

Disruptions and Epistemic Outsiders

Think Piece “Conceptualizing Disruption” in the DOUbT project

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The concept of disruption with which we work in DOUbT is related to transformations of social systems, by which we hope to shed more light on social transformations to sustainability. In this think piece, we first clarify the context of our conceptualization ([section 1](#)), we present our definition of disruptions ([section 2](#)), and we note some upshots for our project ([section 3](#)).

1 Background

In our project, “The Disruptivity of the Others in Urban Transformations”, we aim to combine insights from philosophy, psychology, and transformation studies in order to develop tools for studying social transformations to sustainability. Given the urgency of dealing with the climate crisis, sustainability transformations are crucial, and so is the understanding of how these transformations occur – and especially whether human agents can foster them. In our empirical research, our focus is narrowed to mobility transformations in urban settings, but the conceptualization below covers other types of transformation as well.

For understanding *social systems*, we refer to Anthony Giddens’ structuration theory (Giddens, 1984; see also Geels, 2010, with a view to transformations). Based on Giddens’ framework, we take it that a social system is a patterned spatiotemporal set of interrelationships existing between agents (individuals, groups, or organizations) acting in institutional, technical, and ecological contexts. Their interrelationships are governed by rules, norms and standards that constitute the structural properties of the social system. The structures inform individual and collective agency, stipulating, e.g., how to relate to each other and to the environment, what technology to use and how, or what social behaviours to accept and in which circumstances, etc.

While incremental changes happen all the time in all social systems, *transformations* refer to nonlinear change processes that fundamentally alter the structures and practices that characterize a given system (see Scoones et al., 2020; Wittmayer et al., 2018). This particular type of systemic change dynamic depends on numerous coevolving factors

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(social, economic, ecological, cultural, institutional, technological, etc.) that together create *disruptions* of the system. By involving disruptions, social transformations imply acceleration and unfold rapidly compared to the established pathway. Consequently, in order to deal with the grand challenges of the Anthropocene, disruptions can offer an important lens to explore options for purposively accelerating and scaling up transformations. We thus move to our conceptualization of disruptions.

2 Definition

According to a well-known definition from the socio-technical system literature (Kivimaa et al., 2021, p. 119), disruption is “[...] a high-intensity effect in the structure of the sociotechnical system(s), demonstrated as long-term change in more than one dimension or element, unlocking the stability and operation of: incumbent technology and infrastructure, markets and business models, regulations and policy, actors, networks and ownership structures, and/or practices, behaviour and cultural models”.

To this understanding we need to add two important twists: Firstly, we acknowledge that disruptions do not *always* lead to a change in the structural properties of the system, even if they interfere with them. A system may just as well return to its baseline configuration after the disruption ends (depending on its resilience). Consider, for example, the financial system associated with Wall Street after the global financial crisis of 2007-2008. While the crisis was a highly disruptive event for the New York Stock Exchange and for the financial markets all over the world, a few years after the crisis the functioning of the financial system seems to have gone back to ‘business as usual’ (see Reich, 2012).

Secondly, we add an *epistemic* dimension by recognizing that the interferences with the structural properties of the system, specific to disruptions, are *unplanned* by the disrupted system itself – i.e., they are not derived from the rules, norms and standards specific to that system – such that they are *not anticipated* by the insiders to that system. Were the interferences to be anticipated or planned, they would have not amounted to disruptions anymore. Consider the case of a coup d’état. The transfer of power from one group of people to another is a disruption to the system only if it interferes with its functioning in a way that is not anticipated or planned by the system. Were the interference to be anticipated and planned, it would not have amounted to a disruptive coup d’état, but to an event that was programmed to have happened. This entails that agent-induced disruptions require epistemic positions outside the system (otherwise the interference would be planned and anticipated), an important point that we will come back to in [section 3](#). Thus, we define disruptions in the following way:

Disruption An event (or a chain of events) *E* is a disruption of the reference system *R* if and only if (i) *E* is a high-intensity *interference* with the structural properties of *R* and (ii) *E* is *unanticipated and unplanned* by *R*.

Disruptions thus represent major windows of opportunity for leveraging transformations, but they require epistemic positions from “outside” of the system i.e., not derived from its rules, norms and standards - an important point in our conceptualization of epistemic outsiders as agents of change.

3 Upshot

Indeed, in our project, we are interested in human agents who aim to disrupt and transform an unsustainable social system. Considering the notions introduced above, it seems plausible to assume that all agents usually associated with disruptions and transformative action are also *epistemic outsiders* to the social system they intend to transform. Formally, we define an epistemic outsider in the following way:

Outsider Supposing that $N = \{p, q, r \dots\}$ is the set of all structural propositions corresponding to the reference system R (describing the rules, norms and standards of R), an agent A is an *epistemic outsider* to the system R if A disagrees with at least one of the propositions from the set N . The more propositions A disagrees with, the more of an outsider they are.

The fact that disruptive agents are epistemic outsiders to the system they intend to disrupt and transform is entailed by the very way in which we define disruptions. As defined above, disruptions are unanticipated and unplanned interferences with the structural properties of R . This means that planning such interference cannot be part of the shared set of beliefs of the epistemic insiders of R . This idea is supported also by a scoping review of the literature on sustainability transformations, which suggests that many different conceptions of transformative agents and their agency are based on a certain divergence of these agents' views from the *status quo* they intend to destabilize and transform. On the one hand, this kind of agency has been attributed to actors outside the mainstream, such as in the context of *niches*, in which alternative system configurations of limited scale and scope can emerge (in these contexts, the actors follow different values, goals, rules and practices from the regime; see Geels, 2002, 2020; Hargreaves et al., 2011). On the other hand, agency exercised by certain incumbent actors – but having a dissenting worldview within the established regime – in support of niches or for broader transformation has been pointed out to be crucial, too (Sovacool et al., 2020; Trencher et al., 2021). In all of these cases, it can be argued that the change agents aiming at transforming the reference social system are epistemic outsiders to that system.

Much more can be said about how epistemic outsiders are related to disruptions and transformations, and about how this relationship can offer insights into sustainability transformation dynamics. In our project, we approach various levels of analysis, from individual systems of beliefs to social practices, networks, or institutions. Here we merely want to note how we define disruptions and how this definition is conceptually used in our project.

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