



## **Ignorance, Vulnerability and the Occurrence of “Radical Surprises”: Theoretical Reflections and Empirical Findings**

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By definition natural disasters always contain a moment of surprise. Their occurrence is mostly unforeseen and unexpected. They hit people unprepared, overwhelm them and expose their helplessness. Yet, there is surprisingly little known on the reasons for their being surprised. Aren't natural disasters expectable and foreseeable after all? Aren't the return rates of most hazards well known and shouldn't people be better prepared? The central question of this presentation is hence: Why do natural disasters so often radically surprise people at all (and how can we explain this being surprised)?

In the first part of the presentation, it is argued that most approaches to vulnerability are not able to grasp this moment of surprise. On the contrary, they have their strength in unravelling the expectable: A person who is marginalized or even oppressed in everyday life is also vulnerable during times of crisis and stress, at least this is the central assumption of most vulnerability studies.

In the second part, an understanding of vulnerability is developed, which allows taking into account such radical surprises. First, two forms of the unknown are differentiated: An area of the unknown an actor is more or less aware of (ignorance), and an area, which is not even known to be not known (nescience). The discovery of the latter is mostly associated with a “radical surprise”, since it is per definition impossible to prepare for it. Second, a definition of vulnerability is proposed, which allows capturing the dynamics of surprises: People are vulnerable when they discover their nescience exceeding by definition previously established routines, stocks of knowledge and resources—in a general sense their capacities—to deal with their physical and/or social environment. This definition explicitly takes the view of different actors serious and departs from their being surprised.

In the third part findings of a case study are presented, the 2002 flood in Germany. It is shown, that the flood was far beyond people's power of imagination (nescience). The reason therefore is that previous to the flood an institutionalized space of experience and horizon of expectation existed, which did not consider the possibility that the “stability” of the river is artificially created by engineering achievements to reduce its naturally given variability.

Based on the empirical findings and the theoretical reasoning overall conclusions are drawn and implications for flood risk management under conditions global environmental change are outlined.