April 2015

Thanks again to everyone who took part in my logo internet surveys; the comments were appreciated. After some exploration, I think I have something that is simple, distinctive, modern and appropriate. It was a hit with my ‘focus group’ and I now hope to phase it in on my web pages over the forthcoming month. Feel free to email me if you have any comments. The Johnston lettering is by Douglas Rose.

In the media, on the web

• The New York Subway map reconstruction last month caught the attention of many New Yorkers. It was discussed in articles by The Atlantic, Curbed NY, Gothamist, and Untapped Cities. Thanks again to Peter Lloyd, Reka Komoli and Raleigh D’Amado for making this possible.
• The Brussels concentric circles map features in another article, this time in La Première Heure - PHnet.be.
• My designs pop up in the strangest places. The Skibbereen Eagle discusses a map that tells the truth about London place names, then Curvy Tube Map and Circles Tube Map make an appearance.

Dates for your diary

• On Tuesday 9th of June, I will be giving a presentation to the London Underground Railway Society titled Underground Maps Invigorated, 18:40, Upper Room, Allsouls Clubhouse, 141 Cleveland Street, London W1T 6QG. I will be discussing the benefits and pitfalls of digitally reconstructing historic maps. If you are a LURS member, I look forward to seeing you there. Guests are admitted, but space is limited.
• The TfL archives are holding a two-day event on 5th/6th August at the Palestra building in Southwark. The theme will be TfL’s design and innovation heritage, and I've been invited to take part. This will be a closed event, but quite a few people from TfL are on my mailing list, so look out for further details.

Research news

A nice study has been completed by Ida Vaeng at the University of Essex for her dissertation. She looked at objective journey planning data and subjective usability ratings for two of the maps from my recent internet survey (download this article to see them). Compact Curvilinear had been rated the least usable design with a score of just 17% (where 0% indicates that everyone thought the map was difficult to use, and 100% that everyone thought the map was easy to use). Compact Octolinear had been rated one of the more usable designs (53%) despite its deliberately poor line trajectories. In her study, volunteers were given several start/destination stations to plan journeys between, for both of the maps. Overall, the task was performed significantly faster using the curvilinear design. Despite this, and everyone experiencing both maps, the octolinear version was still rated the most easy to use. The prejudice that octolinearity equals a usability gold standard, no matter how poorly implemented, is clearly strong. Now to test the other seven maps!

Map of the Month: An old angle on Paris

I've described the Paris Metro as a graphic designers' graveyard. No other network makes such a mockery of attempts to tame it, with so many well-intentioned ideas ending in disaster. Even the very best designs struggle to show the dense, tangled network clearly. I suspect that there will never be a 'Eureka map' where all the elements fit into place and leap out with clarity, not without a level of geographical distortion that might have made even Massimo Vignelli pause for thought. I have dabbled with mapping the Paris Metro, but generally try to avoid it, so why have I decided to risk adding yet another tombstone this month?

The main problem in designing a schematic map for Paris is what to do about the city’s tilt. A bundle of lines (primarily comprising Line 1) form a major axis at around 25 degrees to horizontal across the city. Using conventional octolinear angles (horizontal, vertical and 45° degree diagonals) an insurmountable incompatibility between design rules and network structure results as soon as pen hits the paper. Henry Beck famously tried to resolve this by snapping Line 1 to 45°, and the result was an unbalanced design that practically rolled Paris on its side. The English are utterly bemused as to why the reactionary Parisians rejected such an amazing piece of work; people familiar with Parisian geography might not be so puzzled. Paris Metro map historians will know that official schematic maps with a correct tilt were created throughout
the 1980s/90s, but these have so many station names interrupting lines that the clarity of the designs suffered. The usual solution today is to attempt to show as much of the bundle of lines as possible as horizontal, but many corners are then inevitable, damaging the simplicity of the design, robbing the city of one of its most distinctive features and (for the maps that appear to have conquered the problem most successfully) distorting geography and wrongly configuring complex interchange stations. Other solutions, such as multi-linear designs (any angle permitted) only accentuate the chaos of the network, and my own all-curves version suffers from people’s expectations and prejudices, despite its excellent performance in all usability studies. But, while creating my Boston Marathon sequence, I saw that octolinear designs with evenly-spaced angles don’t have to be aligned to a conventional grid. Rotate the available angles by 22.5º and this gives an isomer that is closely compatible with the east-west line bundle. Paris can have its tilt back.

It is never as simple as that. With standard octolinear angles, the designer of a Paris Metro map battles with topography. For rotated ones, the battle is with typography: intersecting lines form tilted triangles that are incompatible with the shape of text, and diagonals less than 30º to horizontal require a lot of space for station names. There are aesthetic uncertainties as well. Which grid should be used for aligning stations and termini for neatness? The conventional one that people are familiar with, or a rotated one to match the angles. And, of course, although the rotated angles are compatible with some line trajectories, others are much less cooperative.

The official Paris Metro schematic is one of my personal all time worst designs, turning complex twisted lines into complex zigzags instead. So, I persevered, but used a wider space to improve the balance. This meant that I then had to create my own conventional octolinear control for comparison, using the same dimensions. For this, it was a heroic struggle to keep the topographical distortion under control while keeping the line trajectories simple. The rotated version has fewer corners, and on the conventional design the topographical distortion is obvious, for example, an exaggerated gap between Line 1 (yellow) and RER A (red) on the west side of the city. The two maps are as comparable as could be expected from a designer with his own expectations and prejudices, but we are a very long way from disinterested computer software that is able to design Paris Metro maps in different ways without human intervention. More realistically, can we develop metrics to measure topographical distortion that focus on aspects important to users, so that maps can be objectively compared for their accuracy?

To English eyes, there is something inherently strange about a schematic map with no horizontal lines anywhere. It would be fascinating to know what native Parisians felt about the two alternatives. Preference and performance are not the same thing, but if a map is rejected by users, it doesn’t matter how effective the solution is. Complete versions of both designs can be downloaded from the newsletter archive on my website. Map of the Month for May will be something very different and very special. You can subscribe to my newsletter at www.tubemapcentral.com.

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