GLOBAL NANOTECHNOLOGY GOVERNANCE FROM A NETWORK ANALYSIS PERSPECTIVE

Reut Snir, Law Faculty, Bar Ilan University, Israel

Abstract

Over the last decade, there has been a proliferation of nanotechnology regulatory initiatives, developed to ensure responsible development of nanotechnology applications. This article examines the emergence and diffusion of environmental, health and safety (EHS) regulatory norms dealing with emerging technologies under conditions of scientific uncertainty. Drawing on a social network analysis of the nanotechnology regulatory landscape globally, the article analyzes the role of key organizations at multiple levels and their interplay in initiating and diffusing occupational safety and health regulatory norms. It shows that private international standard-setting bodies become "centers of information", which play a strategic role as intermediaries that diffuse national regulatory norms at the transatlantic (and more importantly trans-pacific) level. In this process, these centers help to shape supranational regulatory norms. Such an understanding of the role of international private standard-setting bodies sheds a new light on the current debate over the privatization and internationalization of EHS governance.

The analysis presented in this article is based on an identified list of 128 OSH-related nano-specific regulatory initiatives introduced between 2000 and 2012 worldwide; of these, 99 regulatory initiatives make 262 cross-references to one another. It uses a social network analysis (SNA) methodology, which has rarely been used in legal literature, to analyze the structures of policy diffusion across regulators and regions. Diffusion routes are analyzed between different types of actors, geographic regions, and scale of the initiatives. This allows mapping and measurement of relationships and flows between sources of knowledge ('actors') of different types and levels, and therefore the explanation of the linkages among these actors and their implications. From an SNA perspective, actors and their actions are viewed as interdependent rather than autonomous units; thus, SNA allows to better account for real-life social dynamics.