

## • The hatchet and the seed: never mind about old positions, let's work together!

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### Background

Sustainability science invites us to rethink our approach to research, as well as the role of science in resolving the social and environmental crises now rocking the world. The challenge is twofold: to work effectively within collective structures embracing multiple disciplines and existing at the interface between science and society, all in a crisis context which breeds chronic uncertainty and regular emergencies. In this article I reflect upon the opportunities that sustainability science offers for collaboration between scientists and civil society, while acknowledging the tensions which may arise between different scientific perspectives on what sustainability science actually represents.

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#### Contact

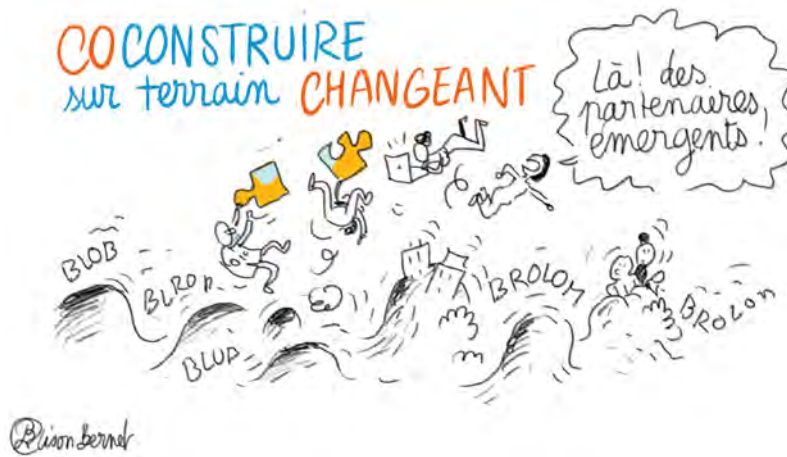
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#### Further reading

ROBBINS P., 2004 – *Political Ecology*. Oxford, Blackwell publishing, 242 p.

SOULÉ M. E., 1985 – What is conservation biology? *Bioscience*, 35 : 727-734.

VIRDIN J. et al., 2021 – The Ocean 100. *Science Advances*, 7 (3). DOI: 10.1126/sciadv.abc8041



### Working together in a time of crisis

(Lison Bernet).

## Sustainability science: working together in a time of crisis

The pillars of sustainability science are not all that different to the founding principles of conservation science, a concept floated almost forty years ago (Soulé, 1985): a meta-field created in response to a crisis situation, with an emphasis on action. While conservation science was established as a multidisciplinary response to the decline in biodiversity, sustainability science concerns itself with changes linked to socio-ecological challenges. These changes manifest themselves in one of two ways: slow and gradual (rising sea levels, increasingly acute environmental pressures, globalisation), or sudden and violent (increased frequency and/or amplitude of extreme weather events, tipping points). In order to face up to these challenges, sustainability science places its faith in inter- and

transdisciplinarity. It prioritises those research subjects considered to be most pertinent to furthering our understanding of the current socio-ecological crises, focusing on the relations between the environment and human societies. This approach requires greater interdisciplinarity between natural sciences and human and social sciences. Moreover, sustainability science straddles knowledge creation and action, inciting us to re-examine the science/society axiom and our understanding of transdisciplinarity. It considers the consequences of our own research practices, while also taking an interest in the practices of others, which can be tested, evaluated and adjusted as required. It creates new narratives and explores alternative systems of reference (transitions, transformation, sustainability, liveability etc.). There are any number of ways of engaging with this meta-field, depending upon one's scientific background and the resources at your disposal.

The key pillars of sustainability science invite us to rethink science as a whole, in light of the twofold challenge we face: on the one hand, the context of crisis, uncertainty and change in which we live demands urgent measures in short timeframes; on the other hand, we need to learn to take decisions and take action together within collective structures which will vary in terms of both their membership and their size (embracing different disciplines, academics and non-academics, civil society etc.). These things take time...

### A familiar path... and lingering doubts

This is not a new story. There have been any number of attempts, from the 1970s onward, to “do science differently” in response to environmental crises, particularly by expanding collective scientific structures. And yet, the crisis continues to get worse, causing researchers to doubt their own capacity to conduct interdisciplinary, action-oriented research. The human and social sciences are still only marginally involved, and interdisciplinary exchanges can sometimes be difficult. Although transdisciplinarity is increasingly being invoked early on in the research process, with critical reflection on its political dimension, it seems regrettable that science/society approaches largely remain linear and “top-down,” almost impermeable to non-scientific forms of knowledge. For some proponents, sustainability science offers an opportunity to “put the magic back into science.” For others, it is nothing more than a series of failures and disappointed best intentions. For more radical dissenters, it is an

offshoot of capitalist and neoliberal thought, incapable of bringing about a genuine change of perspective.

### Coalitions, positions, transformative potential

Any researcher wishing to engage in transdisciplinary science at a time of crisis must face certain key questions. Firstly, what is the right position to adopt: knowledge, co-production, transformation? Secondly, with which actors and coalitions should one seek to ally oneself? When, and in what context? Some believe that the real capacity for change resides with those in positions of power, who need to be accompanied as they change their ways. Such is the crux of the recommendations formulated by Virdin et al. (2021) regarding the ocean economy, dominated by a small group of powerful companies known as the *Ocean 100*. Others criticise the decisional inertia and immobilism inherent to dominant frames of reference, preferring to work directly with those proposing alternative solutions, often at a more local level and with closer societal engagement. This is the approach championed by geographer Cyria Emelianoff in a recent sustainability science debate: direct collaboration with local people to imagine the sustainable cities of the future. Others, particularly in the human and social sciences, prefer to adopt a critical perspective on the structural obstacles and power games which arise when multiple actors work together. How, then, can we navigate a path through these different approaches – external observation, support for grass-roots collectives, radical critique – and form effective

coalitions to support the transition to a more sustainable, ecological and socially just world? If we adopt a position too close to dominant systems of reference, can we ever hope to achieve transformative change? On the other hand, are excessively radical or locally-specific positions doomed to remain marginal? These divergences create tensions between researchers who, each in their own way, are all striving to find solutions to the social and ecological crises we face.

### Between the hatchet and the seed: let's work together!

Based on their own personal background, their means and the context in which they work, researchers must make their own choice: to form coalitions with those in positions of power, or else champion alternatives, decrying the inertia of politicians or choosing the path of radicality. Faced with this diverse array of

positions, the challenge is to maintain a spirit of dialogue within the scientific community, in order to collectively defeat immobilism and change the *status quo*. To return to the old analogy, we need both the *hatchet* – i.e. a critical approach – and the *seed* – i.e. alternative strategies (Robbins, 2004) – in order to bring about the transformations we want to see. An alliance of different positions would allow for a more reflexive perspective on the different coalitions within which we operate, and the transformations that these coalitions are capable of achieving. The success of this self-reflexive turn in sustainability science will depend largely on the role taken on by the human and social sciences. Whether the current enthusiasm for sustainability science in France endures or dissipates, we can only hope that it will serve to strengthen the bonds between actors united by a desire for societal, structural and institutional transformation. A transformation which will change science as much as it changes society.

### KEY POINTS

Sustainability science seeks to do things differently in order to rise to the challenge of the environmental crisis, particularly by expanding collective scientific structures. This ambition requires researchers to rethink their own positioning, the coalitions to which they belong and the strategies they deploy in support of the sustainable transition. Differences of positioning may give rise to certain tensions within the scientific community. It therefore seems essential to remind ourselves of what we have in common – a desire to break out of the rut of immobilism – in the interests of a more fruitful dialogue, promoting reflexivity and collective endeavour for a successful transformation to a more sustainable, ecological and socially just world.

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