



EDWARD TUFTTE'S 'THE VISUAL DISPLAY OF QUANTITATIVE INFORMATION' – DATA DENSITY AND SMALL MULTIPLES

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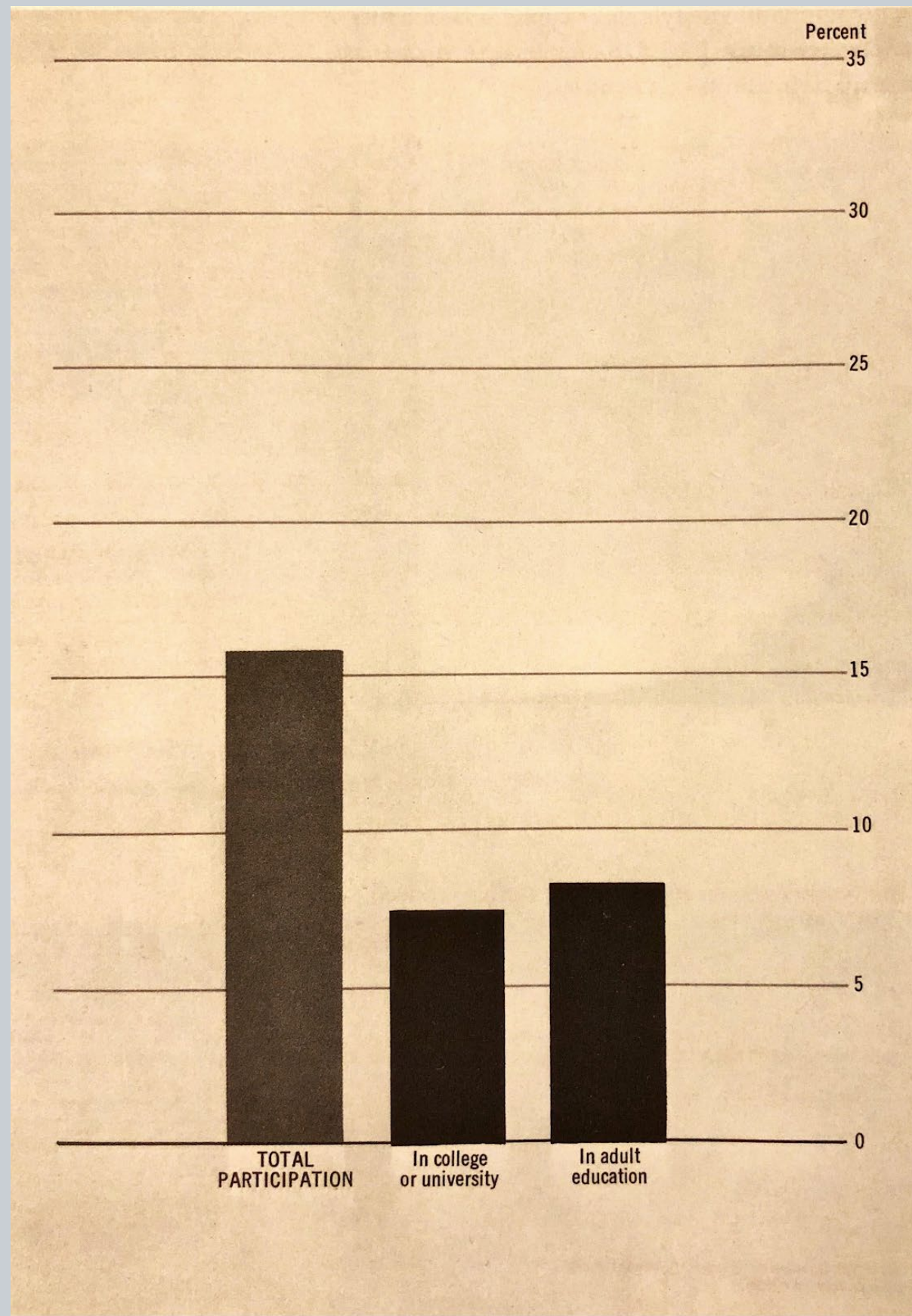


A step-change in
quantitative social
science skills
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ESRC and HEFCE



DATA DENSITY

$$\text{data density of a graphic} = \frac{\text{number of entries in data matrix}}{\text{area of data graphic}}$$

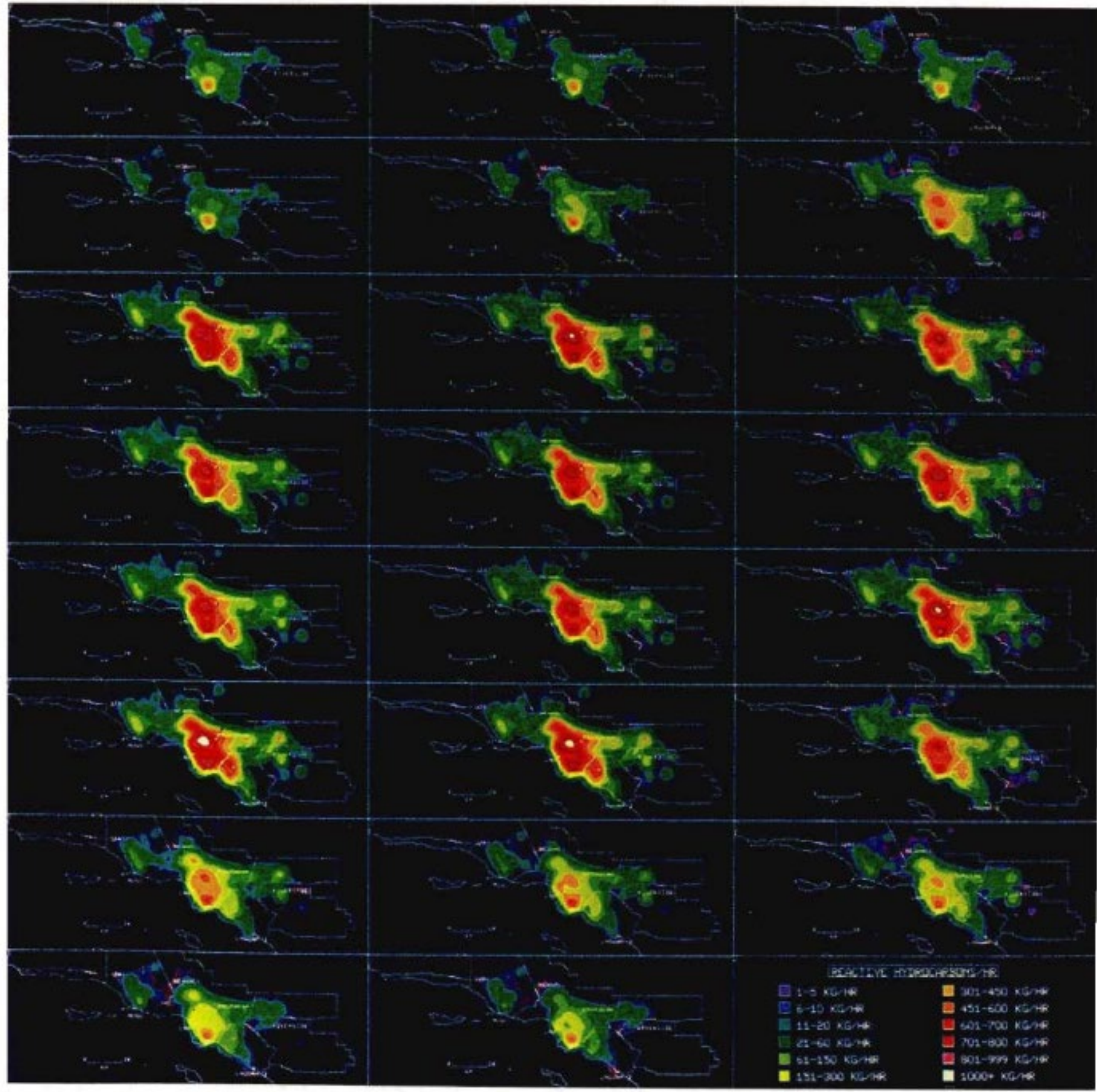


FOR EXAMPLE...

Executive Office of the President, Office of Management and Budget, Social Indicators, 1973 (Washington, D.C., 1973), p. 86. From Tufte (2007).

SMALL MULTIPLES

Small multiples are a series of graphics, showing the same combination of variables sub-plotted according to a change in one variable.



FOR EXAMPLE...

TUFTE'S ADVICE FOR WELL DESIGNED SMALL MULTIPLES

- inevitably comparative
- deftly multivariate
- shrunken, high-density graphics
- usually based on a large data matrix
- drawn almost entirely with data-ink
- efficient in interpretation
- often narrative in content, showing shifts in the relationship between variables