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## Book Review

EDWARD R. TUFTE  
*Envisioning information*  
 Graphic Press, £30.00

When I was first asked to review this book I assumed that the title really meant 'Visualising Information', and basically that is what the book is about. But prior to reading the book I had also assumed that the book's content was concerned with scientific visualisation using computer graphics, but that is not what the book is about. In fact it addresses the graphic design techniques for translating data into information, with examples ranging from sixth-century illuminations on vellum to the three-dimensional distribution of man-made debris about the Earth.

Now having read the book I feel slightly disappointed that the author, Edward Tufte, failed to include any real reference to scientific visualisation using computer graphics, as this is rapidly acquiring a maturity that will make it a major design tool during the next decade. The index does include three references to 'computer visualisations', but no more than two dozen words are given over to this subject, which does not seem adequate, bearing in mind that the author has worked on information design for IBM, Hewlett-Packard, CBS, NBC and the Bureau of the Census.

As one would expect, the book is beautifully illustrated, with only one or two pages that do not contain some form of colour illustration. Within its six chapters on: Escaping Flatland, Micro/Macro Readings, Layering and Separation, Small Multiples, Colour and Information, and Narratives of Space and Time, the reader is presented with various ways of visualising data (my dictionary had no entry for envisioning!), showing ways of depicting eighteenth-century dance steps and Japanese national railroad timetables. But in spite of the excellent illustrations, I was very conscious of the author's descriptive style – it was, to say the least, protracted. For example, page 106 contains the following sentence: 'Above, two rivers meander boustrophedonically around a tight frame, weakening comparison of their lengths'. Now surely there must be a simpler way of expressing this idea without forcing readers to retreat to their dictionaries only to discover that there is no entry for boustrophedonically! I admit that this example is over the top, but I found that I was continually skipping sentences and looking ahead to identify a safe point to recover the current gist.

So what is the book *really* about. Well it contains a hundred, or so, examples of how

different graphical approaches have been used to simplify the visual interpretation of multi-dimensional data. The written commentary analyses why the techniques work, but does not offer alternatives which might have improved or hindered the communication process; but to be fair, I do not believe that the author intended it to be a tutorial on the subject, it is simply a collection of effective graphical techniques for communicating the information contained within complex data sets.

To whom is the book directed? Well there is no doubt that students studying graphic design will find it a useful source of how such techniques have evolved historically, but I am not certain how complete the survey is, all that I do know is that the book makes no reference to London's world-famous map of the Underground! But the author writes on page 50: 'Showing complexity is hard work... The conventional economies of declining costs for each additional data bit will usually be offset by a proliferation of elaborate complexities provoked by the interacting graphical elements.'

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