

Is Cultural Evolution useful for Science, Technology & Innovation Studies?

An Outsider Perspective

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The field of Cultural Evolution (CE) is increasingly making inroads to the study of technology (e.g. Valverde and Solé, 2015; Youn et al., 2015; Gjesfjeld et al. 2016). To date, however, few connections have been established between CE and the field of Science, Technology & Innovation Studies (Sismondo, 2010). Drawing on the author's own disciplinary experience in STI this presentation suggests that the current situation is caused by both, historical and substantive factors. First, in the 1980s an influential community of scholars mobilized around the metaphor of co-constructivism (Bijker et al., 1987; Bijker and Law, 1992) which largely led to the omission of the potential insights of evolutionary theory. The metaphor of co-evolution was taken up in innovation studies (e.g. Tushman and Murmann, 2002; Schot and Geels, 2007) but has since been criticized for its broad scope and accompanying imprecision (Malerba, 2006). Second, and perhaps more importantly, while CE offers interesting avenues for the quantified exploration of specific evolutionary mechanisms its actual findings tend to be somewhat underwhelming. In particular, so far CE does not seem to offer much in terms of the identification of long-term patterns on the middle-range level, a goal considered important by many STI theories such as the Multi-level Perspective on socio-technical transitions (Geels, 2005) or the Techno-economic Paradigm framework (Perez, 2002). The talk explores the possible crossovers between CE and STI suggesting how the intersection of these fields might lead to mutual benefits in the future. The presenter will also wield a sock puppet that, during the course of the presentation, would attempt to devour a middle-sized Mars bar.

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