

# Beyond active failures and latent conditions: Applying organizational communication metatheory to rework the “Swiss Cheese Model” of accident causation

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## Introduction

In recent years, organizations in high risk industries have begun to embrace models of organizational accidents that downplay individual error in favor of examining systemic factors that may have contributed to the tragedy, of which the individual played *a* part but not the only one (Perin, 2005). A stated role of accident investigations seek to identify systemic failures that can be corrected by adjusting work procedures (Thackaberry, 2005).

James Reason’s (1997) model of organizational accidents, often referred to as the “Swiss Cheese Model of Accident Causation” has been influential in creating this change. Reason developed the model in order to help high risk organizations to better “manage the risks of organizational accidents.” The Swiss Cheese model was translated to the Human Factors Analysis and Classification System for aviation by Shapel and Wiegmann (2000), and was recently embraced by the wildland fire community (Ryerson and Whitlock 2005; USDA 2003).

Our paper is concerned with the fact that in modeling organizational accidents, Reason’s model is implicitly modeling *the organization* and the role of individuals in it, which implicates communication (Taylor, 1999). Therefore, in addition to transforming accident investigations in high risk industries, Reason’s model also has the potential to transform popular and theoretical conceptions of organizing per se.

Given Reason’s critical impulses to transform investigation, but also given the tendency of popular management discourses to overly reinforce the organization as a “container” within which communication flows like a conduit, in this paper we examine the model’s implicit assumptions about the nature of organization and organizing, including the role of individuals in contributing to organizational accidents.

## Methods

We rhetorically analyze the model’s two key terms, “latent organizational conditions” and “active failures,” as well as the implications of the two terms being set in opposition to one another. By juxtaposing “latent conditions” and “individual actions,” Reason’s model relegates *being* only to the organization and *action* only to the individual, and thus fails to capture organizational becoming, plus how individual action may be shaped by context. These limitations, we argue, potentially short-circuit the model’s explanatory power and emancipatory potential. We are not critiquing the utility of having such a model but rather how meanings associated with its key terms may train practitioners’ thinking in limited ways (Deetz 1996).

After explaining the model and identifying these limitations, we apply the organizational communication equivalency theory developed by J. R. Taylor and associates, particularly his ontological conception of organization as both “text and conversation” (Taylor *et al.* 1996) to challenge the model’s rather static conception of organizational ontology.

Finally, we reanalyze data from the fatal 2003 Cramer fire using the reworked model. Organizational problems in conveying weather related information to the firefighters illustrate how the emergence of organizational defects can be a quite “active” process; and, how

individual action may be influenced by sensemaking about emerging organizational defects. We also note how the model itself can be used as a conversational tool to overcome both problems.

## Results

The model divides up action and being and parcels them out separately to the individual and the organization, respectively. In the realm of being, only the organization exists; moreover, it exists as a static entity. The model provides no way to understand how organizations “become” through ongoing activities including communication. Conversely, in the realm of action, it is only individuals who act. There is no acknowledgement of the role of context and how it can shape individual sensemaking and action (Weick 2005). Perhaps constrained by an underlying machine metaphor for organization, there is thus no acknowledgement of the role of *interaction* in the process of organizing (Taylor *et al.* 1996).

Three implications stem from these limitations. Juxtaposing active and latent conveys meanings of passivity for the emergence of organizational defects, when the breaking down of organizational defenses can be a quite active normalizing process (Vaughn 1996). Second, juxtaposing latent with active represents individuals as if they behave consistently without regard for sensemaking in a changing context that includes the emergence of organizational defects. Third, juxtaposing latent with active suggests that organizational defects are only knowable in retrospect, that is, after a tragedy has occurred, whereas the model may actually be used as a discursive tool to talk about defects as they are emerging (exteriorization) (Taylor 1999). We explore how these before and after scenarios apply to understanding the Cramer fire.

We recommend a reworking of the model by expanding its key terms to capture organizational being and becoming, how individual action is shaped by sensemaking in a changing context, and ways to use the model itself in everyday conversation to point out organizational defects as they are emerging.

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