

N6 Diesner, J., Carley, K. M., Katzmail, H. (2007). The morphology of a breakdown. How the semantics and mechanics of communication networks from an organization in crisis relate.

Previous research suggests that the patterns of intra-organizational communication change during crises. Additionally, network-analytic studies indicate that during organizational crises interpersonal communication becomes intensified, diversified, and tends to by-pass formal chains or hierarchies of communication more strongly. However, the connection between the semantics and the morphology of communication networks from organizations in crises is not well understood yet.

In our project we investigate this possible relationship by studying e-mail networks. The data set we use is the Enron email corpus. Our research is based on the assumption that communication networks are the place where organizational culture and identity are created through discourse and the circulation of stories. We furthermore assume that the semantic and structural mechanism of this process change during crises. More precisely, for the times of crises we hypothesize that

- a) The network segmentation and cohesion of network clusters increase, because people engage in strategic alliances and small groups with trusted others.
- b) The interpersonal usage of antonyms increases, because antonyms are one way or indicator for establishing and distinguishing identity.
- c) The semantic entropy of communication networks decreases, because the discourse drifts towards polarized ends of themes and issues. In our presentation we report on our findings with respect to these hypotheses.