# Title Page Information

## Title

**Real geographies and virtual landscapes: Exploring the influence on place and space on mortality Lexis surfaces using shaded contour maps**

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# Abstract

This paper describes how shaded contour plots, applied to mortality data from the Human Mortality Database, can be used to compare between nations, and start to tease out some of the ways that place and space matters. A number of shaded contour plots are presented, in order to describe the age, period and cohort effects which are apparent within them. They show variations between different subpopulations within the same nation, over time, and between nations. In illustrating these intra- and international variations in the patterns, we hope to encourage the development of hypotheses about the influence of such factors on mortality rates. We conclude with a brief discussion about how such hypotheses might be developed into statistical models, allowing for more rigourous testing of hypotheses and projection across time, place and space.

# Highlights

* Shaded contour maps are a way of showing how something varies over a two dimensional surface.
* A two dimensional surface where the dimensions are age and year is known as a Lexis surface.
* A Lexis surface where the outcome variable is mortality is known as a mortality surface.
* Mortality surfaces for around 100 populations from 37 nations have been produced.
* These surfaces can show how place and space influences health and longevity.

# Key words

* Demography
* Mortality
* Data visualization
* International variation
* Maps

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