Think Piece
Learning in a Changing World and Changing in a Learning World: Reflexively fumbling towards sustainability

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Introduction

We need nothing short of a new global ethic – an ethic which espouses attitudes and behaviour for individuals and societies which are consonant with humanity's place within the biosphere; which recognises and sensitively responds to the complex and ever-changing relationships between humanity and nature and between people. Significant changes must occur in all of the world's nations to assure the kind of rational development which will be guided by this new global ideal – changes which will be directed towards an equitable distribution of the world's resources and more fairly satisfy the needs of all peoples. This kind of development will also require the maximum reduction in harmful effects on the environment, the utilisation of waste materials for productive purposes, and the design of technologies which will enable such objectives to be achieved. Above all, it will demand the assurance of perpetual peace through coexistence and cooperation among nations with different social systems.

Policies aimed at maximising economic output without regard to its consequences on society and on the resources available for improving the quality of life must be questioned. Before this changing of priorities can be achieved, millions of individuals will themselves need to adjust their own priorities and assume a personal and individualised global ethic – and reflect in all of their behaviour a commitment to the improvement of the quality of the environment and of life for the world's people.

The reform of educational processes and systems is central to the building of this new development ethic and world economic order. Governments and policy makers can order changes, and new development approaches can begin to improve the world's condition – but all of these are no more than short-term solutions, unless the youth of the world receives a new kind of education. This requires new and productive relationships between students and teachers, between schools and communities, and between the education system and society at large.

A basic aim of sustainability education is to succeed in making individuals and communities understand the complex nature of the natural and the built environments resulting from the interaction of their biological, physical, social, economic and cultural aspects, and acquire the knowledge, values, attitudes and practical skills to participate in a responsible and effective way in anticipating and solving sustainability problems, and in the management of the quality of the environment. A further basic aim of sustainability education is clearly to show the economic, political and ecological interdependence of the modern world, in which decisions

and actions by different countries can have international repercussions. Sustainability education has a role to play in developing a sense of responsibility and solidarity among countries and regions as the foundation for a new international order which will guarantee the conservation and improvement of the environment. For this purpose, sustainability education provides the necessary knowledge for interpretation of the complex phenomena that shape the environment, and encourages those ethical, economic and aesthetic values which, constituting the basis of self-discipline, will further the development of conduct compatible with the preservation and improvement of the environment. To carry out these tasks, sustainability education should bring about a closer link between educational processes and real life, building its activities around the sustainability problems that are faced by particular communities and focusing analysis on these by means of an interdisciplinary, comprehensive approach which will permit a proper understanding of sustainability problems.

Before reading on, please take a few minutes to reflect on what you have just read. Does it make sense to you? Are you sympathetic to the analysis of our 'current' state of affairs and to the aims of sustainability education provided?

What you have read so far is not something that I have written. Some of you may have recognised a few lines here and there as all of the above is a mixture of sentences almost literally taken from the 1975 Belgrade Charter (UNESCO, 1975) and the 1977 Tbilisi Declaration (UNESCO-UNEP, 1978). I have made a selection from both landmark documents and have 'only' changed three things: (1) environmental education has been changed into sustainability education, (2) environmental problems have been changed into sustainability problems, and (3) the declarative and prescriptive 'should', typical of international declarations, has been eliminated. Some of you, probably most of you, will be surprised that these texts were generated over 30 years ago when nobody spoke of 'sustainable development' and certainly nobody used the phrase 'education for sustainable development'. One can ask the question why these words, signed by so many governments back in the seventies, have had so little impact? In fact one could argue that we are now in the midst of the crisis that was already announced by some in the fifties and sixties of the last century.

I have brought back these landmark sentences to ask the question: what have we learned in over 30 years? Are there any new insights in 'our' field? What kinds of innovations in 'learning' have entered 'our' field (regardless of whether you call this field environmental education (EE), education for sustainable development (ESD), education for sustainability (EfS), sustainability education (SE), learning for sustainability (LfS), or something else)? Are we learning at all in this changing world? This paper links the theme of 'Learning in a changing world' to the idea of 'Changing in a learning world' to highlight the need for reflexive responsiveness and the creation of learning societies in moving towards a world that is more sustainable than the one currently in prospect. At the same time, the theme-expansion stresses that in order to adequately deal with this changing world we ourselves need to be changing. The paper draws from a book I recently was privileged to edit titled *Social Learning towards a Sustainable World,* which brings together scholars and practitioners from around the world exploring ways to utilise diversity, dissonance and emergence in creating communities of learners who creatively work towards a more resilient and responsive system (Wals, 2007).

Conceptualising Sustainability Challenges

The nature of sustainability challenges seems to be such that a routine problem-solving approach falls short as transitions towards a more sustainable world require more than attempts to reduce the world around us into manageable and solvable problems. Instead, such transitions require a more systemic and reflexive way of thinking and acting with the realisation that our world is one of continuous change and ever-present uncertainty. This alternative kind of thinking suggests that we cannot think about sustainability in terms of problems that are out there to be solved or in terms of 'inconvenient truths' that need to be addressed, but we need to think in terms of challenges to be taken on in the full realisation that as soon as we appear to have met the challenge, things will have changed and the horizon will have shifted once again.

After 20 years or so of talk about sustainability and sustainable development, both in theory and in practice, it has become clear that there is no single outlook on what sustainability or sustainable development means. It is also clear that there is not one process that will confidently realise its achievement. Determining the meaning of sustainability is a process involving all kinds of stakeholders in many contexts, people who may not agree with one another. There are different levels of self-determination, responsibility, power and autonomy which people can exercise while engaged in issues or even disputes related to sustainability. In dealing with conflicts about how to organise, consume and produce in responsible ways, learning does not take place in a vacuum but rather in rich social contexts with innumerable vantage points, interests, values, power positions, beliefs, existential needs, and inequities (Wals & Jickling, 2002; Wals & Heymann, 2004). The amount of space individuals have for making their own choices for developing possibilities to act, and for taking responsibility for their actions, varies tremendously. Hence, creating a world that is more sustainable than the one currently in prospect, might have something to do with the utilisation of diversity, the creation of space for learning and innovation, and overcoming inequities and power imbalances that limit certain peoples' possibilities to participate.

Learning Systems

Fritjof Capra sees ecosystems as learning systems that have developed a number of traits that he considers both crucial and exemplary for social systems, including resilience, flexibility, and adaptive and networked connectivity (Capra, 1994; 1996; 2007). All these traits combined lead to sustainability and continuity. The essence of sustainability, Capra maintains, lies in the way ecosystems are organised and are able to respond to disturbances/crises. Healthy (eco) systems are systems that are continuously learning. Fritjof Capra suggests that creating a more sustainable world requires that we have a better look at how ecosystems work and become competent systems thinkers. Systems thinking here broadly refers to things like: seeing connections and interrelationships, fine-tuning functions and roles, utilising diversity, and creating synergies (see also Sterling, 2004; Tilbury, 2007). Social learning is often referred to as a way of organising individuals, organisations, communities and networks, that is particularly fruitful in creating a more reflexive, resilient, flexible, adaptive and, indeed, ultimately, more sustainable world (Keen,

Brown & Dyball, 2005; Wals, 2007). The adjective 'reflexive' has been added here to stress the important, but underused, human ability that has been identified by a number of scholars as a key aspect of (transformative) (system) learning (Dyball, Brown & Keen, 2007; Loeber, van Mierlo, Grin & Leeuwis, 2007; McKenzie, 2007; O'Donoghue, Lotz-Sisitka, Asafo-Adjei, Kota & Hanisi, 2007). A learning system has to be reflexive in order to be willing and able to question (and break away from) existing routines, norms, values and interests. A reflexive society requires reflexive citizens able to participate in and contribute to processes of change.

David Selby – in applying a Bohmian perspective on, what he calls, dialogical social learning – suggests that participants in such a reflexive system would individually and collectively need to commit to a range of things (Selby, 2007:171–172):

- Empathetic and alert listening in which each listener would make conscious efforts to be mindful of their refractive thought processes whereby others' ideas are selected, prioritized, aggrandized or belittled according to the degree of fit with the receiver's own *Weltanschauung*, participants being prepared to own to and discuss their listening difficulties in this regard;
- Attentiveness to their own emotional and somatic responses to the interventions of others and readiness to share and explore those reactions, inviting the reflections and insights of others;
- Pooling perceptions of what they construe to be the misperceptions on the part of others of their own – and others' – interventions;
- Suspending assumptions and opinions in the sense of suspending them in front of the group; that is, flagging them to participants, neither suppressing them nor allowing them to inhibit participation in an emergent pool of common meaning;
- Abandoning the 'impulse of necessity,' the assumption that something is so absolutely necessary that there cannot be any yielding on the issue, and, hence, being prepared for 'new orders of necessity,' however provisional, to emerge from the flow of dialogue (Bohm 1996, 21–3);
- Engaging in open, transparent and mutual collaboration in applying proprioception to thought, bringing into conscious awareness, and thereby seeking to dissolve, conditioned fragmentation in its intellectual, psychological, emotional and somatic manifestations;
- Bringing what is tacit (implicate) in individual responses, what is vaguely felt and normally not articulated, out into the open within the dialogical process and exploring whether and to what extent its articulation resonates across the group.

Social Learning

Social learning is not introduced here just as a naturally occurring phenomenon but also as a way of organising learning and communities of learners. This is not to suggest that there is some kind of consensus about the meaning of social learning. As Parson and Clark (1995:429) write:

The term social learning conceals great diversity. That many researchers describe the phenomena they are examining as 'social learning' does not necessarily indicate a common theoretical perspective, disciplinary heritage, or even language. Rather, the contributions employ the language, concepts, and research methods of a half-dozen major disciplines; they focus on individuals, groups, formal organizations, professional communities, or entire societies; they use different definitions of learning, of what it means for learning to be 'social,' and of theory. The deepest difference is that for some, social learning, means learning by individuals that takes place in social settings and/or is socially conditioned; for others it means learning by social aggregates.

One could argue that idea of social learning is attractively vague still. Nonetheless it is safe to say that social learning tends to refer to learning that takes place when divergent interests, norms, values and constructions of reality meet in an environment that is conducive to meaningful interaction. As suggested earlier, this learning can take place at multiple levels, i.e., at the level of the individual, at the level of a group or organisation, or at the level of networks of actors and stakeholders. In their book on environmental management, Keen *et al.* (2005) describe social learning as '… the collective action and reflection that occurs among different individuals and groups as they work to improve the management of human and environmental interrelations' (p.4). In the context of sustainable environmental management they speak of five braided strands of social learning: reflection, system orientation, integration, negotiation and participation.

From the idea of 'sustainability as emergence' (Bawden, 2004), moving towards sustainability as a social learning *process* is more interesting than sustainability as an expert predetermined transferable *product* (i.e., as set by a policy, code of behaviour, charter or standard) (Jickling & Wals, in press). Through facilitated social learning, knowledge, values and action competence can develop in harmony to increase an individual's, a group's or a network's possibilities to participate more fully and effectively in the resolution of emerging personal, organisational and/or societal issues. In social learning, the learning goals are, at least in part, internally determined by the community of learners itself.

The point of social learning is perhaps not so much what people should know, do or be able to do, which could be an embodiment of authoritative thinking and prescriptive management, but rather: How do people learn? What do they want to know and learn? How will they be able to recognise, evaluate and, when needed, potentially transcend or break with existing social norms, group thinking and personal biases? What knowledge, skills and competencies are needed to cope with new natural, social, political and economic conditions, and to give shape and meaning to their own lives? How can social learning build upon people's own knowledge, skills and, often alternative, ways of looking at the world? How can the dissonance created by introducing new knowledge, alternative values and ways of looking at the world become a stimulating force for learning, creativity and change? How can people become more sensitive to alternative ways of knowing, valuing and doing, and learn from them? How do we create spaces or environments that are conducive to this kind of learning?

These questions not only suggest that learning in the context of sustainability is open-ended and transformative, but also that it is rooted in the lifeworlds of people and the encounters they have with each one another. It is these 'encounters' that provide possibilities or opportunities for meaningful learning as they can – however, not automatically – lead both to (constructive) dissonance and increased social cohesion. The value of 'difference' and 'diversity' in energising people, creating dissonance and unleashing creativity has been repeatedly mentioned by several scholars who have reflected on the meaning of social learning in the context of sustainability (Wals, 2007). Many also speak of the power of 'social cohesion' and 'social capital' in creating change, and building resilience, in complex situations characterised by varying degrees of uncertainty. In addition to the importance of social cohesion, diversity and dissonance, the power of collaborative action that preserves the (unique) qualities of each individual is mentioned by a number of scholars (i.e., Apple, 2007; Bradbury, 2007; Glasser, 2007).

The success of social learning depends a great deal on the collective goals and/or visions shared by those engaged in the process. Whether such collective goals and/or visions can actually be achieved depends, to a degree, on the amount of space for possible conflicts, oppositions and contradictions. In social learning the conflicts and their underlying sources need to be explicated rather than concealed. By explicating and deconstructing the oftentimes diverging norms, values, interests and constructions of reality people bring to a sustainability challenge, it not only becomes possible to analyse and understand their roots and their persistence, but also to begin a collaborative change process in which shared meanings and joint actions emerge.

Conflict and Dissonance, Framing and Reframing

Given the importance of conflict and dissonance in social learning, it is important to be mindful of people's comfort zones or dissonance thresholds. Some people are quite comfortable with dissonance and are challenged and energised by radically different views, while others have a much lower tolerance with regard to ideas conflicting with their own. The trick is to learn on the edge of people's individual comfort zones with regard to dissonance: if the process takes place too far outside of this zone, dissonance will not be constructive and will block learning. However, if the process takes place well within people's comfort zones – as is the case when homogeneous groups of like-minded people come together – learning is likely to be blocked as well. Put simply: there is no learning without dissonance, and there is no learning with too much dissonance! Ideally, facilitators of social learning become skilful in reading people's comfort zones, and when needed, expanding them little by little. An important role of facilitators of social learning is to create space for alternative views that lead to the various levels of dissonance needed to trigger learning both at the individual and at the collective level.

Frame awareness, frame deconstruction and reframing (Kaufman & Smith, 1999) can be viewed as central steps in transformative social learning. People can become so stuck in their own frames – ideas, ways of seeing things, ways of looking at the world, ways of interpreting reality – that they may fail to see how those frames colour their judgement and interaction. Perhaps the essence and success of social learning lies in people's ability to transcend their individual frames, so that they can reach a plane where they are able find each other and create enough 'chemistry'

to feel empowered to work jointly on the challenges they come to share. An important first step in social learning is becoming aware of one's own frames. Only then can deconstruction (sometimes referred to as de-framing) begin (Wals & Heymann, 2004). Deconstruction is then seen as a process of untangling relationships, becoming aware of one's own hidden assumptions, their ideological underpinnings and the resulting blinding insights they provide. When this is done in a collaborative setting, where dissonance is properly managed, cultivated and utilised, participants become exposed to the deconstructed frames of others, begin to rethink their old ideas and are challenged to jointly create new ones (co-creation).

It is hard to capture social learning in a neat process or cycle, but there are some 'sequential moments' or activities that might be helpful when trying to design and monitor social learning (see also Wals & Heymann, 2004):

- Orientation and exploration – identifying key actors and, with them, key issues of concern or key challenges to address in a way that connects with their own prior experiences and background, thereby increasing their motivation and sense of purpose
- (Self)awareness raising – eliciting one's own frames relevant to the issues or challenges identified
- Deframing or deconstructing – articulating and challenging one's own and each other's frames through a process of clarification and exposure to conflicting or alternative frames
- Co-creating – joint (re)constructing of ideas, prompted by the discomfort with one's own deconstructed frames and inspired by alternative ideas provided by others
- Applying/experimenting – translating emergent ideas into collaborative actions based on the newly co-created frames, and testing them in an attempt to meet the challenges identified
- Reviewing – assessing the degree to which the self-determined issues or challenges have been addressed, but also a review of the changes that have occurred in the way the issues/challenges were originally framed, through a reflective and evaluative process

A preliminary phase is likely to be needed before entering this cycle of activities. In this phase the initiators of the change process reflect on the nature of the change process by asking questions such as: 'Is the kind of change that is desired of a more emancipatory or of a more instrumental nature?' and, 'Is there sufficient political and organisational space available for engaging people in a participatory process characterised by high levels of self-determination and autonomy?'. These questions need to be asked in order to be able to confidently introduce and enhance social learning as a vehicle for realising change.

It should be noted that although these activities can be distinguished, they are hard to separate in reality as they interrelate and overlap. They also suggest a linearity one seldom finds in social learning processes since social learning is more of an ongoing, cyclical and emergent process. Furthermore, having an evaluation moment at the end suggests that this is a one-off activity which it obviously should not and need not be: social learning requires reflection and reflexivity throughout the entire process, if only to improve the quality of the process itself and to monitor change and progress throughout. Interestingly enough the sequence of activities as presented here resembles the conceptual change process as described by Driver and Oldham (1986) in the context of children's learning in science.

But What about Sustainability?

People around the world, scientists and policy makers alike, are working on identifying 'indicators of sustainable development' (130 000 Google hits on March 8, 2007) or 'sustainability indicators' (393 000 Google hits on March 8, 2007). Many scientists working on sustainability are doing so at the request of international organisations like UNESCO, UNECE, UNEP and the World Bank, or at the request of national governments. Sustainability and sustainable development – but also 'education for sustainable development' (500 100 Google hits on March 8, 2007) as a means to 'realise' sustainability – have deeply penetrated the world of policy. There is quite some pressure to translate these policies into concrete actions with measurable outcomes, by creating benchmarks and standards that heavily rely on Specific, Measurable, Acceptable, Realistic, Time-specified (SMART) goals. To have an exhaustive list of sustainability indicators seems very handy for becoming SMART in working towards a more sustainable world, but at the same time might take the learning out of moving towards a more sustainable world, and, therefore, ironically perhaps, block any progress towards such a world.

This is not to say that having indicators for sustainability is necessarily a bad thing, but the questions then become: For whom are these indicators? How have they been created? By whom? Are they carved in stone or subject to change and even abolition? The process of identifying indicators can in and by itself be a very useful part of social learning, but when indicators are then authoritatively generated and prescribed, the transformative learning disappears and is replaced by the kind of conditioning and training that might be damaging in creating a more reflexive, empowered, critical, self-determined citizenry that competently and creatively co-designs a more sustainable world.

Interestingly enough *none* of the 27 contributions to *Social Learning towards a Sustainable World* (Wals, 2007) focus on sustainability as a measurable outcome. Instead they focus on the *processes* and the *conditions* needed to *engage* people in issues related to sustainability. Most of them, however, will probably agree that our current way of living on this planet is unsustainable and something needs to, indeed, radically change in the way we live, interact, do business, use resources, and so on. They suggest – some more explicitly than others – that it would be pretentious to declare what 'sustainability' is exactly, let alone how it should be implemented. In fact, they suggest that doing so would take the learning out of creating a more sustainable world, whereas, in their view, the key to creating a more sustainable world lies precisely in *learning*. More specifically: not just in any learning, but rather in transformative learning that leads to a new kind of thinking, alternative values and co-created, creative solutions, co-owned by more reflexive citizens, living in a more reflexive and resilient society.

Back to Belgrade

A lot has changed since Belgrade in 1975. We only have to look at (former) Yugoslavia and the Balkan region today to be convinced of that. Why then has so little changed in environmental education since the Belgrade Charter and the Tbilisi Declaration? Today's policy statements about ESD highly resemble the international declarations on EE of the mid-seventies. Some

of the wording has changed perhaps, but there is still little evidence to show that EE or ESD and ESD-derivatives, for that matter, plays a key role in creating a more reflexive society that is able to critique and overturn existing routines, values, norms and interests which we (can) know or intuitively feel are deeply unsustainable. As the looming eco-cultural crises, that were already so well articulated in the mid-seventies of the last century, are becoming more visible, more transparent and more complex, and at the same time, more urgent and, indeed, more real, it is more tempting than ever to become SMART, prescriptive and instrumental in finding solutions. Yet, environmental education (EE), education for sustainable development (ESD), education for sustainability (EfS), learning for sustainability (LfS), and sustainability education (SE), should (with apologies) resist this temptation and dare to focus on (critical) reflexivity and transformative (social) learning as a means to engage people meaningfully in the everyday struggle for a better world.

Sustainable living requires more than consensus in the present about what sustainability is or even might be. While there is a constellation of ideas as to what a sustainable world might entail, the lack of consensus about the implications of an exact meaning – if this were at all possible – in variable contexts, should prevent global prescriptions. Instead contextual solutions are required that are, at least partly, co-created and co-owned by those who are to (want to?) live sustainably. Forcing consensus on how people should live their lives is undesirable from a deep democracy perspective, and from an emancipatory education perspective it is essentially 'mis-educative' (Dewey, 1916; Wals & Jickling, 2002).

Social learning – albeit as a spontaneously emerging property of people interacting together or as an intentionally introduced and facilitated process of change – not only allows for commonalities and social cohesion to form, it also provides space for disagreement and 'dissensus'. From this perspective, democracy and participation – much like social learning – depend on this space for difference, dissonance, conflict, and antagonism. This also suggests that in reflexively fumbling towards sustainability, deliberation is radically indeterminate (Goodman & Saltman, 2002). The conflicts that emerge in the exploration of sustainable living become prerequisites *for* rather than barriers *to* learning. Sustainable living requires dialogue to continuously shape and re-shape ever-changing situations and conditions. A dialogue here requires that stakeholders involved *can* and *want* to negotiate as *equals* in an *open* communication process which values *diversity* and *conflict* as driving forces for development and social learning. Hence, a key challenge for EE, ESD, EfS, LfS and SE lies in facilitating dialogical social learning that helps create a more reflexive society capable to respond adequately to emerging crises and challenges irrespective of their label.

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