New Year, new logo? I have been thinking for a while about a new header for my newsletter and web page: something more flowing and fun, and less clichéd. What do you think? I’ve set up a short survey online, so click here and let me know: should I go back to the old logo, use the new one, or try something different?

I have 2015 calendars for sale, while stocks last, and free copies will still be bundled with my book, Underground Maps Unravelled. The online price is £40 including UK delivery and this special offer will continue until 29th March 2015, when the Royal Mail promotional rate for UK parcels expires.

In the media, on the web
• A brief mention of my work in the German magazine Spektrum can be downloaded here.
• An article on the poetics of underground ends with my London circles map, although I’m not sure why.

Map research
• At 593 respondents, my online survey is tantalisingly short of its final target of 600. It should reach this very soon and then I will take it down. This is your last chance to take part, and it takes around 15 minutes to complete. You can access it at www.tubemapcentral.com/survey.

Map of the Month: Bending the rules to fit the city

Maps based on concentric circles and spokes are eye-catching, but if the network structure is incompatible, then they will always be geographically distorting. Cities vary in how much their line trajectories can be neatly categorised into purely radial versus orbital components. London was a difficult starting point for configuring maps in this way, and creating a reasonable solution required the design rules to be broken even before they had a chance to hit the paper. One feature of the London map is the roundel shape for the Circle Line, although a few commentators suggested that this was contrived. In fact, this shape followed as a natural consequence of two decisions. First, forcing the Circle Line into a perfect circle would be a disaster, and so this line would best be shaped as a circle with side-projections. Second, based on other experiments with linear maps, a London design without horizontal lines would be inadvisable and so, for Central London, I relaxed the requirement for straight lines to be true spokes (which converge on a single point of radiation). One advantage of concentric circles maps is that they can be highly organised, with a network shown coherently. The downside is the risk of over-complex individual line trajectories (many bends required). Relaxing the basic requirement for perfect spokes can improve simplicity, but breaking the design rules to improve trajectories might be outweighed by a loss of coherence. However, for London, the sketch here shows the consequence of adhering strictly to these design rules: disrupting the broadly radial routes inside the Circle Line (yellow) and expanding the vertical space that the Circle Line requires at Aldgate and Notting Hill Gate, turning reality on its head. This is one of those sketches destined not to be completed. I could try other solutions such as centering the map on Oxford Circus, but overall this particular version is probably a lost cause. Making the Circle Line the shape of the roundel considerably improves the organisation and simplicity of the map, as well as its geographical accuracy.
Concentric circles-and-spokes maps might be ill-suited to cities for other reasons. For example, if the orbital components of a network are elongated along one axis, then using concentric circles might result in an unbalanced design, compressed along one axis with over-dense stations, and elongated along the other, exaggerating distances between them. Attempting to balance the design by mixing circles and spokes to stretch the congested dimension would only ruin the overall simplicity. Barcelona is a good example of a network where this problem applies, so how could it be solved? Instead of concentric circles, we could use concentric ellipses. I tried this eighteen months ago, and rapidly concluded that I was opening a can of worms, creating more problems than I was solving!

When using a vector graphics package, enlarging an ellipse by automated scaling extends the wide dimension at a greater rate than the narrow one. The result is curves that are not parallel with each other, and this is fiddly to correct. Even when achieved, there is still a problem with the linear elements. If they radiate from one single point, only the axes will be perpendicular to the curves (right side of lower ellipses). Creating perpendicular lines is also fiddly (left side of lower ellipses) but, in any case, would it be wrong to design such a map with lines radiating from a central point? This depends on the shape of the network. If the line trajectories are compatible with automatically-scaled ellipses and radial lines converging on a single centre, then the design rules of choice for geometric purists won’t quite match the network.

The upper map is based upon my original Barcelona design, with non-parallel curves and straight lines that radiate from one single point. The lower map is the newer design, with parallel curves and straight lines at tangents to them. Which to choose? The upper map is less defensible geometrically, but probably fits the shape of the city better. A usability study would be unlikely to yield a clear winner, and so the final decision would be aesthetic, although you could decide to stay with the current official design: an awkward disorderly hybrid comprising little more than chaotic straight lines on a street map.

It has been a quiet start to the New Year, but there are several exciting projects and events in the pipeline. For Map of the Month in February, we will be returning to Berlin. You can subscribe to the newsletter at my web pages www.tubemapcentral.com.

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