

The intertwined nature of cross-boundary coordination practices during emergency management

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One of the central issues in emergency management is how to effectively coordinate the actions between the different organizations involved (Chen, Sharman, Rao, & Upadhyaya, 2008; Comfort, 2007; Janssen, Lee, Bharosa, & Cresswell, 2010; Kapucu, 2006; Moynihan, 2009). Emergency responders from police, medical and fire agencies are confronted with opposing tensions while coordinating their actions, between operating according to the predesigned operational logic or improvising to the changing situation; between organizing their own organizational response operation and at the same time mutually adjusting to the work of other emergency organizations; and between taking immediate action or getting a sufficient overview of the situation first.

The identification of a constant tension between two opposites is not new in theories of coordination. In fact, most well-known conceptualizations of coordination have centered around dualism, being two poles in a spectrum (Scott, 2004); such as formal versus informal coordination, programmed versus non-programmed (March & Simon, 1958), and personal versus impersonal coordination (Vandeven, Delbecq, & Koenig, 1976). These dualisms impose rigid dichotomies, while recent studies suggest that these poles might be more intertwined than we think (Farjoun, 2010).

Accordingly, more recent coordination studies zoom in on the practices of coordinating and perceive coordination as a contextualized process of constant adaptation to find suitable solutions to the problems at hand (Faraj & Xiao, 2006). One of the promising possibilities of this practice perspective is that it by zooming in on the actual work practice (Nicolini, 2009) it becomes possible to study how actors deal with and unite opposing tensions in their daily work (Feldman & Orlikowski, 2011) and are able to transcend the dualism suggested in traditional coordination theories. As such, a profound role is opening up for practice based studies, in which attention is given to how coordination work is constructed through daily actions (Bechky, 2006; Bechky & Okhuysen, 2011; Ewenstein & Whyte, 2009; Faraj & Xiao, 2006; Feldman & Orlikowski, 2011; Hsiao, Tsai, & Lee, 2011; Jarzabkowski, Lê, & Feldman, 2011; Kellogg, Orlikowski, & Yates, 2006).

However, a practice perspective can overemphasize the role of processes, at the expense of the structure in which these processes occur (Geiger, 2009). Therefore, it is necessary to recognize practices as a temporary stable patterns of activity, which have to be lived and enacted to be socially recognizable (Gherardi, Nicolini, & Strati, 2007). As such, more attention is needed for a perspective in which work practices are analyzed in interaction with the existing structures, stressing the situated, socially constructed, embedded and normative character of organizations (Gherardi & Nicolini, 2006). Because this focus is grounded in organizational activity, an ethnographic method is especially suited (Miettinen, Samra-Fredericks, & Yanow, 2009).

To bring together the logics of contextualized work practice on the one hand, and the role of structure on the other hand, we need a perspective that focuses on the enactment of temporary stable patterns of activity. We do this by adopting a structuration perspective (Giddens, 1984) on coordination as practice. We blend theories of coordination as practice with assumptions of structuration theory to see what emergent inferences will occur and bring this discussion a step further (Cornelissen & Durand, 2012).

To embed our argument in the growing body of coordination literature, we will build on a dualism that is receiving considerable attention in this debate: *designed* versus *emergent* coordination (Okhuysen & Bechky, 2009). Yet, we reconsider this dualism as a duality, based on the notion that coordination processes take place a dynamic environments, in which predesigned solutions, or designs, are not applicable and have to be adapted to the local emergent logic, under constantly changing contingencies (Faraj & Xiao, 2006; Kellogg, et al., 2006; Majchrzak, Jarvenpaa, & Hollingshead, 2007).

In this paper we question how the duality of design and emergent coordination is practiced by emergency responders during emergency response operations and develop a perspective on coordination that regards these opposing poles not as dichotomies, but as mutually enabling; not as dualism, but as duality. Our insights are drawn from an ethnographic case study of sixteen emergency management field exercises observed from the winter of 2010 until the spring of 2011, and interviews with all of the involved emergency management officers-in-command. We will show that reaching coordination during emergency response requires the officers to constantly enact situated and socially constructed work practices, and build inferences on the ways in which their coordination practices become intertwined.

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