

A Reflection on the Notion of *Cohabitation* within and Beyond the Walls of Life Sciences

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ABSTRACT

Synthetic biology is at the front edge of a wave the National Research Council has termed the “New Biology” which involves bio, info, nano, and cognitive sciences. A lot of innovation will occur in the interstitial or “white” spaces between these disciplines, but this emerging multi-disciplinary science will provide challenges in term of social governance: there will likely be new challenges in managing ethical, social, and legal issues at the boundaries between disciplines. As an attempt to reflect on these challenges, a major workshop, sponsored by the National Science Foundation (SES-0925449) and organized in May 2010 by the Wilson Center and the University of Virginia, gathered experts from three emergent, boundary-crossing translational and transnational fields: STS, sustainability science and synthetic biology. Among other inputs, the workshop’s participants reached a significant and key conclusion. In the future, scientists will need effective, symmetric and balanced interdisciplinary collaborations about sustainable governance of emerging technologies that respond to environmental, societal and technological challenges in a comprehensive way. This requires a serious rethinking and re-organization of life sciences (bio-engineering) education.

Keywords: *Cohabitation, Collaboration, Imaginaries, Life Sciences, Matters of Concern, Reflexivity, Social Sciences, Sustainability, Synthetic Biology*

1. INTRODUCTION

1.1. An Introductory Digression Around the Concept of *Cohabitation*

“Can we cohabitate with you? Is there a way for all of us to survive together while none of our contradictory claims, interests and passions can be eliminated?” (Bruno Latour, From Realpolitik to Dingpolitik - or How to Make Things Public)

This quote from Bruno Latour suggests alternative ways of doing what we have been used to call “collaboration” or “cooperation” between fields, between sectors, between cultures, and between publics. It calls for alternative ways to assemble and disassemble around the issues we care for. It calls for improving and renovating our “techniques of representation,” meaning the different techniques that contribute to make “public” the issues we care for, to unveil what we consider being a “matter of concern.” These *matters of concern* are as diverse as the issues that assemble a concerned public around them: just think about the 2008 financial meltdown

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and its economic and political ramifications, the revolutions erupting in Maghreb and Machreq, nuclear proliferation, the spread of genetically engineered mosquitoes to fight dengue, research around bio-energy including the development of synthetic engineered algae. Around every one of these areas of concern we see growing entanglements of passions, indignations, and controversies within a complex web of stakeholders and opponents. *Matters of concern* create an “agora;” they create political conditions for dissenting imaginations.

Matters of concern move us from what has been called *Mode 2*¹ of knowledge production to the *Agora* – “where science and innovation interact with societies”² – and provide a role for modes of collaborations of a more complex kind. In this case, scientists, engineers, policy-makers and diverse layers of societal actors, sensitised through engagement to wider social imaginations, might decide for themselves to approach science and innovation differently. As explained by Stirling about current discourses on sustainability (2009, p. 5):

“Often, the position is expressed as if there were ‘no alternatives.’ The questions asked are thus typically restricted to ‘yes or no?’; ‘how much?’; ‘how fast?’ and ‘who leads?’ If we move instead to more plural understandings of progress, then the quality of debate – and of the ensuing choices – thereby stands to be enriched. Instead of fixating on some contingently-privileged path, we might ask deeper, more balanced and searching questions about ‘which way?’; ‘what alternatives?’; ‘who says?’ and ‘why?’ This is the essence of a normative, analytic, epistemic, ontological – and consequently intrinsically political – project of ‘pluralising progress.’”

The above excerpt eloquently demonstrated the importance of being politically receptive to dissenting imaginations. Instead of designing endogenous modes of collaborations, the prelude is intended to more reflexively understand the political background within which actors from different fields of social practices will be

invited to interrogate particular framings of socio-technological regimes and their potential transition pathways, and to re-open them for debate (Stirling, 2008; Smith & Stirling, 2008). In this journey involving research and policy actors capable of questioning the status quo, there is a necessary need for “daring to imagine” (Wynne, 2009), for reflexivity and for empowerment as suggested by Jamison (2010, p. 13): “change-oriented research is about empowerment, by which the researcher applies knowledge gained from experience to processes of social learning, carried out together with those being “studied”.”

This specific notion of empowerment requires to be attentive to what Wynne calls an “epistemic other” (2009, p. 13): “it is difference manifesting itself as an unknown set of realities, acting themselves as unknowns and beyond our control (but not beyond our responsibility), into a world we thought we controlled.” On the surface of this epistemic variety, a democratically-committed knowledge-society is supposed to have the scientific and political imaginations to work out how a plurality of social actors could share knowledges, practices, and experiences with diverse scientific, policy and economic actors (Jasanoff, 2009). It is the unveiling of these improved forms of collaborations that I wish to explore in this contribution and, beyond, in this special issue. And eventually the term “cohabitation” should be preferred to “collaboration.” Indeed, the concept of collaboration itself is matter to be discussed. Cross-field and -sector collaborations have too often been considered as “fusion” – where actors converge towards a premeditated vision or goal, suppressing *ipso facto* the room for a diversity of knowledges, practices, and experiences; too often, collaborations are experienced as an attempt to co-optation – meaning that the instrumental support of a field, such as ethics, philosophy or sociology, is required to make up for an interdisciplinarity of “façade.” The term “cohabitation” entails more: it presupposes that we leave enough room for different frameworks of thinking to seat together, exchange and ultimately develop visions that

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