



There is safety in power, or power in safety



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ABSTRACT

Power and politics are profoundly implicated in organizational accidents. Yet the safety-scientific literature remains relatively uncommitted to a research agenda that would make power a critical category in our understanding of organizational safety. This has consequences for the field's scholarship and for safety praxis. This paper reviews how power in the literature has been elided or treated as an instrumental force where views of reality compete for acceptance and dominance. Despite its recent preoccupation with "safety culture," the literature has only just started embracing power as embodied in discourse or in the legitimated procedures and organizational processes for the production and acceptance of safety. We conclude with suggestions for how such a research agenda might look.

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1. Introduction

This paper considers the role that safety-scientific research has given to power. It is difficult not to consider power in any serious discussion of safety. An increasingly familiar idea in safety science, after all, is that accidents and disasters are organizational or administrative in nature (Pidgeon and O'Leary, 2000; Rasmussen, 1997; Reason, 1997; Turner, 1978). Accidents are increasingly seen as failures of risk control (Beck, 1992; Giddens, 1991; Green, 2003), to the point that one journal concerned with healthcare safety banned the use of "accidents" altogether (Davis and Pless, 2001). Power is of course inherent in the life of risk-managing organizations (Gephart, 1984). It links the organization to regulators and surrounding communities (Rasmussen, 1997) and is heavily involved in the attribution of causes and processes to learn lessons from them afterward (Clarke and Perrow, 1996; Feynman, 1988; Sagan, 1993; Vaughan, 1996; Woods et al., 2010). An examination of the risk management activities by people involved in preventing (or failing to prevent) failure has become a common political, judicial and safety-scientific focus (Alaszewski and Coxon, 2008; Antonsen, 2009; Dekker, 2009; Woods, 1990), in part to ameliorate societal anxieties provoked by accidents and disasters (Beck, 1992; Fressoz, 2007). This has helped legitimize the expansion of governmental and institutional control of risk (Brown, 2000; Byrne, 2002; Clarke and Perrow, 1996; Gephart, 1984; Perrow, 1984). Power, then, is implicated everywhere in safety and organizational failure,

and necessitates a "constant awareness that politics pervades organizations that manage hazardous technologies" (Sagan, 1994, p. 238).

But how has safety science dealt with power? How has it constructed the role power plays in the creation and breaking of safety? In part, safety science has not worried much about power at all. "The role of power in organizations is an issue which is rarely addressed" (Antonsen, 2009, p. 183). Pidgeon and O'Leary (2000) concluded that "the influence of such societal variables on the promotion of safety cultures are likely to be powerful, and in some circumstances may even dominate, and yet we know almost nothing about them at present" (p. 27). Eliding power in safety research, says Antonsen, sustains an unrealistically harmonious image of organizational life, one that is homogenous and free from conflict.

To begin to address this gap as one of the challenges to the foundations of our science, we try to do three things in the remainder of this paper. We first consider how safety science has been able to eschew serious consideration of power. Then we review safety literature where power is seen as an instrumental force. With more power, the possessor can do more: s/he can intervene in an ongoing process, call the shots, set organizational direction. According to this literature, there is "safety in power." It is safe for one's position, team, patient, process, and so forth, to have power. Emancipatory projects such as crew resource management training in aviation and healthcare, which attempt to redistribute decision power downward, are modeled after this idea. Second, we explore the possibility of a safety research agenda that might turn power into a more social-scientific topic. Rather than power as a possession, this considers power as a process that pervades all aspects of organizational life. In other words, there is power in safety—everywhere in safety.

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2. How not to worry about power

Safety science's unrealistically harmonious image of organizational life (Antonsen, 2009) may have deep epistemological roots. Safety science seems to constitute one of the last research literatures that strongly reflects Enlightenment ideas with its appeals to be both rational and pragmatic. Science, the highest expression of reason, can make the world a better place. After all, science can explain, predict, and ultimately help prevent that which we do not want—disease, disaster. It can also lead to the invention of a more just, and equal social order. Safety science aspires to be a normal or paradigmatic science, with systematic, unified production of evidence so that it can measurably affect things in the real world (Parasuraman et al., 2008). The aim of safety science, for example, is to make organizational learning possible (Catino, 2008). It wants to improve the knowledge actors have of their system and of their own context of action. It wants (and believes it is possible) to enhance the capacity of an organization or material system to obtain and elaborate clear and reliable information about what is going on inside (Rasmussen, 1997).

Safety science continues to adopt a technical and problem-solving approach consistent with theories of organizational life dominated by rational choice (Page, 2008) and regulative management (Gephart, 1984). The environment is seen as a target of managerial control, exercised through rational practices of evidence gathering and decision making. “Power” is added to this material world only as explanandum for the “cookies-and-milk” stuff that defies most engineering logic and scientific explanation (Batteau, 2001). This stance (and the practical successes it generates) allows safety science to avoid some fundamental issues about the social world. One of these is power. Social conflict and power can be finessed. Questions of access to resources and the role that power plays in them are easily ignored. Questions about capitalism or communism as social and economic systems of power distribution that produce precisely the sorts of problems safety science has to address (Wilkin, 2009) are dismissed as too vague and unpractical. For example, Legasov's observation that the Chernobyl accident was the culmination of how the Soviet economy had been run for decades, or the Columbia Accident Investigation Board's conclusion (CAIB, 2003) that the Space Shuttle burn-up was linked to the post-Cold War policy and budget environment, are spurned as diluting accountability for failure (Reason, 2008). With an appeal to Anglo-Saxon individualism, autonomy and responsibility (Feldman, 2004), “power” has been legitimately constructed to fall outside the scope of safety-scientific research. We reflect on that further in the next section.

2.1. How a focus on the individual and human agency eschews power

Much of safety science since Turner (1978) has focused on human agency and its deficiencies, reflecting the rationalist assumptions of regulative management (Gephart, 1984). The science has found, for example, how individuals' erroneous assumptions let events go unnoticed or misunderstood, or how rigidities of human belief and perception can lead to a disregard of complaints and warning signals from outsiders. This produces judgment errors, cognitive lapses, deficient supervision and communication difficulties that safety scientific orthodoxy sees as critical in creating a discrepancy between a safe system and actual system state (Reason, 1997). As said recently (Weick and Sutcliffe, 2007):

... failure means that there was a lapse in detection. Someone somewhere did not anticipate what and how things could go wrong. Something was not caught as soon as it could have been caught (p. 93).

This is a kind of ontological alchemy which turns judgmental attributions (cognitive lapse, judgment error) into remediable statements of fact. If disasters in systems are related to failures of intelligence, or not catching things as soon as possible, then the system's intelligence should be enhanced by increasing the organization's commitment, reach and flexibility in its data infrastructure and interpretations of risk and safety. Many of safety science's solutions emerge from this, including (Hollnagel et al., 2006; Pidgeon and O'Leary, 2000):

- Senior management commitment to safety;
- Shared care and concern for hazards and a willingness to learn and understand how they impact people;
- Realistic and flexible norms and rules about hazards;
- Continual reflection on practice through monitoring, analysis and feedback systems.

What is seldom addressed here is any mention of *who* does or decides what in sharing concern, in changing norms, in committing to certain priorities or principles, in learning and providing feedback. Or *who*, for that matter, got to call something a judgment error or cognitive lapse in the first place. Catino, in the footnote of a recent literature paper, suggests that which latent organizational factors are searched for, and where the search stops, is decided by pragmatics (Catino, 2008). This finesses the question of who decides and defines what is pragmatic. For a science concerned with agency and allotting responsibility, to be silent here does seem curious. If, however, one factors in how safety science defaults to folk theory when it comes to individual autonomy and responsibility (Reason, 2008), all this begins to make sense (Dekker and Nyce, 2012).

An analysis of Space Shuttle accidents by Feldman is a good example (Feldman, 2004). At first, the analysis and its findings remain consistent with the standard safety-scientific model and other published work on those accidents (CAIB, 2003; Feynman, 1988; Jensen, 1996; Starbuck and Farjoun, 2005; Vaughan, 1996). Misunderstandings of flight risk were the systemic products of overconfidence in quantitative data, a marginalization of non-quantitative data, an insensitivity to uncertainty and loss of organization memory, of the illusion that engineering problems and solutions could be addressed independently from organizational goals. All this comfortably fits Turner's category of cognitive failures, or failures of organizational information processing, that characterize the incubation period before disaster strikes (Turner, 1978). In his conclusion, however, Feldman (2004) departed from any further consideration of institutions, power or bureaucracy. Instead, he exhorted engineers to intervene, to be better aware of what they are doing, to speak up, to not be blinded by the situation(s) in which they are involved, to be more responsible. “Engineers need intense cultivation of their professional responsibilities within organizations”, he argued (p. 713). Individuals need to work harder, be more conscientious and virtuous to overcome the limitations of their institutions. To safety science in Anglo-Saxon traditions, such valorization of individual heroism in the face of institutional hysteresis may seem natural. As does the tendency to analyze “down and in” and trace organizational failure to a few who did not speak up (Dekker, 2011a). Even the use of “safety culture”, though ostensibly a way to broaden out to more diffuse understandings of failure, can end up allocating responsibility to particular individuals or groups (Silbey, 2009):

... the endorsement of safety culture can be usefully understood as a way of encouraging and allocating responsibility ... Invoking culture as both the explanation and remedy for technological disasters obscures the different interests and power

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