

Cultures of sustainability and the aesthetics of the pattern that connects

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Abstract

Contemporary developments around the search for 'sustainability' offer an insightful approach to the question of an emerging *global mindset change*. In its cultural dimension, the search process for sustainability fosters a paradigmatic shift in world views and ways of life, breeding a sensibility to the "pattern that connects" (as coined by Gregory Bateson).

1. Sustainability and culture

1.1 Sustainability

Sustainability is most often described as the triptych of social justice, ecological integrity and economic well-being [1]. However, one may prefer an alternative interpretation pointing at the triptych of biodiversity, cultural diversity and human well-being.

One of the fundamentally innovative characteristics of the concept of sustainability is that it calls forward a whole range of apparently paradoxical reconciliations: reconciliation of normative and so-far supposedly 'positive' science, reconciliation of the economy with the ecology, reconciliation of matter and culture (i.e. society, technology and environment), and reconciliation of intra-generational and intergenerational justices (i.e. the needs of present generations across the planet and the needs of future generations). Sustainability is a young concept for an age of hypercomplexity, where challenges of increasingly globalizing economic exchanges as well as cultural exchanges are combining with the challenge of interconnected global and local ecological and social crises. Confronting this complexity implies an approach of systems, i.e. anthropo-systems within ecosystems, across space-scales from the local to the planetary, and across time-scales from the short to the very-long term [2, pp. 15-16], [3] and [4].

1.2 A cultural change

The question of a possible global mindset change emerges from the challenges posed by the introduction of the search process of 'sustainability' in many spheres of private and professional life in recent years. Beyond the current fashion in public discourses and policies across the world, abusing the adjective 'sustainable' for all sorts of strategic purposes, the search for sustainability reinforces rising concerns about the civilizational path of the 'developed world'.

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It comes as no surprise that, for example, the current president of the French Republic, opportunistically recycled Edgar Morin's expression "politique de civilisation" [5] in his policy discourse in early 2008.ⁱ A diffuse feeling is emerging of a wide-scale discrepancy between, on the one hand the development-path followed so far, and on the other hand a civilizational shift hinted at by the search for sustainability. But this feeling is most often not explicitly taking form. And a great deal of confusion and vagueness is maintained in the mass media about the meaning of such a civilizational change. This prolonged latency is to a large extent, to be related to the themes dominating the mainstream discourses on 'sustainable development': Although North-South and South-South issues, social justice and gender were gradually introduced and integrated with environmental and economic priorities (at least at the level of discourses), sustainability is still most often considered to be based on three pillars (the economic, the social and the ecological) while change processes for sustainability are still mostly thought of in terms of 'green' technological innovations.ⁱⁱ The cultural basis for sustainability has been largely neglected, either out of ignorance on the part of political, economic and scientific elites, or maybe because they do realize the radical implications that a cultural strategy for sustainability would have. But a growing number of cultural actors have, in recent years, denounced this situation and started promoting cultural strategies for sustainability and advocating the recognition of culture as the central dimension for the search process of sustainability. One such case is the "Tutzinger Manifesto" elaborated in 2001-2002 with the support of the the German 'Institute for Political Culture' [7]. At the level of international organizations, UNESCO already started recognizing the pivotal role of the cultural dimension of sustainable development in the 1990's (e.g. with its action plan "The Power of Culture") [8].

The failure to consider the cultural dimension of sustainability also reveals a failure to unearth the paradigmatic value-shift, or 'global mindset change', which is required in order to construct a new "politique de civilisation" for sustainability. Indeed, the search process of sustainability is first and foremost, to be understood as a search for 'cultures of sustainability'.ⁱⁱⁱ

In the following pages, I will elaborate on this search for 'cultures of sustainability', following-up on a recent publication introducing this field of inquiry [9].^{iv}

2. Keywords for cultures of sustainability

No rigid or fixed definition of 'cultures of sustainability' can be elaborated. Indeed, a fixed definition would move against some of the basic principles of cultures of sustainability (such as its systemic character and its open identity). However, a framework for further reflection can be proposed, through the introduction of a number of key notions and principles:

2.1 Resilience

Resilience refers to the capacity to adapt to change from the "outside". The term is used in ecology, referring to the limits of a system's capacity to be perturbed; once the limits are reached, the system either collapses or finds a new state of equilibrium (Walker et al., 2006, cited in Haley [10, p. 204]). As noted by ecological artist David Haley, "the capacity to withstand disturbance

is not just a question of how long the status quo can be maintained, but how we might evolve to dwell in this new world" [10, p. 204].

Resilience necessitates the preservation of diversity: Sustainable societies can only exist as long as diversity is preserved, so that the exogenous shocks of the unexpected may give way to the endogenous responses of resourceful social systems and ecosystems. Less diversity in a social and/or ecological system means a lower resilience. The cybernetic "law of requisite diversity" already delivered comparable insights half-a-century ago. In the words of Joël de Rosnay:

"The more complex a system, the more complex its control system must be in order to provide a "response" to the multiple disturbances produced by the environment. This is the law of requisite variety proposed by Ross Ashby in 1956. This very general law asserts [...] that the regulation of a system is efficient only when it depends on a system of controls as complex as the system itself. In other words, control actions must have a variety equal to the variety of the system. In ecology, for example, it is the variety of species, the number of ecological niches, the abundance of interactions among species and between community and environment that guarantee the stability and continuance of the community. Variety permits a wider range of response to potential forms of aggression from the environment" [11, p. 130].

What does this mean, more concretely? The *preservation and the advancement of both biodiversity and cultural diversity are key normative targets* of cultures of sustainability.

But resilience shall not be understood too strictly. Our societies may also need **transformations** when some social-ecological systems are resilient but undesirable (e.g. for matters related to social justice). In certain situations, relative **collapse** may even constitute a necessary step for the construction of new configurations of systems [10].

2.2 The inter...

Understanding resilience and the normative target of diversity, clears up the focus toward operational frameworks advancing cultures of sustainability. The main characteristic of such frameworks is that they are "inter-...", i.e. they operate most especially at the level of the membranes, of the borders, of the contact areas between different elements or different systems, and they foster dialogues across the membranes. The "inter-..." should not be mistaken for the "multi-" nor for the "integrative." Neither does the "inter-..." set differences apart as irreducible, nor does it integrate differences (making them increasingly indistinguishable).

Interculturality is of course the best known example of an "inter-..." framework. Interculturality can neither be achieved through a multiculturalism tending to segregation (allowing each and every cultural community to get its voice heard in a distinct arena, but shaping isolated cultural areas with sharp division lines of non-interaction), nor can it be achieved through a so-called integration that imposes a hierarchy of values between a dominant national culture and cultures of minorities which are suspected and subdued.^v

Effective intercultural interaction requires the build-up of individual intercultural capacity: Geert Hofstede [12] famously characterized three dimensions to this capacity: (1) Awareness of the relativity of one's perceptions

and beliefs ('mental programming'); (2) Knowledge of other cultures (learning process); (3) Skills in handling the symbols of other cultures. Intercultural capacity is more than just an accumulation of information about other cultures; quoting T.S. Eliot: "because in the process of being affected by one powerful personality after another, we cease to be dominated by anyone" [13, p. 14]. This capacity thus gives the individual a richer identity and sharpens his/her critical consciousness. Besides, intercultural dialogue not only sustains cultural diversity but also builds capabilities for systems thinking, because it trains individuals and societies to think of themselves in relationship to their cultural environment, instead of assimilating the environment, the alien (whether cultural or natural) into a closed self-referential belief system.

At another level (i.e. between different social groups, whether conceived in terms of social systems/fields or social classes, subcultures or lifestyles) **inter-conventional** relations offer a framework fostering cultures of sustainability: Such relations involve "entrepreneurship in conventions", i.e. an interfacing and inter-disturbing role to be played by social agents, across social conventions and institutions. Entrepreneurship in conventions allows the loosening and transformation of social conventions. It works as a trigger for change processes in social structures [14]. At the individual level, the required competence is that of a "marginal-sécant", i.e. a social actor operating across social fields/systems [15]. An entrepreneur in conventions will also have a relatively wide "repertoire of social dispositions" [16].

Interdisciplinarity also constitutes an arena for inter-conventionality through entrepreneurship conventions. However, understood in an academic sense, interdisciplinarity most often only represents a limited range of inter-conventionality.

Indeed, the "inter-..." is not just a rational practice, it is also a sensibility, following Bateson's definition of aesthetics as "the sensibility to the pattern that connects", i.e. the ability to perceive connections, commonalities, shared properties between different elements of reality and different levels of reality, at different levels of abstraction [17].

Following Bateson in his transdisciplinary scope and in his ethological observations, one could finally argue that the "inter-..." frameworks and related individual competences, should also include the development of inter-species communication, with the training of ethological competences among human beings.^{vi}

2.3 Systems Thinking

Systems thinking is the main paradigmatic background, the substrate for thinking in terms of 'cultures of sustainability'. It also allows a qualitative leap from the "inter-..." to the "trans-..." It offers a way to gain an overview of complex systems, focusing on the relationships rather than on the details, following a conjunctive logic rather than the disjunctive logic of traditional analytical methods (Le Moigne 1990 cited in [18], pp. 105-106). The rise of systems thinking after the second world war marked a shift in the history of western science and inaugurated a new scientific culture that gradually gained recognition in spite of sciences' path-dependency to the old Descartes-Bacon tradition of linear-causality [11], [19] and [20].

The space of this article does not allow me to do justice to such an important paradigm change, nor to properly introduce the basic epistemological elements of this alternative scientific culture.^{vii} In short,

systems thinking makes use of notions like “feedback loops”, “interconnected systems”, “high/low leverage points”, “different logical types” (i.e. the different logics at play at different systemic levels) and is pointing at phenomena of “emergence”, “structural archetypes”, “stochastic evolutionary processes”, and of course also “resilience”. It constitutes a specific language that allows transdisciplinary work and can serve as one of the bases for cultures of sustainability.

The importance of logical discontinuity has to be stressed most especially, as it turns its back to a long tradition in western thought. Article 2 of the “Charter of Transdisciplinarity” posits: “The recognition of the existence of different levels of reality governed by different types of logic is inherent in the transdisciplinary attitude. Any attempt to reduce reality to a single level governed by a single form of logic does not lie within the scope of transdisciplinarity” [21].

Systems thinking should not be only conceived of as a purely intellectual endeavor. A merely theoretical and abstract understanding of systems won't suffice to help achieve real changes in the sense of sustainability. A new culture implies new practices. It further implies new habits and relevant emotions and virtues. Rational discourses and recommendations alone do not suffice to carry the adherence of individuals and groups in society, nor to foster reflexivity [22]. Furthermore, as the research on experiential learning demonstrated, effective learning requires more than a rational, conceptual *comprehension* of reality: it also requires the performative *apprehension* of reality through tangible experiences and processed feelings [23]. “Authentic education cannot value abstraction over other forms of knowledge. It must teach contextual, concrete and global approaches. Transdisciplinary education revalues the role of intuition, imagination, sensibility and the body in the transmission of knowledge” [21, article 11].

One especially insightful illustration of this more-than-rational application of systems thinking can be found in the “Systems Thinking Games” elaborated by Linda Booth Sweeney and Dennis Meadows [24]. These games allow players to comprehend and apprehend both the working of human beings individually and in groups (with their mental models, habits and conventions), and the working of systems (with their feedback loops, interdependencies, leverage points, time delays, short-term vs. long-term loops and the structural archetypes of different systems). The games also train each player's intuition and creativity when confronted with complex systems, i.e. lateral, synthetic thinking (and not only analytical, logical thinking).

2.4 Autoecopoiesis

With his wide-ranging theory of the differentiation of modern society as a profound segmentation into mutually opaque social systems, systems theorist Niklas Luhmann elaborated an especially strong indictment of modernity as a culture of unsustainability. The overall social system, in contemporary society, is incapable of communicating directly with the non-human environment. It can only be 'irritated' by its direct environment. For Luhmann, the human being him- or herself i.e. the psychic system, and the social system, are environments to one another, and they do not communicate directly; but they can be 'structurally coupled' and may 'irritate' each other. An autopoietic system is able to select which irritations it will notice and ignore the other ones.

As long as the systems are only “autopoietic”, nothing guarantees that

they will genuinely evolve, acting upon irritations. They are more likely to interpret the irritations in ways that will eventually lead to their self-annihilation through further mis-consideration of the environment. Luhmann's conclusions on the possibility for social systems to overcome the contemporary ecological crisis are especially pessimistic [25].

However, a deviation from Luhmann's conception is necessary in order to envisage cultures of sustainability. Strict autopoiesis as a culture of unsustainability in hypermodernity, is *not* an inescapable trend. Autopoiesis is but only a tendency that, if strong and dominant so far, may be balanced by ecopoietic tendencies, i.e. tendencies of psychic systems and social systems to construct themselves in open communications with their environments (implying a co-determination and co-evolution of both the system *and* its environment through the emergence of properties stemming from the open communication between system and environment). Actually, the proper term for this co-evolutionary process is *autoecopoiesis*.^{viii} Not only 'eco-' is necessary, but also 'auto-' because the capacity for relative autonomy (i.e. a capacity for self-closure) is a pre-requisite for a system's ability to participate in its own (re-)construction.

One example of such an autoecopoiesis at work between social systems and ecosystems can be found in the co-evolution of cultural diversity and biodiversity. The UNESCO recently published a report raising awareness on such linkages between cultural and biological diversity and pointing to some studies from the fields of ethnobiology and ethnoecology [26]. Cultural diversity and biodiversity may co-evolve, and thereby contribute to the resilience of human societies.

2.5 Coevolutions

As already evoked in the above paragraph on autoecopoiesis, cultures of sustainability are characterized, not only by evolution, but more especially by coevolutions. "Each party in a coevolutionary relationship exerts selective pressures on the other, thereby affecting each others' evolution" [27]. In an age of hypercomplexity inextricably interweaving social systems and ecosystems for better or worse, interdependencies increase the relevance of coevolutionary capacities. Resilience, as mentioned above, also benefits from coevolution.

The concept of *evolution* used here should not be mistaken for a so-called "evolutionist" discourse. As Bateson clearly articulated, evolutionary processes and their selective mechanisms play a role at the levels of populations and not at the level of individual units, i.e. the concept only makes sense as a systemic concept, at certain levels of emergence. Many misunderstandings and misleading uses of the concept of evolution come from "errors in logical typing", as Bateson argued, i.e. mistaking the causal mechanisms at the level of individual beings with the causal mechanisms operating at the more general levels of populations [17]. Bateson described evolution as a "stochastic process" whereby random change/mutations are met with arbitrary selective mechanisms at the level of populations. The process of evolution as described by Bateson confirms the necessity of maintaining or increasing diversity in order to maintain or enhance resilience.

The concept of evolution used here stands in explicit contrast to Luhmann's conception of the evolution of social systems. The description by Luhmann of what he analyses as the evolution of social systems, is actually, a

perfect description of 'development', i.e. a mechanism of which modernity is the keystone: For Luhmann, evolution is not the history of the adaptation of society to its environment: "Not only does the system not adapt to its environment, but it chooses or alters its environment to adapt it to what the system itself prefers" [28, p. 552]. In an autopoietic system, the next operation is more important than taking the future into account. The social system is then doomed to its eventual collapse through the ecological crisis [25, p. 38].

On the contrary, the concept of evolution used here, like the concept of autoecopoiesis, implies that social systems be open to their environments, or else lose their evolutionary capacity: "non-evolutionary development models try to adapt the environment to the social system while an evolutionary development adapts the social system to the environment" [29, p. 47].

2.6 Open ethics

The question of ethics also holds a central position in any discourse or analysis about "cultures of sustainability". As sustainability deals with a search for good life and justice and not only elementary survival of the human species, its normative character is undeniable. However, given its fundamental valuation of cultural as well as biological diversity, sustainability cannot refer to one single "culture of sustainability" (which would be a contradiction in terms), nor does it allow any directly universal ethics. But it requires an open ethical framework, the goal of which being to preserve this very openness. Or in the terms of the Charter of Transdisciplinarity: "The transdisciplinary ethic rejects any attitude that refuses dialogue and discussion" [21, article 13].

The open ethics^{ix} of cultures of sustainability are ethics of resilience, i.e. both ethics of diversity stewardship and ethics of learning capabilities. The virtues associated with such ethics are those of gamekeepers, gardeners and craftspersons [30, pp. 99-100]. These open ethics also require that the individual human being be always reflexive about his or her own perspectives on reality and about the contingencies in which he or she is embedded, following the path set by Michel de Montaigne more than four centuries ago [31].

The question of ethics also relates to the question of rationality, or rather, rationalities, i.e. plural rationalities taking interculturality as a forum for diversity without the illusion of ever achieving a common reason through communication (in this understanding, the Habermasian concept of consensus through communicative action, leads to an ethical pitfall threatening sustainability) [36].

In cultures of sustainability, ethics and aesthetics are inseparable. Unlike the closed ethics that constrained and hampered aesthetics throughout the history of art, open ethics stand in a mutually dependent and mutually stimulative relationship with the aesthetics of patterns that connect.

3. Sustainability arts: The aesthetics of the patterns that connect

Bateson claimed that aesthetics is the sensibility to the "pattern that connects" [17, p. 8 and p. 118]. Morin also argued that systems thinking follows an "art principle" comparable to the "art of the skillful butcher" or to that of the musician: "The systems sensibility will be like that of the musical

ear which perceives the competitions, symbioses, interferences, overlaps of themes in one same symphonic stream, where the brutal mind will only recognize one single theme surrounded by noise” [20, vol. 1, pp. 140-141 in 1977 ed., *own translation*]. More specifically, I will argue that the sensibility to the pattern that connects (and sensibility to the patterns that connect patterns that connect) is the cornerstone of aesthetics of sustainability.

But what does this characterization of aesthetics mean in practice, i.e. how can cultural practices, e.g. the arts, express and foster such a sensibility? In a broad projective way, I argued that they can do so at three interconnected levels [2, pp. 17-19].

3.1 The topics that connect

A need for new approaches to knowledge stems from the search process of sustainability.

“Traditional disciplinary approaches analysing individual facts or processes are no longer sufficient. Two particular challenges emerge:
i) the need for integrating knowledge from various scientific disciplines and
ii) the necessity to produce action-oriented knowledge to cope with, mitigate, or counteract global change and its negative effects” [32].

Most relevant are instances where the inter-relatedness of cultural, social, economic, political and ecological processes is explored. Also, linkages between local and global realities, between different time frames (from the short-term to the very-long term), and attention to intercultural linkages, constitute topics that connect.

The sensibility to the topics that connect expresses itself most fully in transdisciplinarity, i.e. “that which *is* at once *between* the disciplines, *across* the different disciplines, and *beyond* all discipline. Its goal is *the understanding of the present world*, of which one of the imperatives is the unity of knowledge.” Transdisciplinarity implies the construction of an integrative, patterning knowledge... “*transdisciplinarity concerns the dynamics engendered by the action of several levels of Reality at once.*” [33] Transdisciplinarity develops a “principle of articulation between different forms of knowledge [...] which accepts that an object can pertain to different levels of reality, with attendant contradictions, paradoxes, and conflicts” [34]. This principle, as already laid out by Morin thirty years ago, implies a “dialogue” allowing “unity through diversity” or “*unitas multiplex* [i.e.] we cannot reduce the whole to the parts, nor the parts to the whole [...] but conceive the notions of whole and parts, unity and diversity, together, both as complementary and antagonistic” [20, vol. 1, pp. 105 in 1977 ed., *own translation*].

The sensibility to the topics that connect thus requires a “science and art of discovering bridges between different areas of knowledge and different beings” [34]. One’s topical “focus [shifts to] the organisation of knowledge around complex heterogeneous domains rather than the disciplines and subjects into which knowledge is commonly organised” [35]. One of the most comprehensive approaches to topics that connect, from the world of science, is the so-called “Syndromansatz” (Syndrome Approach) invented by the German Advisory Council on Global Change (WBGU) in 1993 and further developed by the Potsdam Institute for Climate Impact Research (PIK). [32], [36]. The

approach uncovers local and global structures of unsustainable developments, identifying functional patterns (or “clinical pictures”) of interaction between humans and nature. This approach permits to bring together the insights from ecological, demographic, economic, political, cultural, technological, gender and other levels of reality. A syndrome’s systemic network of interrelationships can best be modeled graphically, as a networked table with typically 9 spheres represented: Pedosphere, Atmosphere, Hydrosphere, Biosphere, Population, Economy, Social Organization (also the Polity), Psychosocial sphere (Culture) and the sphere of Science and Technology. The interest of the syndrome approach lies in focusing most especially on the linkages between phenomena of different spheres (e.g. loss of biodiversity, in the biosphere, leading to a loss of indigenous knowledge, in the sphere of science and technology) rather than remain limited to linkages between phenomena within one sphere or between closely related spheres (e.g. formal education and the loss of indigenous knowledge) [37]. The desired outcome is of course then not just to perceive each such linkage by itself, but to perceive the overall syndrome as one’s focus of concern, achieving an integrated perspective.

The more the focus of attention is placed on the comparisons, the interrelations, the connectedness between different dimensions or ‘levels’ of reality, the more one may speak of an aesthetics of sustainability in terms of contents.

3.2 The processes that connect

The processes by which cultural and artistic practices are carried out (i.e. the search processes, research processes, learning processes, working processes) are especially relevant to aesthetics of sustainability:

- When they involve all-out reflexivity about ‘ourselves’ in a wide sense (from individual routines to social institutions and polities);
- When reflexivity skills of different types are developed, appealing to a diversity of human qualities, beyond the limited types of rationality tapped by most scientific discourses and beyond the limitation of imagination embedded in established rules and routines [22];
- When interrelations are perceived and worked with, beyond the fragmentation of socially constructed realities. This practically implies the ability to work in inter- and transdisciplinary teams on projects. In the arts especially, this implies a shift towards relatively less autonomous, less individualistic, more collaborative and more interactive working processes;
- When the research, learning and working processes are also intercultural and interconventional, tapping into a human capacity for enhanced empathy, beyond sociocentrism and ethnocentrism.

3.3 The values that connect

Inspired by open ethics of sustainability, aesthetics of sustainability inquire into the meanings and implications of justices, in a pluralistic way, opening up multiple layers of interpretations. Such aesthetics of patterns that connect, also favor participatory polyarchic polities, i.e. regimes of authority allowing experimentation with various non-hierarchical configurations of work. These political values also profoundly affect the criteria of aesthetic quality

[38]. Aesthetics of sustainability also convey a humility towards the non-human environment, instead of heralding the modernist claims to be able to adapt the whole environment to the demands of one human culture.

Finally, such a sensibility sharpens critical reflexivity: critically confronting modernity and its mythical figures (e.g. the individual, progress, affluence, growth, technology); but also critically confronting one's art world and the institutions one works with as an artist or as a cultural organization (at several levels, from the informal powers behind the 'autonomy' of art, to the role of art as an elitist social field reproducing social distinctions and discriminations).

I have deliberately *not* provided any specific illustrations of cultural and artistic projects in the previous paragraphs, in order to keep readers' imagination and reflection open. There is probably no "perfect illustration" that would demonstrate all the quintessential elements of some "ultimate" aesthetics of sustainability. Nor should there be. The iterative, trial-and-error, experimental and experiential processes matter more than the products, in such aesthetic endeavors. And at each of the three levels I mentioned (topics, processes, values) the sensibility to the patterns that connect can unfold itself under many different guises.

The quote from T.S. Eliot (in section 2.2) continues with an exhortation to the poet that prefigures the aesthetics of the patterns that connect: "Our civilisation comprehends great variety and complexity, playing upon a refined sensibility, it must produce various and complex results. The poet must become more and more comprehensive, more allusive, more indirect in order to force, to dislocate if necessary language into his meaning... cultivating all the possibilities of words as medium and when the speech of one sense is insufficient to convey the entire meaning (using) the languages of another" [13].

4. A provisional conclusion: autoecopoiesis and the artful practice of cultures of sustainability

The emergence of cultures of sustainability and of aesthetics of patterns that connect, opens up projective spaces for the construction of a genuine "politique de civilisation". These spaces are not to be understood as the crucible for a new unified global culture but, as argued by the philosopher Oleg Koefoed, as zones of sustension where the autoecopoietic membranes of the actual and of the virtual meet and assemble intuitions of change: "The eventuality is an immanent tension building an opening for virtual presents and potential futures, rather than a transcendental force reaching from the future" [39, p. 65].

Cultures of sustainability may inspire hope, but their strength is also their vulnerability. As soon as they crystallize into fixed states, closing their boundaries and fixing their borders, they risk losing their elasticity and porosity, down the path of autopoiesis. Cultures of sustainability are a matter of constant self-critical exploration. They require a continuous re-actualization of reflexive competences. For this reason, they demand an artful practice of life.

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- i Edgar Morin is the leading French intellectual in the research on 'systems thinking' and 'sciences of complexity'. His intellectual influence is however much stronger in Central and South America than in France, where resistance is strong against his beyond-Cartesian approach.
- ii The critique of the “technological system” [6] which was at the heart of the development of political ecology in the 1970's, has been conveniently swept under the carpet by the social actors involved in the popularization of 'sustainable development' among them the promoters of 'ecological modernization' as well as the new entrepreneurs of the 'green business'.
- iii Culture is not meant here only as a new set of (often superficial) lifestyles changes, nor as the restricted field of 'cultural practices', but also, in the anthropological sense, as the combination of values, beliefs, symbols, practices and 'scripts' or rationalities that characterize social life in a specific spatial and historical context, i.e. nothing less than the blueprint for civilizational evolution.
- iv The reflections presented here are benefiting from interdisciplinary collaborations, both at the “research network for the sociology of the arts” of the “European Sociological Association”, and at the international network “Cultura21” for cultures of sustainability: See www.cultura21.net and www.new-arts-frontiers.eu.
- v The politically correct recourse to the notion of “integration” indeed still maintains, although in a moderated form, the hierarchy of cultures which is found in its most radical form in the notion of “assimilation” (i.e. ultimately: ethnocide). While assimilation imposes a totalitarian national culture upon minorities, integration is typical of the contemporary forms of “soft totalitarianism” (the expression comes from political scientist Slobodan Milacic) enforcing the dominant culture through so-called political “consensus”.
- vi Following e.g. Konrad Lorenz whose pioneering work was noticed by Bateson [17].
- vii Although sometimes outdated, the already mentioned book by de Rosnay [11] is freely available online and introduces in an accessible way the systems thinking approach.
- viii As far as I know, the term 'autoecopoiesis' has not been used so far. Edgar Morin used the term 'autoecoorganization' [3] which only partly covers the scope of autoecopoiesis. The elaboration of a concept of autoecopoiesis will probably also come closer to Gregory Bateson's description of systems [17] than did Luhmann's autopoiesis.
- ix I refrain from using the term “inter-ethics” to avoid confusions with already existing uses and abuses of this term.