Design of graphics with lattice and mosaic

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The lattice and vcd packages are two powerful paradigms for programming multi-dimensional graphical structures.

I recently completed two implementations of Diverging Stacked Bar Charts for Likert Scales and Other Applications (Robbins and Heiberger, 2011; Heiberger and Robbins, 2013). Both are included in the HH (Heiberger, 2013) package in R (R Development Core Team, 2013). One, likert, is based on barchart in lattice (Sarkar, 2012, 2008). The other, likertMosaic, is based on mosaic in vcd (Meyer et al., 2012, 2006; Zeileis et al., 2007).

Some features are more easily programmed in one setting than the other. Variable-width bars are natural in the mosaic setting and difficult in the barchart setting. Extensive secondary labeling seems easier in the lattice setting. Numeric axes are more natural in the lattice setting. Conditioning factors are possible in both with very different ways of thinking about them. Different sets of levels in the response factor and in conditioning factors are handled very differently by the two settings. The formula interface appears more powerful in the lattice setting than in the mosaic setting. Examples and solutions will be illustrated in both settings.

References


