

Abstract

Into the laboratory: the sociotechnical negotiation of genetically modified crops in the European Union

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Scientists discovered the technology to genetically modify crops several decades ago. The translation of the technology into practice though has varied. In the EU, only one GM crop is cultivated, a stringent regulatory framework mandates strict risk assessment and monitoring over GM crop cultivation, and no GM food products are marketed on supermarket shelves. In explaining this non-translation, some scholars have focused on social structure, including food/farming identity and predispositions to risk aversion, while others have focused on the relative size and effectiveness of the pro/anti GM coalitions. What remains elusive is how these agents and structures developed and how they were mobilized in the specific case of GMOs. The approaches are also not able to account for why EU reactions on similar environmental, food, health and technological issues differ significantly.

Employing Actor-Network Theory and Symbolic Interactionism, two approaches attuned to heterogeneity and process, and qualitative data collected from 20 interviews with industry, EU, and NGO representatives, this paper argues that there needs to be a closer examination of the background contexts, biological processes, and public interactions that have engendered the ongoing evolution of the GM issue assemblage in Europe. By way of illustration, the paper focuses on the site of the laboratory, interrogating how scientific and economic challenges constrained the development of public investment in GM and hindered the development of GMOs that might leave consumers in awe (e.g. food reducing the incidence of cancer), instead leading to bland theater and the dominance of the European market by multinational biotechnology companies that marketed herbicide-tolerant and insect-resistant products. The paper combines this analysis in the scientific laboratory with an examination of the frames and storylines that were performed by scientists, corporations, and NGOs in the societal laboratory. The paper illuminates how the interconnections between these processes shaped the debate within the evolving social settings of the European Union.

The value-added of the approach is an elucidation of the contingent and emergent nature of the issue debate, as constituted by the unique sociotechnical negotiations and particular symbolic/framing efforts of various spokespeople in the actor-network. This thicker and deeper understanding of how the GM issue network evolved in turn points to some conclusions about how these realignments and outcomes could have been different, thereby leaving some lessons about how to improve politics. In particular, the engagement shows that it was a configuration of actants (e.g. disobedient genes, pre-existing scientific knowledge, and the entry of Monsanto as the chief pro-GM spokesman) and dramaturgical performance (e.g. Monsanto as a spokesperson) that contributed to the political outcomes on the issue, which might have been different if particular actants or performance were changed. These contributions are valuable in light of the fact that the GM issue debate is only an illustration of the types of policy quandaries that we might expect to recur over the course of the next century, particularly as many novel and complex issues such as nanotechnology, assisted reproduction, and hydraulic fracturing emerge.