

## **Coping with disaster: the impact of Stórabóla on abandonment, reoccupation and land use in early 18th century Iceland**

Gísli Pálsson

Scale leads ineluctably to generalization: the particular and the individual is effaced in favour of clear patterns. This tension between the general and the particular has implications for approaches at both ends of the scale: studies of individuals can be difficult to contextualize in terms of broader processes, and studies at scale can often feel out of touch with human experience. Bridging the two scales is eminently achievable, but not without the application of digital tools such as SQL and noSQL data structures that allow the general to be formed *on the fly* from particularities.

This paper demonstrates the value of both relational data structures and network theory in the interpretation of a large demographic collapse in early 18th century Iceland. Between 1707 and 1709 a smallpox epidemic ravaged the country. This outbreak, known as *Stórabóla*, may have contributed to the death of a third of Iceland's population. Prior research has demonstrated a range of impacts on Iceland's society; the effect on settlement dynamics and land use yet to be fully explored, however. A key omission in earlier work has been the ability to investigate the way broad national social and ownership networks affect the recovery process and land use reorganization on a farm by farm basis. The study is based on a full digitization of *Jarðabók Árna Magnússonar og Páls Vídalín*, a census of the country undertaken both before, during and after the population collapse. By pulling together the entirety of the census, organized through a relational PostgreSQL datastructure, the study is able to identify key agents in the human ecodynamic impact of the smallpox epidemic that would not have surfaced if the study were structured on a county-by-county basis.