

# Resilience – the key link between biological diversity and cultural diversity? What role for mimetic learning and cultural learning?

Christine M. Merkel, December 2010, building on a joint paper with Dr. Lutz Möller, of July 2010

*As food for thought the link between the “two diversities” will be explored in relation to (post-)industrialised countries. A special focus will be on the connection of diversity and resilience. What role for mimetic and cultural learning, sub- and unconscious? How to reinvent ourselves as biosphere relevant species? How to explore the zone between “things we know” and “things we don’t know”, the tacit, implicit and practical knowledge?*

Cultural diversity and biological diversity are both terms of considerable conceptual complexity. In addition to their respective various scientific definitions, they are also both defined in the texts of multilateral conventions<sup>1</sup>.

When attempting to take into consideration the linkages between “both diversities”, standard approaches focus on traditional and indigenous knowledge (and how it contributes to the conservation of biodiversity) or on hotspots of biological and language diversity.

This rather narrow discourse can and should be broadened, in order to fully utilize the political and conceptual power of the concept of diversity.

The heuristic starting point may be the considerable evidence that diversity of a system increases its **resilience**<sup>2</sup> in coping and adapting to external pressures, stress factors or shocks<sup>3</sup>. It is suggested to postulate this connection as a fact in order to **conceptualize** the terms of cultural and biological diversity **from resilience**.

**Cultural diversity** therefore might be understood as a **cipher** for cultures/societies (and parts thereof) which value, encourage and support diversity, entertain diverse functioning and democratic relationships within itself, including

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<sup>1</sup> UN 1992 Convention on Biological Diversity  
UNESCO 2001 Universal Declaration on Cultural Diversity  
UNESCO 2005 Convention on the Protection and Promotion of the Diversity of Cultural Expressions;

<sup>2</sup> The term **resilience** has been coined in material sciences and has been applied in the 1970ies to psychology - and to ecosystems by Crawford Stanley Holling; the term is still overly frequently used in ecological contexts. Here the definition of the IPCC is retained, explicitly applied to socio-ecological contexts: Resilience is defined as the “ability of a social or ecological system to absorb disturbances while retaining the same basic structure and ways of functioning, the capacity for self-organization, and the capacity to adapt to stress and change” or short “capacity for positive adaptation despite adversity” (Luthar and Cicchetti, 2000). Resilience is also used in management theory, e.g. as the capability to self-renew over time through innovation.

**Adaptive capacity** is the “ability of a system to adjust to moderate potential damages, to take advantage of opportunities, or to cope with the consequences”; the system may increase the range of variability with which it can cope.

**Vulnerability** is the degree to which a system is susceptible to adverse effects; it is a function of the character, magnitude and variation of the adverse effects and the system's sensitivity and adaptive capacity. Vulnerability is related to the spatial-temporal distribution of stress factors and to prior stress factors, i.e. the history of the system.

Cp relevant research institutions/associations such as [www.resalliance.org](http://www.resalliance.org), or [www.stockholmresilience.org](http://www.stockholmresilience.org).

<sup>3</sup> For biodiversity, cp. [www.cbd.int/doc/publications/cbd-ts-43-en.pdf](http://www.cbd.int/doc/publications/cbd-ts-43-en.pdf): “The available scientific evidence strongly supports the conclusion that the capacity of forests to resist change, or recover following disturbance, is dependent on biodiversity at multiple scales”. There seems to be less work on the relation of cultural diversity to resilience – work on diverse socio-ecological systems mostly focus on the need for diversity of governance, cp. chapter 2 of „Complexity Theory for a Sustainable Future” (2009), co-authored by Elinor Ostrom: diversity of local adaptations, of locally crafted solutions, of local governance and of institutions.

The 2007 UNESCO-Christensen Fund workshop ([unesdoc.unesco.org/images/0015/001592/159255e.pdf](http://unesdoc.unesco.org/images/0015/001592/159255e.pdf)) emphasized the resilience concept as well, although almost all practically cited examples pertain to indigenous communities. Resilience is also addressed by researchers working under the heading of “biocultural diversity” (e.g. the conference [www.bioculturaldiversity.net](http://www.bioculturaldiversity.net) and the NGO [www.terralingua.org](http://www.terralingua.org)) Two workshops of June 2010 UNESCO-CBD conference in Montreal ([www.cbd.int/meetings/icbcd](http://www.cbd.int/meetings/icbcd)) addressed the direction of this draft as well.

inter-generational, inter-gender, between different societal groups, and especially support to the participation of disadvantaged groups and minorities. An additional aspect of such cultures/societies is that they at the same time inspire creativity and innovation and are forward-looking, i.e. preparing themselves for future opportunities and challenges while valuing their heritage. Culturally diverse societies and parts thereof are therefore more eager to excel, more innovative, more creative, and more dynamic and respond quicker and better to change.

**Biological diversity** might be called a **cipher** for elements of the biosphere or ecosystems, which because of their diversity have complex and functioning relationships between its different constituent parts. Diverse biological systems produce more complex outputs which may be of benefit to other parts of the biosphere. They are also more dynamic and respond quicker and better to change.

Strong linkages between the two diversities starting from resilience are already built in.

- Forward-looking societies are aware of the limitedness of natural resources and will not pursue development paths that threaten the loss of ecosystem services and endanger their survival or future well-being.
- By valuing cultural diversity, they value diversity per se, i.e. also value biological diversity.
- By valuing natural heritage and traditional knowledge, they attach meaning to a natural system which carries some intrinsic value, be it sacred, spiritual or aesthetic.

The focus on resilience should open paths to examine linkages between learning the “two diversities” in very **concrete contexts**, understanding that hybridity is not 1+1 plus 1+1+1+1....

Examples may be:

- Relationship of different socio-economic-cultural factors leading to the preservation of agriculture systems that are labour-intensive but preserve traditional rural landscapes (i.e. mountain pastures, traditional vineyards, ...).
- Socio-cultural aspects of organic farming vis-à-vis socio-cultural aspects of expanding industrial agriculture....
- Socio-cultural aspects of today’s land use of very relevant groups such as tourists (golf, fun sports, skiing....), leisure hunters, ....
- Being inclusive to large migrants’ minorities, mostly in cities. Researchers currently investigate the biodiversity of Montreal as a result of growing cultural diversity of the city.