Editor: André Stork

Tapestry: A Different Kind of Conference on Storytelling with Data

Robert Kosara
Tableau Research

Tapestry is an unusual conference, at least compared with academic gatherings. There are no proceedings, and the presentations are not chosen through peer review. What it is, however, is a place to meet and exchange ideas for people with a common interest.

We started Tapestry to give people interested in storytelling with data a place to discuss their work. This would not be limited to academics, quite the opposite: the main people we had in mind were journalists as well as people working for nonprofit organizations, the government, and others. The discussion started in spring 2012, when the topic was still obscure and there were hardly any published papers on it yet.

There are two types of talks at Tapestry: keynotes and short stories. Keynotes are hour-long talks by people handpicked not only because of their content, but also because they are really good speakers. Short stories have a somewhat lower bar and are only 15 minutes each.

Tapestry 2013

The conference took place for the first time in late February 2013 in Nashville, Tennessee. To inspire discussions and also break away a bit from the usual dreary, faceless big-box hotel, we picked one that had been a train station for many years and that could only host around 100 people.

The conference was opened by Jonathan Corum, graphics editor at the *New York Times*. He spoke about his work, which includes a wide array of science-related topics. He often reworks existing figures from scientific papers into graphics that are easy to follow and understand. It was amazing to see how his perspective means making different decisions than the scientists and being much more aware of the consumer of the image. As an example, he showed a piece that illustrated lunge feeding by a particular type of whale. The whale dives, then lunges through the water, filtering the water to extract the small animals on which it feeds, and then surfaces again. The authors of the original paper had cut the graphic showing the movement to skip the diving portion. Corum added that back in, and made a number of other important stylistic choices, to give a lay audience a sense of scale. The resulting graphic makes it much easier to grasp the entire movement and appreciate the depths to which whales dive.

I don't want to list all the short stories, but I will point out two that were particularly interesting at the first conference. Nigel Holmes used to work as the graphics editor of *Time* magazine, and he created many controversial information graphics that are now the subject of published studies. He gave a fantastic presentation on the role of scale in visualizing data and how difficult it can be to show it. To illustrate his point, he demonstrated the distance of Bob Beamon's long jump, which set a world record that stood for more than 20 years (see Figure 1). To do this, he had a piece of string measured out to the over 29 feet of distance Beamon had covered and showed just how far that was by walking that distance across the stage.

Hannah Fairfield gave another short story talk, during which she discussed a technique called the connected scatterplot, which had been used first in the economics literature and discovered there by Fairfield's *New York Times* colleague, Amanda Cox. In 2010, Fairfield was only the second person to ever use that technique in news graphics. Since then, the technique has become much more common, and we know that at least one of those uses is because of Tapestry: Katie Peek, information editor at *Popular Science*, saw the video of Fairfield's talk and decided to try the technique for a dataset she was working on. It worked well, and she published the piece shortly after (see Figure 2).

 Published by the IEEE Computer Society

I also gave one of the keynotes, playing the academic. I talked about the common themes I had seen in my surveys of graphics in the news and in other places where they are often considered to tell stories. The main goal was to make connections between the other talks, which I did by looking at ways in which mere data visualization can be turned into something more story-like. While it seems clear that adding a narrative can do that, how to go about storytelling with data visualization is anything but obvious. Also, the importance of focus, in particular when dealing with data that has any complexity, cannot be overstated.

Rounding out the day was Scott McCloud, author of the book *Understanding Comics* (William Morrow Paperbacks, 1994). His talk was a combination of a tour through his book, bits of comic theory, and many examples from comics illustrating his points. Talking about comics might seem a bit odd at a conference about data, but there were many insights in his presentation that easily translate into data visualization. For example, his ideas about time and how time and space are related in graphical depictions are very interesting and useful.

Tapestry 2014

Last year's conference took place in early March in Annapolis, Maryland. As in 2013, we picked the day before the NICAR (National Institute for Computer-Assisted Reporting) conference, which is an event many journalists working with data attend. Our goal was to make it easier for journalists (who generally cannot attend more than one conference per year) to come to Tapestry as part of their travel to NICAR, by just adding one day.

The opener this time was Alberto Cairo, a professor of journalism at the University of Miami and author of the book The *Functional Art* (New Riders, 2012). He talked about the different problems he finds in news graphics, some of which are oversights and some of which are real distortions of the data. He doesn't just consider them graphical problems, though, but ethical ones. As a journalist, he holds his colleagues to higher standards.

The two most remarkable short stories were by Santiago Ortiz and Giorgia Lupi. Ortiz is a visualization researcher and inventor who creates many amazingly rich and interesting visual representations of data. His work spans from data exploration and analysis to pieces that are more like data art. It is an impressive body of work, and his command of graphics as well as interaction is awe-inspiring.

In a similar vein, Giorgia Lupi's visualization studio Accurat, based in Milan and New York, creates rather unusual visualizations. The studio's work is often playful and unusual, which earns them criticism from the more purist visualization people. But it also gets people interested, which is often what they want to achieve. And in all their work, they strive to be true to the data and make it the main message.

Figure 1. Role of scale in visualizing data. To illustrate his point, information graphics designer Nigel Holmes demonstrated the distance of Bob Beamon's long jump using a piece of string measured over 29 feet long.

Aron Pilhofer, who managed digital strategy at the *New York Times* (he is now at *The Guardian*), did not talk about graphics, but about how to get readers interested and keep them engaged. The relationship between media and readers can be difficult, with comment sections quickly turning into religious wars. Leading the discussion with the right questions, however, and making the interesting comments more prominent, can go a long way toward improving the discussion culture and actually enhancing the story with input from the audience.

Fernanda Viégas and Martin Wattenberg, researchers at Google, closed the day with a presentation about genres of data visualization, likening them to literary genres. Many of their comparisons were lighthearted, and the entire talk was not meant to be scientific or complete. Nevertheless, it was a fantastic talk and very thought-provoking. What are the genres of data visualization?

Starting this conference, and focusing it on a topic that is only just emerging, was clearly risky. But we have witnessed many interesting conversations, both at the conferences themselves and afterward through the videos of the talks and via other channels. An interesting recurring theme is the balance between being interesting and sticking to good visualization practice, which can sometimes be challenging. Academics can learn a lot

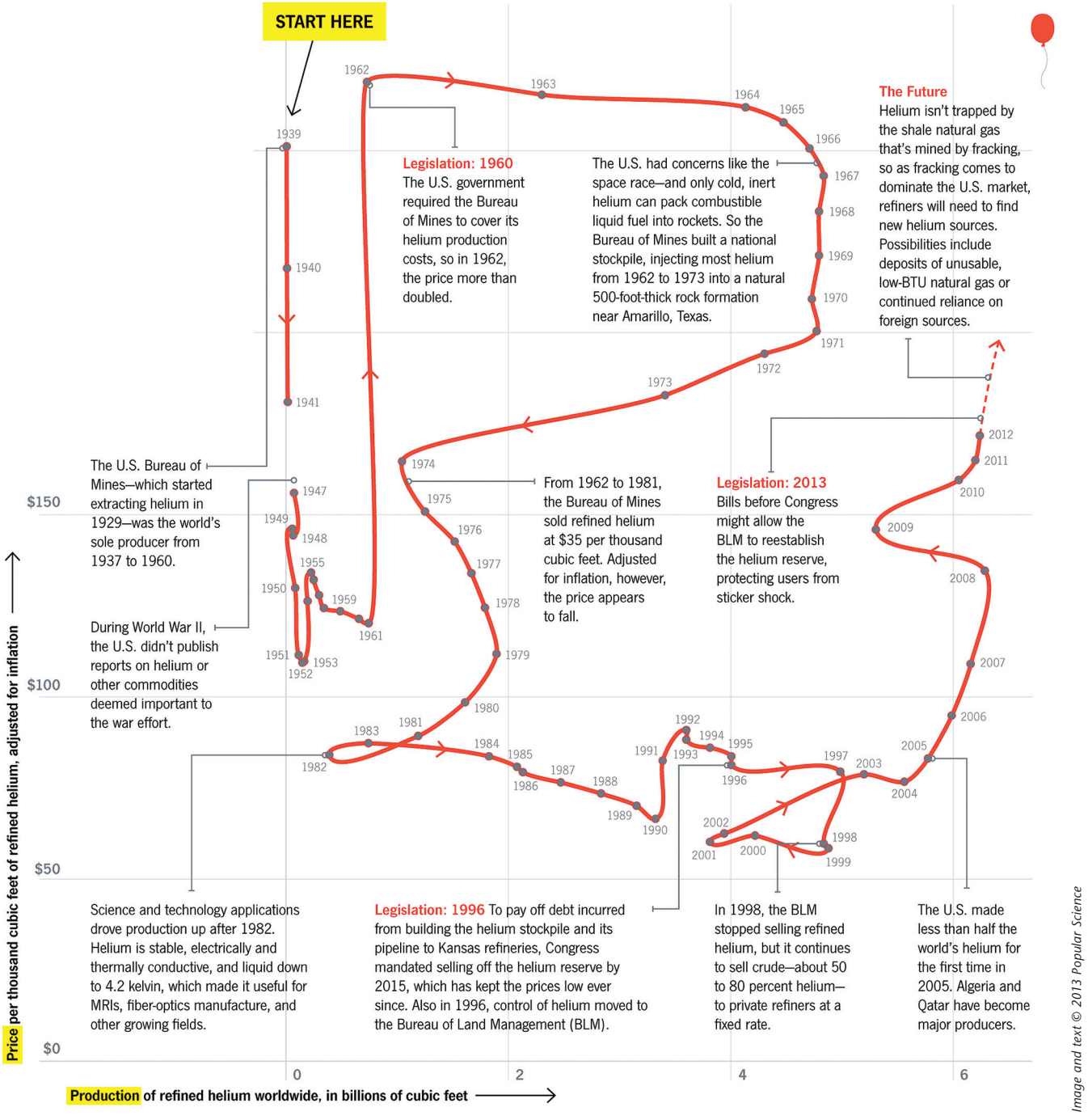

Figure 2. Katie Peek's connected scatterplot. This illustration, which originally appeared in the August 2013 issue of *Popular Science*, shows a history of the price and world production of helium. It was inspired by Hannah Fairfield's talk at Tapestry a few months before.

from the journalists' different points of view, even for their academic publishing.

We do not intend to turn Tapestry into an academic conference, but we are making some changes in 2015. We want to have a more rigorously reviewed posters program, and we have opened the short stories to applications from attendees. But overall, the model seems to be working well for this community, and we believe that some elements of Tapestry could also be incorporated into academic conferences.

For more information, visit the conference website at www.tapestryconference.com, which contains all the videos from the last two years.

Robert Kosara *is research scientist at Tableau Research and the creator of the eagereyes blog. Contact him at rkosara@tableau.com.*

Contact department editor André Stork at andre.stork@igd.fraunhofer.de.