

# Uncertainty management through flexible routines in a high-risk organization

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Safe operation in high-risk organizations can be described as the management of uncertainties, which can stem from change processes within the organization as well as from the organization's changing environment. Reducing uncertainties through rules and standardization has long been seen as the key way to achieve safety in these organizations. However, the acknowledgement that zero risk is impossible to achieve in complex systems has led to a different approach, namely that of coping with uncertainties by enabling the organization's members to handle uncertainties at a local level. Grote (2004) has argued that adequate management of uncertainties requires finding the right balance between these two approaches. This balance has also been described (on an abstract level) by Weick (1976) as loose coupling.

We suggest the concept of *flexible routines* which incorporates the idea of flexible rules as a concrete measure to achieve loose coupling in high-risk organizations. At the core of this approach lies the notion that rules must be enacted to "come to life", and that this enactment process inevitably allows for at least a minimum degree of variation and change (Feldman & Pentland, 2003). Therefore it is believed that by building decision latitude into rules, or by choosing process and goal rules over action rules (see Hale & Swuste, 1998), these flexible rules better support individuals in handling uncertainties, while at the same time keeping some form of standardization. The degree of flexibility desired for a certain rule, however, depends on a number of factors such as the nature of the task and of the uncertainties to be handled, the degree of standardization, and actor's expertise. Choosing the right type and degree of flexibility for a certain rule concerning a certain work routine can thus help achieve loose coupling in high-risk organizations.

In addition to the theoretical development of the concept of flexible routines we present first results of an ethnographic study in a railway organization, where the relationship between rules (as written-down organizational artifacts) and routines (as organizational patterns of action) is looked upon. Special attention is also paid to the worker's view of risk and how they are coping with it. Furthermore, implications for organizational design in general and rule management in particular are discussed.

## References

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