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The Handbook of Sustainability Literacy: Skills for a changing world, edited by Arran Stibbe, Totnes, UK, Green Books 2009, 220 pp., £14.95 (paperback), ISBN: 978-1-900322-60-7

This compilation is a highly gratifying read for many reasons. It sets out to profile the skills, as well as the attitudes, competencies, dispositions and values that are required to facilitate the sustainability transition. It is organised in 32 chapters each authored by a different writer. They include sustainability educators, literary critics, permaculturalists, ecologists, artists, journalists, engineers, mathematicians and philosophers who outline *sustainability literacy* from their various perspectives. Common themes run through the chapters and a coherent picture of *sustainability literacy* emerges. Arran Stibbe and Heather Luna indicate in their introduction that the chapters are written in response to the challenging conditions of population growth, rising demands for energy, water and biological resources, climate change, declining oil resources, rapidly increasing consumption in developing countries, ecosystem degradation and economic uncertainty. Starting points for the Handbook are the social, cultural and economic systems that give rise to these conditions rather than these problems as such. It is through this approach that this book gives a sense of a way forward.

One of the themes reappearing throughout the chapters is the identification of critical thinking and understanding with a sustainability orientation as an important component of *sustainability literacy*. It means here not only understanding the unsustainable paths and the structures and systems that support them, but also re-assessing and re-thinking them under a new paradigm to leverage different kinds of questions that lead to new solutions. For example, it involves critiquing consumerism and the ability to see, as Morgan Phillips puts it, 'beyond consumer culture'. It is about re-assessing science to understand its social construction, and skills in technological appraisal for which Gavin Harper lists a number of aspects and considerations: the role of material, embodied energy, 'bolt-on-renewables' (such as solar coating on car roofs), technological 'lock-in' and 'path dependency' of large infrastructure projects such as energy and transport systems. A question like 'how can I best fulfil my transport needs' replaces 'what's the greenest kind of car I can buy' (Gavin Harper).

Another common theme running through many chapters is the nature of learning required, which is summed up in the concept of *active learning*. This is described as self-directed enquiry, self-reflection, learning by doing, engagement with real life issues, and learning within communities of practice. It aims at action competence, that is, gaining the skills and motivations for personal as well as social action. *Sustainability literacy* then is seen as a collection of skills that allow for effective participation and influence in all areas of life to '(re-)create' a sustainable society.

The concept of *sustainability literacy* in the Handbook spans the spectrum from skills in systems thinking and thinking in relations, to the application of these at the practical level, and over to the deepest level which is residing in the psychological domain. At the practical level, for example, are transition skills, a re-skilling as preparation for 'the

long emergency' (Stephen Quilley), including skills for food production and community building, a 'D.I.Y. bottom-up transformation of local communities', covering also permaculture design (Patrick Whitefield) and community gardening (Alma Clavin). At the psychological level, there is the need to be able to overcome alienation from nature and to fulfil the inert need of feeling ecologically embedded. Barry Bignell suggests that the experience of beauty fills the gap between self and experience as part of conscious knowing of what is essential nature - a *sustainability literacy* skill based in the aesthetic realm. Then there is the need to be able to find ways to gain life satisfaction without over-consumption of resources, and to gain insight into the true sources of emotional well-being (Paul Maiteney; Morgan Phillips).

Other aspects of *sustainability literacy* include ecological intelligence and Gaia awareness, economic awareness based on ecological and ethical values, personal sufficiency, coping with complexity, commons thinking, advertising awareness, 'greening' business, new media literacy, cultural literacy, futures thinking, thinking about the self in interconnection and interdependence with the surrounding world, skills in reducing environmental footprints including carbon capability, and the ability to 'fulfil human needs effortlessly' through working with nature. Underpinning all is an intrinsic values orientation (see Notes), the ability to reflect on what kind of society is desirable and what is important and worth protecting, and the recognition of ethical obligations.

Twenty-eight chapters outline these various dimensions of *sustainability literacy*, and four chapters in a second part of this Handbook discuss the characteristics of the learning systems and educational institutions that facilitate *sustainability literacy*. They call for a new definition of what constitutes 'worthwhile knowledge', for new partnerships for learning, for breaking down traditional hierarchies of access to knowledge, and valuing different forms of knowledge, in particular the 'traditional knowledge of living sustainably within the local environment that is embedded within indigenous and local communities' (Geoff Fagan). This means also for the learning institution to be physically and philosophically accessible; transparent, participatory and inclusive; committed to negotiated learning and for the educators to be facilitators of learning rather than instructors (Geoff Fagan). Facilitating *sustainability literacy* also requires lifelong learning and learning to include spirituality and holism, intuition, imagining and wisdom (Karen Blincoe), addressing the hidden and overt curricula (Anne Phillips), and embracing the concept of the learning society (Kate Davies).

This Handbook did achieve what it set out to do: It provides a comprehensive and holistic picture of what constitutes *sustainability literacy*. The various dimensions of *sustainability literacy* represent the essence of current thinking in the wider field of education for sustainability that draws on holistic and systemic analysis under the ecological paradigm. A stated inherent quality of this concept of *sustainability literacy* is that it needs to be continuously negotiated, adapted to local realities, to changing conditions and needs, and emerging knowledge. As Greg Garrard, one of the chapter authors, suggests, 'there's no such thing as "saving the planet", only keeping on thinking and working for a sustainable society forever.' Kate Davies points out that 'governments are urging us towards another, even more intensified Industrial Revolution through their skills agendas'. In contrast, authors represented in this Handbook focus on the long-term sustainability of life on earth with sustainability extending beyond environmental considerations to include the dimensions of social justice; intergenerational justice; mental and physical wellbeing; social, economic and cultural transformation; and the flourishing of the diversity of all life.

While the idea of the possibility of a *sustainability literate* citizenry is comforting, the way to get there seems treacherous. The following is not meant to hint at any shortcomings of the Handbook, rather, it is a reflection on the implementation context which in turn points to a particular strength of the concept of *sustainability literacy* portrayed in the Handbook: The degree to which *sustainability* and *sustainability literacy* will be widely made a priority may be partly a function of what Foster (2008) describes as ‘the level of change with which we are personally comfortable, rather than that required for making the necessary objective difference’. He refers to this as ‘the politics of never getting there’. An even greater obstructive force than inertia and general resistance to change, however, can be expected from ‘environmental scepticism’ which has turned into an international phenomenon with some influence. Over the past decades, ‘environmental scepticism’ has been organised as an anti- environmental counter-movement (Jacques 2009). Its proponents have constructed environmentalism as a growing threat to social and economic progress, the Western way of life, and to individualist values. ‘Environmental sceptics’ are concerned with a strong commitment to economic growth with its increasing need to maximise consumption of natural resources and a deep anthropocentric orientation (Jacques et al. 2008). ‘Environmental sceptics’ sneer at environmentalism as ‘the new religion’ (see, for example, Plimer 2008).

‘Environmental scepticism’ is based on a value system that clearly is in opposition to all that is espoused by the concept of *sustainability literacy* discussed here, and herein lies the decisive point: *Sustainability literacy*’s greatest resource may be situated in its open commitment to an ecological values orientation which is based on intrinsic values. Crompton (2010), with his review of the evidence about the way in which people’s values are organised across cultural contexts, lists a number of characteristics that have particular relevance for the educational context: People’s values tend to cluster in similar ways across cultures in terms of intrinsic and extrinsic values (see Notes). A person’s values comprise an integrated and dynamic system, such that activating one particular value affects other values leading to activating compatible values and suppressing opposing values. Values can be strengthened culturally, and favouring a particular set of values can indeed be practiced. Moreover, deeply held inner beliefs and value systems are not unchanging or unchangeable. So, there are real opportunities for the facilitation of *sustainability literacy* to make a difference, and for learners to gain resilience, to develop the ability to identify environmental ‘scepticism’, to deconstruct it and recognise the opposing value system, and respond accordingly.

*The Handbook of Sustainability Literacy* is the outcome of a forum discussing sustainability skills and active learning techniques, held in 2008 and supported by the Environmental Association of Universities and Colleges (UK) and other organisations. The chapters are concise, accessible and well-flowing and make for an enjoyable reading experience. Most also contain suggestions for active-learning exercises. The Handbook is suitable for educators from the university sector, schools, vocational education and training and informal education, as well as for learners themselves, and anyone interested in finding out about *sustainability literacy*. It is accompanied by a multimedia version containing extended chapters and video interviews with the authors and is available on <http://www.sustainability-literacy.org>. Chapter authors other than those referred to above include: John Naish, Satish Kumar, Arran Stibbe, Justin Kenrick, Ling Feng, Stephen Sterling, Glenn Strachan, Stephan Harding, Sue Wayman, Jeffrey Newman, Myshale Goldberg, John Blewitt, Kim Polistina, Lorraine Whitmarsh, Saffron O’Neill, Gill Seyfang, Irene Lorenzoni, Zoe Robinson, Melinda Watson, Mike Clifford, Dick Morris, Stephen Martin, Bland Tomkinson and John Danvers.

## Notes

Crompton (2010, 10) summarises that there is a distinction between two broad classes of values: intrinsic and extrinsic values. Intrinsic values are described as self-transcendent values. They include values placed on a sense of community, affiliation to friends and family, and self-development. In contrast, extrinsic values include self-enhancing values, values that are contingent upon the perceptions of others – they relate to envy of ‘higher’ social strata, admiration of material wealth, or power. He continues: ‘Intrinsic values are associated with concern about bigger-than-self problems, and with corresponding behaviours to help address these problems. Extrinsic values, on the other hand, are associated with lower levels of concern about bigger-than-self problems, and lower motivation to adopt behaviours in line with such concern.’

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