Thanks to all at the London Transport Museum who made the Late Debate run so smoothly on July 28th, and to my co-host, Geoff Marshall, who executed his role as MC with aplomb. The people who attended the debate asked challenging questions, and we were delighted with the creativity displayed during workshop sessions, where guests redesigned the Underground Map using craft materials.

I have reviewed shipping rates for my book, Underground Maps Unravelled, and I can now offer this at a bulk price for overseas orders: two for £80, mailed to anywhere in the world. This will be a permanent offer, but until my web pages are updated, click here to place an order.

In the media, on the web

- The latest Paris Metro map to hit the internet receives more attention, with another oblique mention of me in an article in Hotfoot Design. This map also features as part of a compilation from Vivre Paris, which includes my concentric circles version.
- Some extensive research by Tim Briars, investigating one-hundred year-old copies of the London Evening News, reveals that London Underground maps with colour-coded lines were introduced as a result of initiatives by this newspaper. Read the story in two articles, Part 1 and Part 2.

Date for your diary

I will be giving my talk Transit Maps: The Good, the Bad, and the Ugly to the University of the Third Age Hillingdon branch, Monday 9th January 2017, 11:00 at Winston Churchill Hall, Ruislip, HA4 7QL.

Map of the Month: More explorations of rotated tetralinear designs

Summer 2016 has had a tetralinear map theme, with a decorative map for Rotterdam, and a reminder of George Dow’s splendid LMS design from 1935. Using just two angles can cause difficulties showing a complex network but, for a simple one, the result can be very powerful, especially if the basic design is rotated. The downside of this is that most networks do not fit the necessary grid pattern very well, resulting in considerable topographical distortion, or complex line trajectories.

Of course, some cities, especially in America, were created with an underlying grid pattern, and so when looking for candidates for this style of mapping, there is the potential to create very effective designs without excessive topographical distortion. I attempted one such map for Houston last year, and recently experimented with another for Montreal.

Houston Metro Rail is a light rail network under construction in Texas and the projected network map caught my eye as a design that was straightforward but perhaps a little bit clunky. Of course, in the early years of a network, people might need assistance in conceptualising how it will be placed in relation to the context of an established city, but there is also an argument that, what is effectively a fantasy map, needs to be designed for maximum aesthetics and usability. A confused incoherent design might give a poor impression, suggesting to the people evaluating the proposals that the plans are likewise poorly thought through, and an unattractive map might play a part in failing to convince people that they want the rail network to be added to their city; all the associated costs and upheaval must be implied to be worthwhile.

For this design, it was easy to snap the lines to a perfect grid, angled to match the trajectories downtown. The network of major roads, present on the original version, needs to be twisted slightly to match and so, the question is, does the cleanliness and simplicity of the result outweigh the potential conflict with local
people’s mental models of the structure of the city? I do not know anyone from Houston, so if any newsletter readers do, I would be intrigued to receive feedback.

Transit map connoisseurs will know that, for many years, the Montreal Metro has offered a dramatic black-background version, showing the network with a distinctive tilt; a classic example of a rotated tetralinear design. Unfortunately, the power of the maps has been diluted by using additional angles to show the commuter rail lines and, more recently, reverting to an octolinear design, even though this is not fully justified from a topographical perspective.

With the official designs considerably weakened, I decided to investigate if they could be salvaged at all. Consulting geographical maps, it was clear that most of the zig-zags (especially on the Green Line) on the current official map are not only unjustified, but also incorrect; a clear case of spurious topographicity, in which the lines seem to be kinked at the whims of the designer. I chose a slightly steeper angle than usual, making station names easy to place, laid out the metro lines, and then ran into problems adding the commuter railroads, with tortuous and unconvincing routes for the lines starting from Lucien-L’Allier. Returning to the geographical maps, it became clear that topographical errors in the various official and amateur versions were resulting in their use of additional design-weakening angles, as well as many station names interrupting lines. After rebuilding my own attempt to take account of this, everything fell into place neatly. There is really no need for any station names to interrupt lines, and the topographical distortion is not excessive, even with the restrictive design rules. I was even able to add commuter-rail stations within the city. After all, having gone to all the trouble to show the routes, why omit their stations?

If a designer is going to go to the effort of creating a dramatic, powerful rotated tetralinear design, then damaging it with excessive zig-zags or additional angles does not make any sense. A more conventional octolinear map should suffice. Irrespective of the design rules, always keep a geographical map handy when creating any schematic map. If railways or surface features, such as rivers and coastlines, suddenly start behaving strangely, then its possible that a geographical distortion has sneaked in that is actually damaging the simplicity of the design. Sometimes geography is a friend, and embracing it improves the final product.

Designing a map is usually a trade-off: using few angles usually results in complex line trajectories, using many permits simpler ones, but at the expense of the overall coherence. But, if a particular network suits tetralinear, or hexalinear angles, then why use traditional octolinearity? Simple trajectories, few angles and high coherence is an effective combination; one that is worth striving to attain. For more strivings, subscribe to my newsletter at my webpages: www.tubemapcentral.com.

Max Roberts, mjr@tubemapcentral.com