

## **Grammars of Death: Nineteenth Century Literal Causes of Death from the Age of Miasmas to Germ Theory**

The Grammars of Death project is the newest phase of a larger historical demography effort, the Connecticut Valley Historical Demography Project. Beginning in the 1980s, the CVHDP has studied local determinants of mortality in six Connecticut River Valley towns in Massachusetts: Deerfield, Greenfield, Shelburne, and Montague, adding the cities of Holyoke and Northampton in the early 1990s. These industrial mill towns emerging from the rural countryside of western Massachusetts reveal much about the early demography history of the area, most recently the determinants of nineteenth-century mortality in New England and the role of public health infrastructures in the eventual mortality transition. The CVHDP developed extensive family reconstitution files for the four towns, and a longitudinal, quasi-experimental research design linking sample census observations from 1850 to 1910 to the recorded deaths for two years following each census and to tax valuation records in the two larger cities. This database has enabled extensive examinations of some of the hypothesized determinants of mortality, with a particular focus on changing socioeconomic status, urban environments and diagnostic classification (Hautaniemi, Swedlund and Anderton 1999; Hautaniemi, Anderton, and Swedlund 2000; Hautaniemi 2002; Anderton and Hautaniemi Leonard 2004; Beemer, Anderton, and Hautaniemi Leonard, forthcoming). This research, supported by funding from the National Science Foundation and the National Institutes of Health, suggests that the New England mortality plateau was associated with stressful conditions in the industrializing and rapidly growing mill towns, and that mortality decline did not take hold until after growth slowed and public health measures were instituted. Demands for improved sanitation in New England's emerging industrial towns were heeded only after rapidly increasing populations strained the new urban environments and sustained high mortality levels (Hautaniemi 2002; Beemer, Anderton and Hautaniemi Leonard forthcoming). To the extent that these communities represent the phenomenon of emergent industrial centers, conditions in these types of places contributed to a delay in mortality decline in New England, the Northeast and the nation.

The Grammars of Death project seeks a better understanding of the later nineteenth-century mortality plateau and eventual mortality transition in America, through a formal semantic analysis of literal causes of death in the Connecticut River Valley mill towns of Holyoke and Northampton, Massachusetts from 1850 to 1912. The researchers address the problem of precision in historical cause-of-death data through an integrated archival social history of death reporting, and analyses of changing historical cause-of-death nomenclature, social biases in the reporting of deaths, and probabilistic cause-of-death classification. These analyses allow the estimation of robust cause-specific mortality trends for major causes of death and selected causes of importance, which will shed light on past and future epidemiological transitions. This is a collaborative project with the

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**Connecticut Valley Historical Demography Project Publications:**

Articles:

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- Temkin-Greener, H., and Alan C. Swedlund (1978). Fertility Transition in the Connecticut Valley: 1740-1850. *Population Studies* 32:27-41.

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- Hautaniemi, Susan I. (2002). Demography and Death in Emergent Industrial Cities of New England, unpublished Ph.D. dissertation, University of Massachusetts Amherst.
- McArdle, Alan Hugh (1986). Mortality Change and Industrialization in Western Massachusetts, 1850-1910. Ph.D. dissertation, University of Massachusetts.
- Meindl, Richard S. (1979). Environmental and Demographic Correlates of Mortality in Nineteenth-Century Franklin County, Massachusetts. Ph.D. dissertation, University of Massachusetts.

