

DATA Life in the digital age has become a never-ending process of electronic traces, writes **Ella Mudie**. But the question of truth versus beauty remains as contentious as ever.

Painting by numbers

IF THE statistics are boring, then you have the wrong numbers." This was the frank message delivered by American information designer Edward Tufte in the '80s when a new field merging data and design was just starting to take shape. A former statistician turned self-published author, Tufte mourned the loss of skilful interpretation of data. "Those who get ahead are those who beautify data, never mind statistical integrity," was his charge against designers and art directors who like to dress up facts and figures.

Today, Tufte is a much-admired authority in the field now known as data visualisation. He is also something of a henchman for clarity at a time when never before have we had so much information at our fingertips, and so many tools to transform it. A new book profiling the phenomenon, *Data Flow 2: Visualizing Information in Graphic Design*, offers an insight into the breadth of work now being produced among graphic designers and artists who take data as the building blocks for their own eye-catching works. The book is a heady mass of finely illustrated flowcharts and circuit diagrams, technicoloured tree maps and three-dimensional models that put the crude pie charts and bar graphs of schooldays to shame.

And there's more stimulation, too, to be found in *Beautiful Visualization: Looking at Data through the Eyes of Experts*, with tips on how to map patterns in online shopping, air traffic control, the New York subway system and more through images. Proof that data is firmly in the Zeitgeist, the publication of both books coincides with a push among Western governments to "free" data in a bid to foster greater transparency. The federal government unleashed last September 59 "mashable" datasets on its data.australia website, following the lead of the US, somewhat bolder in its release of sensitive stats on areas such as jail populations, hate crime statistics, defence data and even a toxics release inventory.

But for all the deluge of data, the question of truth versus beauty remains as contentious as when Tufte first put pen to paper. The most common complaint levelled at data visualisations, according to the



authors of *Data Flow 2*, is "an over-emphasis on style" resulting in "visualisations for visualisation's sake". Still, this is not reason enough to dismiss visualisation which, they argue, is now "an indispensable instrument" to cope with the massive amounts of data we find ourselves confronted with today.

It's an argument supported by Ben Hosken, founder of the Flink Labs data visualisation studio in Melbourne's Surrey Hills, where he

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is at the forefront of implementing this evolving field in Australia. Armed with an IT and computer science background, his interest in visualisation was sparked by the data mining he was performing for a technology company he recently sold. "I could see there was this massively growing volume of data," he says. "Combine this with the growing power of computing and people are going to need new ways of understanding and interpreting that data. So data visualisation was one of those areas that hit a sweet spot for me."

The studio's breakthrough visualisation, a pulsating and enigmatic representation of the ebb and flow of Melbourne's train network in a single day, was inspired by the

movement of ants through a colony and created excitement in the blogosphere. Hosken has since been approached by local government agencies keen to harness the studio's approach for other datasets.

This unique blending of the artistic with the algorithmic has also informed more recent visualisations, such as Flink Weather, which overlays weather data with air quality statistics from the EPA to explore how pollutants and weather work together to impact air quality. The visualisation was a response to the events of Black Saturday and is typical of the studio's approach. "It's a long process of analysing the data, taking multiple data sets and munching them," says Hosken. "We describe it as trying to understand the story the data is telling you."

As the parameters of data visualisation broaden, Hosken sits firmly in the camp of information design where communicating a clear and accurate message remains on an equal par with aesthetic engagement. When visual artists turn their hands to data, however, motivations can vary.

In *Art + Science Now*, a new book compiled by US artist and author Stephen Wilson, artist projects involving intercepted CCTV footage, ominous "observation robots" and fictional railway agents who interpret and monitor travel card data, all point to the oppression of living under constant monitoring. Yet other projects respond positively to the generative possibilities of data, finding in its sheer volume and its

Artists Torie Nimmervoll (left) and Jason Maling at the Abbotsford Convent.

PICTURE: ROB BANKS



Data Flow 2: Visualizing Information in Graphic Design by R.Klanten et al, Gestalten, March 2010.

Art + Science Now by Stephen Wilson, Thames and Hudson, April 2010. *Beautiful Visualization: Looking at Data through the Eyes of Experts* by Julie Steele and Noah Ilnsky, O'Reilly Media, April 2010. flinklabs.com

capacity to make the invisible visible, a 21st century source of the sublime. The PIEQF seismic monitoring installation by Sydney artist D. V. Rogers, which gave tangible expression to the subterranean rumblings of the earth by visualising earthquake activity in California over a three-month period, is a striking example.

No matter how one feels about it, there's no denying life in the digital age has become a never-ending process of leaving electronic traces. Visualising data connects the dots to reflect back to us who we are, as groups rather than individuals. It was this notion of taking the pulse of a collective through data that interested artists Torie Nimmervoll and Jason Maling in their 12-day Triangulation "prismatic audit" of the arts community at the Abbotsford Convent in February. To conduct the audit, the artists issued each studio with a kit of coloured flags, inviting the tenants to place one on their door and to change it whenever the urge gripped them. The colour changes were recorded and then mapped on a series of colourfield-style pie charts while twice daily public briefings illuminated the tenants on their shifting colour preferences.

This whimsical approach to data collection led to some unexpected insights, Maling observes. "Data provides people with assurance and it gives people a sense of meaning which is compact and workable. The closer you come to a conclusion the more people are drawn to it. This intrigues me a lot, and Torie, because what happens is the truth of what is being measured will often reveal its own essential incomprehensibility, its own poetics even."

Louisa Bufardeci is a Melbourne born and now US-based artist who transforms data, statistics and maps into tactile, minimalist artworks. She describes her stance towards data as neither utopian or dystopian; "I don't see it as an attitude as much as an inquiry." Data may indeed be mere information, but despite its cloak of objectivity, it's rarely neutral. Like the age-old tradition of portraiture, the question of whether the role of visualisation is to interpret or inform continues to prove divisive. This tension may well become its greatest charm but only, it seems, if we can appreciate its output through the lens of our own critical reflection.