

Are organisations too complex to be integrated in technical risk assessment and current safety auditing?

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Received 19 November 2004; received in revised form 22 June 2005; accepted 24 June 2005

Abstract

The organisation has been seen for many years as the next step for improving safety and for understanding accidents better, along with the on-going technological and human factors approaches. Many works on the organisational dimension in safety are now available and some recent researches have attempted to integrate the three dimensions, sometimes in a quantitative manner.

This paper is an attempt to make things clearer around the organisational issues for the purpose of enhancing current safety auditing but also for discussing the issue of integrating quantitative and qualitative approaches with various dimensions.

This paper goes through a presentation of complexity and the work of some researchers who have conceptually defined complexity. This provides an interesting framework compared to the scientific deterministic and positivist one (generally implied in technical approaches), when it comes to thinking of complex systems, which organisations and major accidents phenomena are. This paper tries to identify some of the most influential organisation theories within the human and social sciences and attempts to classify some of the existing organisational researches in major hazard prevention and accident investigation using these theories.

With an experience in technical risk assessment, safety auditing and accident investigation, the author discusses the difficulty of introducing the complex nature of organisations into integrated methodologies (implying a link between technical installations and organisations), and discusses

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the perspective of introducing it into current safety auditing practices. The research strategy of this work is therefore an interdisciplinary one, using insights from safety engineering, safety auditing practices and human and social sciences. This kind of research implies an exploration and understanding of the rationales in these different domains. It is aimed at creating, as far as possible, articulation between them for practical purposes. The nature of this paper is therefore in some parts theoretical and conceptual, but intends to frame some of the issues for improving auditing techniques and integrated methodologies. Current empirical researches are being carried out to create the methodologies required for supporting auditing improvements.

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Keywords: Organisation; Safety auditing; Complexity; Crossdisciplinarity; Accident

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