

Overcoming dichotomies:

The transdisciplinary development of human learning to meet the challenge of creating a peaceful and non-violent world

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This brief communication highlights some of the observations I made during my intervention on *Paix, non-violence et transdisciplinarité : Implications pour le développement de l'apprentissage humain* at the Congress on Peace, Non-Violence and Transdisciplinarity held from 16 to 18 May 2003 in Strasbourg. I kept the three concepts that are present in the title of the congress, peace, non-violence and transdisciplinarity, also in the title of my intervention, as I believe there is a connection between them. I also believe that, taking them together, while considering their interrelationship, light can be shed on the question of how human learning should be let to evolve so that a better – more harmonious, more peaceful and less violent – world may ensue. As I am writing these notes more than half a year after the congress took place, I don't follow exactly what I might have said in Strasbourg. Rather, I take the opportunity to look back at the notes and PowerPoint slides that I then prepared and speak to them anew. This is also the reason why these notes are preceded by an adapted title, putting the issue of the transdisciplinary development of human learning before the challenge of creating a peaceful and non-violent world, emphasizing the need to overcome dichotomies as the key concern.

Different realities of human learning

I have worked on the issue of the development of human learning for roughly the last ten years, first in the context of UNESCO's Learning Without Frontiers program (<http://www.unesco.org/education/lwf/>) and subsequently in the framework of an organization specifically dedicated to its cause, the Learning Development Institute (<http://www.learndev.org>). Before that I had an interest in helping people learn, but largely interpreted the concept 'learning' in the narrow sense of the term, namely with reference to its connotations with acquiring some new state of being, particularly in terms of mastering certain pieces of knowledge, being able to perform particular skills, or gaining certain predilections. Part of that conception was also that learning would normally happen through the agency of someone specifically habilitated for that purpose. In other words, I was, for decades, a teacher in several disciplinary areas (often science-related, as I am a theoretical physicist by original background) in a great variety of institutional settings. In addition, the range of those settings span several continents, some of which are commonly referred to as 'developing.' Learning being intimately linked to the idea of growth and development, it is actually peculiar to designate only part of the world as developing. The implication is that the other part is already developed and therefore no longer in need of development. Learning, as defined within those parameters, cannot be but a directional process: It goes from the developed to the developing. The idea also has built into it some sort of static belief, namely that learning has an end. When you are developed the job can be considered done.

Going by my students' comments, I should probably conclude that I have been a good teacher. Nonetheless, I realize that, while my work may have contributed to my students' increased effectiveness in their world, I must

also have locked them into restrictive patterns of thought that come about when students and teacher interact within the bounds of stale systems with rather rigid expectations concerning what should happen in the teaching/learning context and even more rigid expectations regarding what, as a result of that process, is worth evaluating at the end of it and what is not. There is a need to liberate students and teachers of the limiting parameters that surround what goes on in many teaching/learning situations. There is also a need to rid humanity of the arrogance that leads part of the human population to think that it should teach – and through teaching develop – the other part. Both flaws contradict some of the most essential truths about learning, namely that it is dialogic (see e.g. Shor, 1997 and 2000, October) and collaborative (e.g. John-Steiner, 2000) and that it is generative and open-ended (J. Visser, 2001).

Open-ended collaborative dialogue

Learning is a profoundly dialogic process. For instance, some of the most profound learning takes place in teachers and other facilitators of learning when they are at their best and most successful in helping others to learn. Analysis of the learning stories collected and researched by the Learning Development Institute (detail and examples available at <http://www.learndev.org/MoL.html>; see also Y. Visser & J. Visser, 2000, October), reveals frequent occurrence of this phenomenon not only among professional teachers but equally among all those ordinary individuals – such as parents, siblings, occasional mentors, and friends – who get deeply involved in helping other people to learn. It puts community building, rather than institution building, at the heart of the learning enterprise. As a consequence, it also challenges many preconceptions about the traditional roles of teachers and learners as well as about the separateness of those roles, which are

commonly still perceived as each other's diametrical opposites. Thus, in building learning communities, participants may become part of a particular community with specific intentions or expectations to either focus on learning or teaching. However, when the community works well, everyone will ideally end up both learning and being involved in facilitating the learning of other members of the community. The traditional binary teacher-learner relationship will then have been transcended and a new reality will have emerged in which learning and helping to learn have become inseparable.

Naturally, under such circumstances, learning cannot be but seen as a collaborative effort. The cases analyzed by John-Steiner (2000) present powerful examples at the level of small partnerships, often of two or just very few people. Such analysis of collaboratively learning dyads or triads is relevant also in terms of its meaning for much larger learning communities, which thrive by virtue of how each member connects meaningfully to just a few other members – immediate neighbors, so to say – who, in turn, connect meaningfully to yet other members. Thus, the health of a community depends on the strength and effectiveness of the collaborative meaningful relationships – learning relationships in the case of a learning community – between individual members. Together those mutually interacting members form a Complex Adaptive System (CAS) that as such may interact with other communities, leading to complex self-organization of learning by individuals and social entities at ever-higher levels.

Communities of learning

Most traditional schools are poor examples of the application of the principles of dialogue and collaboration as key ingredients of the learning they are supposed to generate. Luckily, there are exceptions. Rogoff, Turkkanis and Bartlett

(2001) and the author team they brought together for their book on *Learning Together: Children and Adults in a School Community*, show convincingly that a school can indeed be organized – or rather be made to organize itself – as a community of learners and how this can be done. Not that schools are the only possible instance of (self-)organized learning communities. Far from it. A sports club, a music ensemble, a group of people who share spiritual insights, scientists fascinated by the prospect of advancing knowledge in a particular area, certain home-schooling communities, a commercial partnership, the family, these are all examples of groupings of human beings that could potentially function as learning communities. Together, they make up an impressive learning ecology, each learning entity, whether individual or social, feeding on and serving as food for other learning entities.

The meaning of learning in today's world

I am interpreting learning in the above paragraphs as something that goes beyond the standard definitions of learning used among mainstream educators and education specialists. Such definitions focus exclusively on the individual and what happens inside the individual. The dialogic view of learning referred to above recognizes the role played by individuals and how that role is conditioned by, for instance, neuro-physiological processes that take place inside individual human bodies, particularly their brains. However, it transcends that vision by placing learning in a larger framework that also recognizes and attributes key importance to what goes on between individuals. Moreover, and as a logical extension of the above broadening of vision, it recognizes not only interactions that go on between individuals, but also processes through which social entities, made up of any number of individuals, interact among themselves as well as with single individuals. Most traditional

definitions also explicitly or implicitly assume that learning is the result of some instructional process. While instruction may play a major role in a number of important instances, much learning takes place outside, and at times despite, instruction. Instruction is simply one among multiple forms in which individuals interact with each other in order that they may learn.

Key to human learning is the question of constructive interaction between human beings and the world that surrounds them. That surrounding world is in constant change, not just of its own accord, but also - and particularly so - because human beings cause it to change constantly as they are themselves an active part of that environment. Human learning therefore means more than developing an adequate response to a given change in the environment, more than adapting human performance to new demands (the latter idea being the underlying vision of most deliberately structured instructional and training activities). Rather, it is, in its deepest sense, the disposition to be in constant dialogue with one's environment, elevating one's consciousness of being present in that same environment, seeing oneself functioning within it, and asking oneself questions about such presence and such functioning from multiple perspectives.

The way learning is being defined expresses a worldview, a view of what it means to be human, an answer, however tentative, to the questions: Who are we? Where do we come from? Where are we going (or why are we here)? Such questions are as inadequate as the linguistic tools that have evolved through which we can express them and so are the tentative answers humanity comes up with at different moments in its history inadequate. This brief communication takes the view that *each human being is a unique opportunity for*

the development of consciousness in the evolution of the universe.

As such, the latter view may be an expression of the Zeitgeist that produces it. The state of the planet is increasingly a concern among more and more people. We are ever-more conscious of the confines of our planet, the limits of its resources, and the possible relative uniqueness of the occurrence in the universe of consciousness at the level at which we experience it. Previous visions of humanity were certainly more earthbound and many of our ancestors could thus be satisfied with seeing themselves play a useful role in the particular processes they were part of, not questioning those processes to the extent we do. The world was big enough to function as a conceptual safeguard allowing individuals of past centuries to consider those questions as ones that future generations should deal with, not they. To compensate for it, their religious experience came to relate to the binary opposite of their earthbound reality, a projection out of that reality. Current views may be leading us to transcend such dichotomy, the *inseparability of earthbound and religious conceptions* revealing itself as the included third that was invisible in previous notions of reality that we are in the process of overcoming.

Similarly, the deeper understanding of human learning and the search for its meaning in our time and our world are transdisciplinary concerns. Learning is the included third between consciousness and reality. For a long time, reality and consciousness have been seen as categories that should be kept rigorously apart, learning simply being a way to create a mental representation of the real world such that that same real world could be manipulated in a premeditated manner without the conscious mind being conceptually part of what was being manipulated. Or, as Merleau-Ponty (1964) pointedly asserts with specific reference

to the scientific enterprise: “La science manipule les choses et renonce à les habiter.”

Efforts of the transdisciplinary community of researchers, practitioners and thinkers associated with the work of the Learning Development Institute and its predecessor, UNESCO’s Learning Without Frontiers program, have focused and continue to focus, among other concerns, on changing the above vision of separateness. One definition that attempts to bridge the gap and that situates human learning in the context of an ecology of consciousness, sees human learning as “*the disposition of human beings, and of the social entities to which they pertain, to engage in continuous dialogue with the human, social, biological and physical environment, so as to generate intelligent behavior to interact constructively with change*” (Visser, 2001, p. 453).

Theory into practice beyond the disciplines

Bransford, Brown and Cocking (1999) emphasize that the study of learning has to do with many different research areas related to diverse disciplines including, among others, “cognitive development, cognitive science, developmental psychology, neuroscience, anthropology, social psychology, sociology, cross-cultural research, research on learning in subject areas such as science, mathematics, history, and research on effective teaching, pedagogy and the design of learning environments” (p. xxi). However, to understand and give meaning to learning in the way we wish to promote it, more is needed than just bringing together and making to interact the knowledge and procedures that are part of a variety of disciplines. Consciousness must be raised about issues that transcend the traditional approaches and that require ways of inquiry that keep the worlds of consciousness and reality together instead of breaking them apart

and splitting each of them up into isolated entities. To be clear, doing so must not be done *instead of* applying disciplinary approaches but rather *in addition to* the disciplinary modes of inquiry.

Trying to do the above has, for instance, led the Learning Development Institute to engage in the following actions.

- We create ‘communities of mind’ among people from different disciplines and schools of thought, asking them to individually and collectively address questions that are beyond the reach of their traditional approaches. Example are the work we have been conducting since 1999 on the “*Meaning of Learning*” (MOL), the recent explorations regarding “*Ambiguity, cognition, learning, teaching, and design,*” started in June 2000 but culminating in active debate in 2003, and the ongoing work on the “*Book of Problems*” (BOP), initiated in 2002, a reflection of all of which can be found on LDI’s Web site.
- We engage – and engage others – in research in which the unit of analysis refuses to allow the world to be broken apart and that requires adopting a perspective on the dialogic nature of learning. An example is the earlier mentioned “*Learning Stories*” project on which, in addition to LDI, scholars and students of several other universities have contributed.
- At the more practical level, we assist in efforts and advise where people try to create a learning reality that is different from the traditional schooling practice, though we recognize that forms of deliberate instructional practice are not necessarily alien to advancing learning

as a dialogic experience. We have been involved in such work, for instance, in places such as the state of Madhya Pradesh in India, Mexico, Venezuela, the Democratic Republic of Congo, Mozambique, and Algeria. The emphasis is on creating the conditions of learning in a broad environment such that they allow learning to evolve as a dialogic experience. A focus on problems and problem areas rather than on content as defined in a disciplinary fashion helps to accomplish the above.

- In line with the above efforts are also our attempts to create dialogue among practitioners, researchers and thinkers internationally to develop new visions about the world of learning and knowing. Examples are international colloquia on a variety of issues, details of which can be found on LDI’s Web site.
- While we are not involved in regular instructional practice, such as through giving courses, we do engage in, usually short-term, training, which focuses both on awareness building and on creating relevant capacity. An example is the workshops on “*Reinventing Learning*” we conducted around the globe.

I am providing the above detail so as to exemplify how the transdisciplinary development of human learning can be given hands and feet. No doubt, LDI’s existence has been relatively short-lived. It may therefore be too early to respond seriously and convincingly to questions of evaluation. The Institute has been in operation formally since early 2000, though in practice a little longer. It also builds on the experience of Learning Without Frontiers during the five years preceding the creation of LDI. It is encouraging, though, to be

able to refer to interesting concrete signals of a changing attitude in environments where we did not expect it (such as among the instructional design community that comes together on a yearly basis under the banner of the Association for Educational Communications and Technology). We have also seen that government officials in many places where we worked have shown a surprising openness to the questions we raised, which implied a serious critique of the schooling practices for which those same officials are responsible. A tentative conclusion may thus be allowed at this stage that we live in a world in which radically new ways to conceptualize learning may no longer be resisted as much as they were in the past. It is also interesting to note that raising issues at the level we do has led to unprecedented voluntary and active participation among some of the best minds, individuals willing to commit themselves (and through their efforts also their affiliated institutions) beyond the prospect of any possible way of gaining from such commitment materially. Transdisciplinarity, one may be tempted to conclude, apparently liberates the collaborative spirit?

Conclusion

On the previous pages I have outlined how human learning can be conceived of in ways that go fundamentally beyond the dominant conceptions of the past and that equally transcend the visions that drive most of today's educational practice, which situate learning within the rather narrow confines of instructional procedures and contexts. The current state of humanity and the current state of the planet require views of learning that rise above such dominant paradigms.

Peace and non-violence are among the essential features of human existence that will determine if and how planetary society will sustain. The complexity involved in the development of the

qualities of peacefulness, harmony, and non-violent thinking and behavior among humans requires a view of the whole rather than the compartmentalized visions that drive most current educational practice. Thus, in dealing with them in the context of human learning, the kind of transdisciplinary perspective is required that was alluded to above.

Sustained peace and non-violence are often thought of as the end-products of utopian thinking. However, the more it becomes clear that they are not merely desired states of the world that unfortunately lie beyond the reach of a species that thinks of itself as incapable of creating them, but that, instead, they are an essential part of the conditions for the survival of human consciousness on earth, the more it becomes necessary to overcome the dichotomy between perceptions of the human self and its utopian desires. That is the challenge.

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