioning of a school or other learning community (Selby 1999, 2000; Pike/ Selby, forthcoming).

If, within the fabric of the global education debate, differences regarding scope provide the warp of the argument, the weft concerns ideology, goals and purposes. There are those who perceive purpose in terms of increasing competi-tiveness, reinforcing dominance and buttressing decline within the global marketplace. The Illinois State Board of Education document, *Increasing International and Intercultural Competence through Social Sciences,* for instance, speaks of the need to equip students for effective participation in a world in which it is necessary to "court foreign investors and markets for locally produced goods" and Toh Swee-Hin (1993) has noted a similar commercial strategic argument in some Canadian global education mission statements. Knowing about global interdependen-cies, (some) global issues, and other cultures will thus increase "global competitiveness". Such a position is, perhaps, the baldest manifestation of the "liberal-technocratic" paradigm of global education within which global interdependencies are viewed uncritically (i.e. as symmetrical), culture is treated fragmentally and superficially rather than holistically and paradigmatically, and a management interpretation of the "global village", with its reliance on experts and elites, is overtly or covertly embraced (Toh 1993). Set against this is a "transformative paradigm" of global education which is "explicitly ethical", encourages a critical global literacy (interdependencies at all levels viewed as preponderantly asymmetrical), highlights the "pervasive reality of structural violence", embraces a radical pedagogy, and is liberationist, empowering and ecological (Toh 1993, p. 11-14). Another divide of significance that has recently opened up within the field is between those whose work is (often uncritically) humanistic in tone and assumptions, and those calling for biocentric expressions of global education in which the hu-man project is decentered (Pike 1996/Selby 1995). The glo-bal education I want to discuss here is of the biocentric, holistic, and transformative genre.

A Four-Dimensional Model of Global Education

I would like to propose a four-dimensional model for glo-bal education. The model comprises three outer dimensions and an inner dimension, reflecting the global educator's twin

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and complementary goals of helping students explore the dynamics, condition and future of the world in which they live (the "global village") and through that exploration, helping them better comprehend, realise and utilise their own potential as human beings (the "global self'). All four dimensions are to be seen as profoundly interrelated.

The model draws upon and blends together two strands of educational thinking and practice that have had some marginal influence on schools and other learning communities during the last century. The first strand has been called *worldmindedness* (Richardson 1985), a commitment to the principle of "one world" in which the interests of particular societies and nations are viewed in light of the overall needs of the planet. Education, it is argued, has a crucial role to play in the development of young citizens who demonstrate respect for people of other cultures, faiths and wordviews, who have an understanding (i.e. a familiarity going beyond awareness) of global issues and trends, and who commit to acting for global peace and justice. Such thinking gained great impetus in the wake of the First and Second World Wars, was influential in the founding of UNESCO in 1945 (Heater 1984), and, from a bedrock of ongoing academic and professional support, has resurfaced recurrently for wider educational debate ever since. The second strand, *childcenteredness*, has an even longer lineage that has drawn inspiration from some notable progressive educators in many countries, including John Dewey, Friedrich Fröbel, Maria Montessori, A.S. Neill and Leo Tolstoy (Lawson/Silver 1973, p. 353-356, 397-401; Miller 1988, p. 64-67). Central to this concept is the idea that children learn best when encouraged to explore and discover for themselves and when addressed as individuals with a unique cluster of beliefs, experiences and talents. Transformative/holistic global educators argue that, in the interdependent world of today, the two strands are vital, interrelated elements at the core of relevant education. "Worldmindedness" is no longer a luxury, but a necessity for survival in the new century; encouraging diverse viewpoints and perspectives engenders, too, a richer understanding of self; personal discovery is critical to self-fulfilment and to the generation of constructive change on a global scale. The model borrows from the insights of leading-edge quantum physicists, and from philosophers and spiritual leaders, who argue that relationship is everything (Selby 1999).

The Spatial Dimension

The *spatial dimension* addresses the concepts of interdependence and interconnectedness at multiple levels including intrapersonal, interpersonal, local, bioregional, national, international and global. The levels are not mechanistically conceived as concentric circles with, say, local and global at opposite ends of the spectrum, but as an "unbroken wholeness" (Bohm 1983), mutually embedded and in dynamic relationship. The global, girdling the Earth, is, by definition, manifest within the local; the local flows into the global. An event at any level reverberates through, and can significantly affect all other levels, feeding back through the whole to further transform the level and point of origin. The dimension also concerns the cycles and systems of nature and the relationship between human society and the natural environment, its underpinning philosophy overriding the false dichotomies spawned by pervasive mechanistic/reductionist thinking such as local/global; human/animal; human/environment; nature/culture; masculine/feminine; mind/body ; content/process. In economic, social and political terms, included here are the global connections propelled by the movement of goods, people and information that link all humanity, albeit not so often within relationships that are just and equitable. At a personal level, this dimension focuses on the interconnectedness of an individual's mental, emotional, physical and spiritual make-up. Learners, it is argued, should develop an understanding of the interdependencies that, in so many forms and at so many levels, personal to global, influence their present and future lives. They should learn to understand, too, the nexus between humans and all lifeforms. In curricular terms, this dimension calls for forms of integration, interdisciplinarity or other-than-disciplinary, and speaks to forms of learning that enable learners to cultivate an holistic mindset and the attendant skills that are usually marginalised within the citadels of mechanism we recognize as schools. Intuition, for instance, the ability to immediately perceive and be sensitive to the whole (Capra/Steindl-Rast 1992, p. 76) is recognized as a quality to be honed within the process of learning.

The transformation that the spatial dimension - and, indeed, the whole model - is calling for within prevailing mechanistic thinking in education can be represented symbolically as one from a "billiard ball" to a "web" model. Picture billiard balls on the green baize table. The balls are in relationship to each other. They bump into each other, they alter each others' positions and momenta; they stop each other occupying the same place at the same time; there is gravitational attraction between them. Yet all these relationship are of an external kind in that they do not affect the inner qualities, structures, dynamics and relationships of each ball. Regardless of the forces acting between them they remain round, bouncy, and quite separate billiard balls, each with its own mass, position and momenta (Zohar 1990, 81). The billiard ball model is reflected in much mainstream educational practice with its heavy emphasis on separate subject disciplines, maintaining grade apartheid, the skills of sequential and analytical thinking, the quest for right answers, the prizing of (unrealizable) objectivity, the strict demarcation between "teachers" and "learners" (as though the former have nothing to learn and the latter nothing to teach).

Now picture a sub-atomic box in which electrons simultaneously manifest themselves as both particles and waves. Their wave aspects will interfere with each other, they will overlap and merge, drawing the electrons into an existential relationship where the actual inner qualities - their mass, their charge and their spin as well as their positions and momenta - become indistinguishable from the relationship between them. All are affected by the relationship, they cease to be separate things and become parts of a whole (Zohar 1990, p. 81). This relational holism, in which nothing has identity or meaning save in relationship to everything else, brings us to an understanding of the web model.

Sub-atomic physicist, David Bohm, speaks of reality at two levels: the explicate and the implicate. At the explicate level we can consider objects as (relatively) separate and treat them as such for practical purposes; at the implicate level we need to see the whole as "enfolded" in every part.

Human beings, he suggests, need to be more alive and responsive to the latter level in their social, political and economic relationships and in their relationship to the environment. Groups, for instance, which separate themselves from the rest of the world, will ultimately break down because members are really connected to the whole. "Each member has in fact a somewhat different connection, and sooner or later this shows itself as a difference between him and other members of the group. Wherever men divide themselves from the whole of society and attempt to unite by identification within a group, it is clear that the group must eventually develop internal strife, which leads to a breakdown of its unity [...] True unity [...] between man and nature, as well as between man and man, can arise only in a form of action that does not attempt to fragment the whole of reality" (Bohm 1983).

Young people growing up in the new century are inheriting a *glocal* world (in which the local is in the global and the global in the local). It is no longer possible for them to live effectively - and responsively - without understanding the world as a system in which the skyline, the frontier, the seas separating one country from another, have lost much of their relevance. The Internet is no respecter of territorial boundaries. Global warming does not stop at the frontier post. The government of their country no more stands between them and world society than do trees or hills on the immediate skyline. The unreasonableness of linking the concept of citizenship solely with the nation state becomes daily more apparent. We owe our allegiance and loyalty to, we draw aspects of our identity from, a range of other sources; our kith and kin, our locality, our region, supranational groupings and networks, our planet. Citizenship in the twenty-first century is going to be an increasingly plural and parallel affair.

We are often told that formal schooling aims to help the young make sense of, and be effective agents in, the world in which they live. But to what extent does present-day schooling help students make sense of a world in which the interdependence of lands and peoples is one of its most salient features? In which their lives will be buffeted by events often happening on the other side of the globe? Does their school foster glocal thinking? Are they encouraged to think holistically or within systemic terms of reference? Does their school in its curriculum, structure and organisation approximate more to the billiard ball or web model? It is the contention of transformative global educators that schools remain by and large wedded to a mechanistic, reductionist and compartmentalising mindset and are, thus, less than effective in preparing students for life in a dynamic, multi-layered world system.

The Issues Dimension

The issues dimension has three aspects. First, it calls for learners to learn about key global issues and themes, each of which will have multi-levelled, including personal and local, manifestations. Hence, learners, at age-appropriate levels of sophistication, consider development, environmental, equity, health, needs/rights, peace, social justice, sustainability and other issues across the curriculum and throughout the grades of schooling. Second, learners are encouraged to consider diverse perspectives on these issues and themes from a variety of cultural, disciplinary, social, ideological, and paradigmatic vantage points. Third, the issues and themes are conceived of as enfolded in each other. A seemingly "environmental" issue, for instance, is likely to contain within it aspects pertaining to all other themes and issues. As a passage in *The Avatamaska Sutra* puts it: "In the heaven of Indra, there is said to be a network of pearls so arranged that if you look at one you see all the others reflected in it. In the same way each object in the world is not merely itself but involves every other object, and in fact IS everything else" (cited in Pike/Selby 1995, p. 13). The application of holistic thinking to global issues means that they have to be presented within non-causal, non-linear frameworks demanding a reconceptualization of the nature of both "problems" and "solutions". "Problems" are manifestations of multi-layered webs of relationships; "solutions" are at best provisonal adjustments within an ongoing, dynamic process.

Hence, a major "environmental problem" may well impact upon and be impacted upon by, for instance, a raw materials shortage, a regional war in which the UN and major powers become involved, rising unemployment, a rising incidence of psychiatric illness, a long standing issue of resource and wealth maldistribution and a famine crisis, each of which will be simultaneously impacting upon each other at a range of levels, personal to global. It follows that we cannot hope to compartmentalize solutions strategies without running the risk of each action being ultimately counter-productive. As Eugene Schwartz (1971, p. 72) puts it: "Each quasi-solution has a multiplier effect on the residue of problems." What we can be fairly sure of is that schools give their students insufficient opportunity to learn to think in such an holistic or systems mode.

In the last forty or so years progressive educators have sought to give curricular focus to global issues through a range of initiatives in social, political and moral education. Some of the initiatives are summarised in Table 1 opposite (the list is by no means exhaustive). Proponents of each initiative have proceeded to build a wall of legitimacy around their field by securing sponsorship, building a theoretical base, publishing policy and mission statements (and encouraging local educational authorities, national and international bodies to issue same), facilitating in-service education, setting up teachers' networks, publicising examples of noteworthy practice and making available classroom resources. Impressive though much of this work has been, the search for a place in the curricular sun has blinded many progressive educators to the pitfalls of compartmentalism. There has been often unwitting collusion with the hegemonic billiard ball model and a reluctance to recognise the degree to which their respective fields are profoundly enfolded in each other.

The destruction of the tropical rainforests, for instance, long claimed as falling within the curricular province of the environmental educator, is also a development issue. Governments of countries in which the rainforests are located have viewed them as a resource for fuelling a process of economic development, usually along western lines. It is only in the last several years that there has been any significant dialogue between environmentalists and those concerned with the economic development of the South, a dialogue that reared above the threshold of media newsworthiness at the Earth Summit in Rio de Janeiro in July 1992. Out of that dialogue have emerged the concepts of sustainable growth and sustainable development; concepts that are now finding educational expression under the umbrella terms of education for sustainability and education for sustainable futures. But tropical rainforest destruction is of concern to educators whose respective frameworks of reference are not necessarily embraced by current conceptions and definitions of those terms. The human rights educator has important things to say about rainforest destruction as a rights issue, not only for the threatened indigenous peoples of the forests, and the new settlers, but also, if dire predictions of climatological and environmental catastrophe are to be believed, because the destruction threatens environmental rights globally. The peace

Area	Focusses
Development Education	- Third World (geographical expression) - North-South interdependencies and inequalities - Third Word (as an expression of powerlessness covering all peripheralised, disadvantaged and downtrodden peoples and groups) - Sustainability
Environmental Education	- Local ecology - Spaceship earth - Sustainability
Human Rights Education	- Moral and legal rights - Liberty-oriented human rights (individual liberties) - Security-oriented human rights (rights to physical/psychological well-being) - Duties/responsibilities
Peace Education	- Interpersonal/intercommunity/international peace - Negative peace (absence of personal violence and war) - Positive peace (presence of equitable and juststructures within and between societies)
Health Education	- Cleanliness - Specific campaigns (e.g. anti-smoking, anti-drugs, aids awareness) - Holistic health
Gender Equity Education	- Equal opportunities - Addressing attitudinal sexism - Addressing structural (systemic) sexism
Education for a Multicultural Society	- Cultural diversity - Addressing attitudinal racism - Addressing structural (systemic) racism
Humane Education	- Animal welfare - Animal rights
Citizenship Education	- Political institutions/politics - Identity - Plural/parallel citizenship (i.e. simultaneous loyalty/obligations at a range of levels, local through nation state to global)
Media Education	- Deconstructing media messages and images - Social/political effects of the media

Table 1: Global Education: Some Key Areas

educator, on the other hand, can cast light on rainforest destruction as a peace/conflict issue, instancing both local conflicts between interest groups in the forest, as well as emerging international conflict over the rainforests (presently but, perhaps not for long, limited to the North making development aid conditional on rainforest conservation). She would also point out that leading edge peace educators have for many years identified environmental damage as a problem that peace education should confront and ecological balance as a key value that must underpin any definition of peace (Smith/Carson 1998). In the final analysis, environmental

issues are development issues are rights issues are peace issues.

We are also realising, ever more clearly, that environmental issues are, in a profound sense, gender issues. Ecofeminist writers (Gaard 1993) see the devastation of the environment as an inevitable outcome given the value placed within patriarchal society upon the "male" characteristics of aggression, control, domination and exploitation. The rape of women and the rape of the wild, some argue, issue from the same mindset and psychological source. "In patriarchy," writes Andrée Collard (1988, p. 1), "nature, animals and

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women are objectified, hunted, invaded, colonised, owned, consumed and forced to yield and to produce (or not). This violation of the integrity of wild, spontaneous Being is rape. It is motivated by a fear and rejection of Life and it allows the oppressor the illusion of control, of power, of being alive." "Rather than seeing the liberation of women in isolation," write Léonie Caldecott and Stephanie Leland (1983, p. 7), "we conceive of our struggle in the larger context of human liberation and, furthermore, in the context of liberating the earth and all life upon it from the suffocating, annihilating grip of patriarchy." Interestingly and importantly, we have latterly come to recognise a mutuality of interest between the environmental and anti-racist educator that goes beyond exploring non-western perspectives on the environment (Bryant 1995; Warren 1996). New concerns around "environmental racism" challenge us to ask why, for instance, low level military flights occur with such frequency over the Inuit lands of Canada and why the sale of substances deemed dangerous to the environment, and hence, banned in the countries of the rich "North" are still exported to the developing countries of the economically poor "South". "Environmental problems", writes Cheryl Lousley (1998, p. 27), "can be read as social justice issues where class, race/ ethnicity, and gender are significant factors in determining who experiences the effects of, and who controls the causes of, environmental degradation".

Other initiatives summarised in Table 1 are similarly overlapping and mutually illuminating, especially in their more recent and broad-focus manifestations. Take *health education.* Earlier limiting their field of concern to matters of cleanliness, bodily function and awareness of unhealthy behaviours, health educators are beginning to embrace an holistic conception of health and asking students to consider questions such as:

- am I a healthy person if my behaviours and lifestyle have a negative impact upon social and natural environments, upon other human beings and other species?

- am I a healthy person if I am part of an oppressive personal relationship, either as oppressor or oppressed?

- am I a healthy person if I am prejudiced and/or directly or indirectly discriminate against people of another culture, ethnic group, race, sexual orientation or gender?

- am I a healthy person if I collude in a world economic system tilted against the interests of the majority of humankind and the interests of most animals and other lifeforms?

Holistic health education thus links with education for gender and race equity, humane education, citizenship education and media education (in that the ability to deconstruct media makes us more resistant to messages reinforcing negative images of others and less gullible in our response to the establishment bias and shorthand conventional wisdom of much media material), as well as development, environmental, human rights and peace and social justice education.

The Temporal Dimension

The *temporal dimension* concerns the interpenetrative nature of what are commonly held to be distinct phases of

time. Past, present and future are perceived of as in dynamic embedded relationship. Interpretations of the past grow out of our present concerns and prioritisations and out of our (conscious or unconscious) perceptions of the future. Likewise, both our present images of the future and the future itself are shaped by our current preoccupations and interpretations (including our interpretations of the past) and by our ongoing decision-making and action-taking. Global education, according to this dimension, involves giving the future the central place in the educational process it does not currently enjoy. Schools, charged with the task of educating future generations, tend to make little or no investment in helping students think about and understand the future. They are rather like a speeding driver on a motorway who keeps a fraction of an eye on the road ahead but most of her attention on the rear mirror as she watches out for the flashing light of any approaching police car. They are driving into the future with what has gone before as their principal frame of reference. Schools, in short, are inventing the future backwards. The school curriculum tends to be, at best, a dialogue between past and present (which, given the time lag involved in curriculum development, is already a jaded present).

The term *alternative futures* is used to signify the wide range of futures, at all levels, personal to global, open to us at any point in time. Alternative futures are commonly divided up into *possible, probable* and *preferred* futures. *Possible futures* include all future scenarios that *might conceivably come about.* The broadest category of all, they include futures in the short, medium and long term, scenarios emanating from multiple, diverse and countercultural perspectives and scenarios that are not hidebound by dominant paradigms and seemingly inexorable contemporary trends. In educational terms, the category of possible futures offers huge potential for enabling students to confront radically different perspectives, and for developing and honing lateral and divergent thinking skills and the creative use of the imagination. *Probable futures* encompass all future scenarios that are *likely to come about.* They are the firmest category in that they, for the most part, involve the short-term projection and interplay of current cultural, economic, political and social trends. *Preferred futures* are futures *we would like to come about* given our values and priorities. Exploration of preferred futures offers excellent scope for values clarification work in the classroom. The interplay of the three categories within the educational process is important. Our choice of preferred futures is likely to be based upon a narrow range of options unless study programs encourage exploration of the wealth of possible futures. In the final analysis, there can be no freedom of choice unless "one understands the full range of options available *and* the possible consequences of each option" (Kaufmann 1976, p. 11). Likewise, our exploration of probable futures is likely to lead us into embracing a "business as usual" view of the future unless we are actively encouraged to think about how we might translate the possible and preferred into the probable.

Possible and probable future scenarios can embrace both the *optimistic* and *pessimistic.* Preferred futures are mostly optimistic but may involve "better of two evils" choices

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amongst those with a pessimistic view of the future. Other useful ways of exploring alternative futures is to consider them from the point of view of *desirability* and *plausibility.*

Futures-oriented education is only in a very limited sense about *prediction* of what is going to happen. It is rather about the future as a "*zone of potentiality",* about knowledge of what is possible rather than knowledge of certainties. It is also about helping students recognize that human choices and actions (including their own choices and actions) flow into, and help shape, the future. Let us ask some more critical questions of schools. To what extent are present-day students being equipped with, to borrow from Alvin Toffler, the shock avoidance skills and capacities they will need to be both capably reactive and effectively proactive within a world manifested by an accelerating rate of social change? Are they given the opportunity to study, discuss and reflect upon alternative, possible, probable, plausible and preferred futures? Are countervailing visions of the future being offered to balance the "technical fix" and "spaceship and battlestars" image of the future projected by business corporations, government, and the mass media? Is school offering a "business as usual" conception of the future by default? Is a forward-looking counterpart to history included within the curriculum? If not, why not when sages, poets and philosophers of very many cultures have told us that we can only understand past, present and future by conceiving of them in dynamic interrelationship? Are the rich opportunities presented by activities and programs exploring the interlocking nature of past, present and future for higher order skills development (including lateral and divergent thinking, problem solving, extrapolating, predicting, imaging) being availed of by schools? Such opportunities are nicely hinted at in Roger von Oech's prose poem (Young 1986):

"Life is tough. It takes up a lot of your time, all your weekends, and what do you get at the end of it?.... Death, a great reward.

I think that the life cycle is all backwards. You should die first, get it out of the way, and then you live twenty years in an old age home. You get kicked out when you 're too young, you get a gold watch, you go to work. You work forty years until you 're young enough to enjoy your retirement. You go to college, you do drugs, you do alcohol, you party, until you 're ready for high school. You go to high school, you go to grade school, you become a little kid, you play, you have no responsibilities, you become a little baby, you go back into the womb, you spend your last nine months floating, and you finish off as a gleam in somebody's eye."

Translated into curriculum this reverse history idea has been employed in the activity, *Inventing the Future Backwards,* in which students, working in small groups, determine a major breakthrough to the realisation of a better world in the mid-term (2020 - 2070) or more distant future (2070 or after). They then prepare a front page newspaper story and headline, side stories and an editorial, for the day after the great breakthrough. Having completed the task, students go on to prepare five previous front pages stories and headlines covering the chain of events back to the present that led to the breakthrough, consulting reference works and people in the community with a special interest and/or

knowledge in their chosen topic. Groups then present their work to each other. This is a powerful and multi-faceted approach to exploring alternative and preferrred futures, giving free rein to the imagination and exercising lateral, divergent, and creative thinking skills (Pike/Selby 1999, p. 233f.). The injection of a future-facing component into the school curriculum would seem to be one important precondition if young people are to develop the capacities, skills and attitudinal framework to take greater control over the direction change takes during their lives. Futures-oriented education provides a springboard for becoming a "practical visionary". Having envisioned and identified their individually and collectively preferred futures, students can be encouraged to take steps to realise those futures through school-based social, political and environmental action projects. Learner-directed action, around issues that are relevant to their lives and their community, provides an important grounding in the practice of responsive, active citizenship and is an assertion of participatory rights as laid down in the *Universal Declaration of Human Rights* (1948), the *Convention on the Elimination of all Forms of Discrimination against Women* (1979), the *Convention on the Rights of the Child* (1989), and other international covenants. Futures thinking leading to action is what Alvin Toffler has called the process of "anticipatory democracy".

The Inner Dimension

The dimensions of the four-dimensional model reflect what novelist Penelope Lively has called "the cosmic chaos of everywhere, all time" an interpenetrative reality of delicious uncertainty in which all "places", "events" and "moments" touch each other at every point. A quantum world.

It is, indeed, to quantum physics that we look for some of the most provocative and timely challenges to the mechanistic worldview that has colonised and informed all areas of Western thinking - and, on account of Western hegemony, girdled the Earth - since the seventeenth and early eighteenth century. According to mechanistic - or reductionist - thinking, the world is rather like a clock in that it can be understood by taking it apart and reducing it to its many component parts. This way of seeing the world, critics of the mechanistic paradigm argue, has so limited our consciousness that our approach is always to compartmentalise and fragment reality at massive cost to ourselves and the planet. First, let us look at ourselves. We have divided and dichotomized body and mind, feeling and thought, intuition and reason, spirit and matter; we have promoted so-called male or "hard" qualities such as reason, competitiveness, aggression and domination and demoted so-called female or "soft" qualities such as intuition, co-operation, nurturing and receptivity. Then, let us look at how we view and behave towards the planet. First, as argued above, we see it as a machine (even many environmentalists refer to "Spaceship Earth"). Second, we see it as an inexhaustible cornucopia, acting as though whatever is taken out will be replaced - we have still to internalise an understanding of its finite and fragile nature (Edgar Marin: "Humanity should stop behaving like the Genghis Khan of the Solar System"). Third, we see it as a gigantic garbage dump (to parody Descartes, "I dispose therefore I am") always

excepting our own backyard. Fourth, and underpinning all previous points, we see nature as divorced from ourselves. Many environmentalists, with remarkable hubris, talk of "managing" or "stewarding" the environment rather than seeing humankind as embedded in the planet's natural systems. In the same way, we talk of "human and animals" as though we were somehow not the latter.

The holistic paradigm emerging from fields such as quantum physics sees the well-being and prospects of person and planet as in dynamic synthesis; if each of us endeavours to bring together the many dimensions of our divided self we benefit the planet and if we work towards a better world we emerge with heightened powers and a profounder conception of our own personhood. *Relational holism.* Our inner world, therefore, is as much the focus of global education as our outer world. Our programmes and projects need to address the "global self" as much as the "global village".

An emerging awareness of the world goes hand in glove with a growing level of self-awareness. As many people who have made voyages of discovery have found, they learn as much about themselves as about the new landscape they enter. *The outward journey is also the inward journey. The two journeys are complementary and mutually illuminating.* A student brought face to face with new perspectives, different cultures, new ways of seeing the world, alternative visions of the future; learning that her life is inextricably bound up with the problems and prospects of peoples and environments thousands of miles away, will inevitably begin to critically examine her assumptions, perspectives, values and behaviours. Likewise, carefully and sensitively coaxed, her journey into self can be a journey outwards to the wider world. "My argument", writes Theodore Roszak in *Person/Planet* (1978), "is that the needs of the planet are the needs of the person. And, therefore, the rights of the person are the rights of the planet. [...] The adventure of self discovery stands before us as the most practical of pleasures." "Suddenly", he writes in an earlier work, *Unfinished Animal* (1976, p. 4), "as we grow more introspectively inquisitive about the deep powers of the personality, our ethical concern becomes more universal than ever before; it strives to embrace the natural beauties and all sentient beings, each in her and his and its native peculiarity. Introspection and universality; center and circumference. Personal awareness burrows deeper into itself, our sense of belonging reaches out further. It all happens at once, the concentration of mind, the expansion of loyalty." Roszak's title, *Unfinished Animal,* neatly encapsulates a further and related aspect of the inner dimension of global education: the need to develop each student's full *potential* if they are to effectively engage as global citizens. Myriad opportunities abound for that potential to be tapped during the school years but schools often fail to create the right climate and conditions for it to flourish. My colleague, Graham Pike, and I have described schools as "dustbins of human potential" in that they fall significantly short of addressing the multiple dimensions of the whole person (Pike/Selby 1988, p. 38f). Some few notable exceptions aside, we have schools that:

- continue to carve reality into tidy, self-referential and outer-directed learning programmes;

- prize linear, analytical and reductionist (left-brain) processes of learning and downgrade or disregard synthesising, emotional and intuitive (right brain) processing of what is learnt;

- restrict learning to indoors, and give little space (save in the primary school) to developing sensory and embodied awareness and pay little attention to the exploration of personal attitudes and values, esteem building and developing positive feelings towards others;

- set insufficient store on realising equality of educational opportunity in their failure to ensure a diversity of learning styles, suitable for different kinds of learner, in each and every classroom;

- rest easily with hierarchies of human attributes (reason stands above emotion logic above intuition, analysis above synthesis) and of people within institutions.

The inner dimension of global education, in particular, but also the four dimensions taken together, point up the need for an ecology of learning approaches that:

- nurture intuition, emotion, imagination, sensory awareness, embodied learning, and the ability to synthesise, as equal and complementary partners of the analytical, the rational, the cerebral;

- build self-esteem which, research suggests (Selby 1995, p. 36f), is a cornerstone for personal empowerment and for building altruistic attitudes towards the peripheralised, the marginalised, the disadvantaged, the different (the "other") and the downtrodden;

- help students explore their values, perspectives and assumptions in an affirming classroom context;

- facilitate interaction, participation, and classroom democracy;

- foster co-operative skills and attitudes and, thus, an internalisation of the concept of interdependence.

In practical terms, this has involved global educators in developing and refining:

- various forms of group discussion work encouraging communication, negotiation, consensus seeking, perspective sharing and decision making;

- self-esteem building and peer tutoring programmes;

- role play, experiential and simulation activities and, more recently, guided fantasies and visualisations to promote empathy and to activate, *inter alia,* sensory learning, values clarification, creative thinking and problem solving processes.

A range of English language teacher handbooks, describing global education activities are available (see, for instance, Pike/Selby 1988, 1995, 1999, 2000; Selby 1995). A comprehensive German language global education handbook is currently being prepared (Rathenow/Selby, forthcoming). Table 2 lists some key components of global education under each of the four dimensions in terms of knowledge, skills and attitudes. The lists are not exhaustive; neither are the various compartments of the chart meant to be mutually exclusive. There are clearly many overlaps within and between columns and some components could

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well be listed in several places. Hopefully, the chart provides an overview of the essence of transformative global education in a way that can easily and usefully be considered and applied in a variety of educational contexts.

Towards the Global School

My final suggestion is that the global education approach, as summarised in the quotation with which this paper began and embracing a kaleidoscopic concept of space and time, an alliance of "educations", inner ecology and an ecology

	KEY IDEAS	KNOWLEDGE	SKILLS	ATTITUDES
SPATIAL DIMENSION	• interconnectedness • interdependence • local ⟷ global • systems	• of local/global connections and dependencies • of global systems • of the nature and function of a system • of connections between areas of knowledge • of the common needs of all humans and other species • of oneself as a whole person	• relational thinking (seeing patterns and connections) • systems thinking (understanding the impact of change in a system) • interpersonal relationships • co-operation	• flexibility in adaptation to change • willingness to learn from and teach others • willingness to work as a team member • consideration of the common good • sense of solidarity with other people and their problems
ISSUES DIMENSION	• interpersonal/local/global issues • interconnections between issues • perspectives on issues • common moral values	• of critical issues, at interpersonal through global levels • of interconnections between issues, events and trends • of a range of perspectives on issues • of how perspectives are shaped	• research and enquiry • evaluating, organising and presenting information • analysing trends • personal judgment and decision making	• curiosity about issues, trends and the global condition • receptivity to, and critical examination of, other perspectives and points of view • empathy with/respect for other people and cultures • identification with broadly-accepted humanistic values (e.g. human rights)
TEMPORAL DIMENSION	• phases of time as interactive • alternative futures • active citizenship • change	• of the relationship between past, present and future • of a range of futures, including possible, probable and preferred • of sustainable development • of potential for action, at personal to global levels	• coping with change and uncertainty • extrapolation and prediction • creative and lateral thinking • problem solving • taking personal action	• tolerance of ambiguity and uncertainty • preparedness to consider long-term consequences • preparedness to utilise imagination and intuition • commitment to personal and social (non-violent) action
INNER DIMENSION	• inner learning journey • selfawareness • human potential • personal growth	• of oneself - identity, strengths, weaknesses and potential • of one's perspectives, values and worldview • of incongruities between professed beliefs and personal actions	• personal reflection and analysis • personal growth- emotional, intellectual, physical, spiritual • learning flexibility (learning within a variety of contexts and in a variety of ways)	• belief in own abilities and potential • recognising learning as a life-long process • genuineness - presenting the real person • preparedness to take learning risks • trust

Table 2: Key components of Global Education

of learning approaches, has implications not only for the classroom but for the administration, management, relations, decision-making processes and community relations of the school as a whole. It is a useful and important exercise to take the precepts and principles of global education, individually and collectively, and ask what are the concrete implications for each aspect of a school's functioning. We need to ask what a "global school" would really look like. The Ontario Green Schools Project (1993 - 1996) employed the model described here in its endeavour to transform schools. Out of a dialogue between project co-ordinators and teachers, non-teaching staff, students, parents and community members in seven Ontario schools over the three years of the Project, emerged eight school ethos principles (Selby, 2000; Pike/Selby, forthcoming):

- The school fosters learning and social environments that promote equity, fairness, peace, and social and environmental justice.

- The school commits to principles and processes of participatory democracy.

- The school wholeheartedly embraces an ethic of environmental responsiveness.

- The school values diversity while affirming commonality.

- The school commits to educating for a fast-changing, interdependent world.

- The school fosters the inherent worth and dignity of each individual, positive interpersonal relationships, and safe school environments.

- The school promotes healthy lifestyles and relationships.

- The school values congruence between its principles and its practices.

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