

The eye of the beholder: Individual differences in information acquired through accident investigation.

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Accident investigations determine how accidents are understood, and in turn addressed with countermeasures and remedies. The quality of the data that investigators collect may vary in their value and contribution to the analysis (Strauch, 2002). Work injuries often reveal that risks vary because people differ in many ways: their size, strength, endurance and knowledge required by the demands of the work. What is less well appreciated is the role of individual differences in the approach to accident investigations. If recognized at all, individual difference in causal reasoning is ordinarily regarded as primarily the degree to which the investigator was trained and the adequacy of her effort, i.e., a purely individual situation. The field of human factors, however, focuses on identifying those characteristics that have predictable relationships with performance outcomes, in order to predict future performance, and determine where interventions may be needed.

Some past theoretical and empirical literature (e.g., Lekberg, 1997; Lewycky, 1986) has observed that investigators are influenced by their professional backgrounds, but individual differences also include the investigator's job role, the type of investigation training, job aids used (e.g., forms and methods) and the investigator's "type" (using the Myers-Briggs classifications), as these influence not only the types of causal factors of which the investigator is aware, but also where she will stop searching for more information. There is an intimate relationship between the stop rules chosen and the investigator's model of the processes of causation and the responsibility for change (Rasmussen, 1990). Several past and ongoing studies have shown that even well-trained investigators can differ in the data they unearth and their conclusions about an accident. This poster will summarize findings from past and ongoing studies exploring the relative impact of these individual differences, and the dimensions and implications of the differences in the data acquired on the interpretation and response to accidents.

Status: this research has been presented orally at CARWH and the IWH External Plenary, and portions of it have been reported in Applied Ergonomics and in technical reports to the FAA. Thus this poster would be prepared for IAPA 2006.