Changing Discourse-Semantics of Risk - A historical analysis of US newspapers after World War II utilizing corpus linguistics research instruments

Jens O Zinn (Lancaster University, UK) and Daniel McDonald (University of Tübingen, Germany)

Since the 1980s and 1990s the notion of risk has become increasingly influential in societal discourses and scholarly debate (Skolbekken, 1995). From early work on risk and culture (Douglas, 1966, 1992) to the *risk society* thesis (Beck, 1992, 2009; Giddens, 2002), from governmentality theorists working in the tradition of Foucault (Dean, 1999; O'Malley, 2012; Rose, 1999) to modern systems theory (Luhmann, 1993) all have built their work around the notion of risk and implicitly or explicitly refer to linguistic changes. Though this body of literature offers different explanations for the shift towards *risk* and its connection to social change, to date there have been few attempts to empirically examine their relative ability to explain this change. At the same time, linguists have approached risk from frame-semantic and corpus linguistic perspectives, building a conceptualisation of the kinds of participants and circumstances that co-occur with represented risk events. These approaches, however, have not attempted to identify longitudinal change, or to connect their work to sociological accounts of risk.

This presentation reports from an ongoing research initiative (compare Zinn & McDonald 2015, 2016; Zinn 2010) which aims to advance understanding of the historical changes surrounding risk, and to develop the corpus/computational tools for extracting useful information from parsed and metadata-rich corpora. First, we provide a general overview of our project, describing novel possibilities for sociological analysis afforded by increasing digitisation of news and increasingly fast and accurate tools for annotating and parsing natural language. Second, we introduce key claims made within sociology about the nature and evolution of the concept of risk. Variously, it has been argued that risk is increasing understood as negative, that risk is increasingly scientised, and that institutional resources are increasingly devoted to the identification and management of particular kinds of risk. At the same time, we are mindful of insights from media studies, which emphasize the fact that news coverage is significantly influenced by factors such as the political stance and style of reporting.

Our methodology involved the creation of a large, grammatically annotated, metadata rich text corpus of digitized newspaper archives. In order to control for newspaper specific factors such as a particular stance, thematic orientation, style of journalism and regional/national focus in reporting, we included a number of different newspapers: the New York Times, the Wall Street Journal, The Tampa Bay Times, USA Today, Chicago Tribune and the Washington Post. We included all articles where a risk token has been used at least once in the years 1987 to 2014, preserving metadata concerning topic, date, author, publication and publication section where possible.

We parsed all articles using Stanford CoreNLP (Manning et al. 2014) and developed *corpkit*, a purpose-built tool for performing detailed analysis of parsed

corpora. Using the tool, we queried the constituency and dependency annotations, uncovering sites of change within the lexicogrammar of risk clauses. Concepts from systemic functional grammar (Halliday & Matthiessen, 2004) were used to relate Mood and Transitivity patterns of risk clauses to changes in the arguability and experiential semantics of risk. Finally, longitudinal changes in risk language are then mapped to key events, as well as broader social processes and changes.

The presentation will present evidence for systematic discourse-semantic changes across newspapers but also systematic differences between newspapers and social domains:

- A growing routinisation and institutionalisation of risk across all newspapers.
- Decreasing human agency in risk processes (e.g. *risk*, *take risk*, *run risk*, *put at risk*). There is also clear evidence for the discourse semantic of risk-taking being affected by newspaper specific factors in contrast to other risk processes.
- A clear increase of reporting which presents people and particular social groups as lacking control, especially regarding health issues.
- Risk reporting, in particular in the health sector, being driven by reference to scientific research supporting a rationalised approach to risk. However, expressions of control such as calculated risk are decreasing while expressions indicating the possibility of negative outcomes are increasing indicating a rise of a possibilistic notion of risk.
- A clear difference in the presentation of powerful risk-takers and relatively powerless at-risk groups. The difference between the groups is increasing over time. The powerful take more social risks while the powerless take much more substantial risks often related to illness, injury and death.

Discussion is organised around two main themes. First, we describe theoretical challenges and compromises inherent to a project involving constituency, dependency, frame-semantic and systemic functional linguistic theory, highlighting strengths and limitations of the various linguistic theories and grammars as ways of extracting and interpreting results from corpora. Second, we provide an account of the relationship between identified semantic change and sociological hypotheses about risk. Trends toward nominalisation, reduced arguability and increasing use of risk as a pre-head nominal modifier, for example, have only partial compatibility with Beck's account of the Risk Society. Future research aims are then briefly presented.

References

Beck, U. (1992). *Risk society: Towards a new modernity*. London, Thousand Oaks: Sage.

Beck, U. (2009). *World at risk*. London: Cambridge, UK; Malden, MA: Polity.

Dean, M. (1999). *Governmentality: Power and rule in modern society*. London, Thousand Oaks: Sage

Douglas, M. (1986). *Risk acceptability according to the social sciences*. Russell Sage Foundation.

Douglas, M. (1966). *Purity and danger: an analysis of concepts of pollution and taboo*, New York: Praeger.

Douglas, M. (1992). *Risk and blame: essays in cultural theory*, London, New York: Routledge.

Giddens, A. (2002). *Runaway world: How globalisation is reshaping our lives*. Profile books.

Halliday, M., & Matthiessen, C. (2004). *An Introduction to Functional Grammar*. London, New York: Routledge.

Luhmann, N. (1993). *Risk: A Sociological Theory*. New York: Walter de Gruyter.

Manning, C. D., Surdeanu, M., Bauer, J., Finkel, J., Bethard, S. J., & McClosky, D. (2014). The Stanford CoreNLP Natural Language Processing Toolkit. In *Proceedings of 52nd Annual Meeting of the Association for Computational Linguistics: System Demonstrations* (55–60). Retrieved from http://www.aclweb.org/anthology/P/P14/P14-5010

O'Malley, P. (2012). *Risk, uncertainty and government*. London, New York: Routledge.

Skolbekken, J.-A. (1995). The risk epidemic in medical journals. *Social Science & Medicine*, 40(3), 291–305.

Zinn, J. O. & McDonald, D. (2015). *Discourse-semantics of risk in the New York Times, 1963–2014: a corpus linguistic approach*. University of Melbourne.

Zinn, J. O. & McDonald, D. (2016). Changing Discourses of Risk and Health Risk: A Corpus Analysis of the Usage of Risk Language in the New York Times. In: M. Chamberlain (Ed.), *Medicine, Risk, Discourse and Power* (207-240). London, New York: Routledge.

Zinn, J. O. (2010). Risk as discourse: Interdisciplinary perspectives. *Critical Approaches to Discourse Analysis Across Disciplines*, 4(2), 106–124.