Thanks to the London Transport Museum for hosting me at their Technology and the Future event on Wednesday 29th November. A slick operation as always, and the design workshop was entertaining. Christmas will soon be with us, and if you intend to give posters or books as presents, do try and place your orders by the end of the first week of December!

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 Broomfield and District branch on Wednesday 9th May 2018, 14:30, at Broomfield Village Hall, Main Road, Broomfield, Chelmsford, CM1 7AH.

Map research

Two more preprints to download, and more to follow after Christmas …

- My paper on the benefits and pitfalls of digitising historic schematic maps, presented at EOM 2017, has been enlarged, with extra illustrations, and submitted to The Cartographic Journal.
- With Peter Lloyd and Peter Rodgers at the University of Kent, our first paper on the effect of colour-coding on map usability has been completed. This is a preprint submitted to Diagrams 2018. There are some intriguing findings. Lines on the New York City subway Weekender subway map are generally easier to follow if routes are given individual colours, but the effects are contextual, with fewer errors for other colour-coding systems under certain circumstances. The results are a good demonstration of how information, inconsistently applied, can lead to errors.

In Newsletter 31, I featured a map of the Köln network, which has a perfectly reasonable official map that uses conventional octolinearity, but a cursory glance at a geographical map reveals that the city is almost perfectly structured as a series of concentric rings. By using design rules that match the structure of the city, everything falls much more neatly into place.

For all concentric circles/spokes maps, the most important part of the process is identifying a good central point of radiation. Amsterdam Centraal Station is an obvious starting point but, using this, I found that the tram lines were not relating to each other very well at Dam and Spui. The trams are difficult to place because there are so many of them, but if the map creation process runs into difficulty, so quickly, at such an important location, this is a sure sign that there is something fundamentally wrong with the design.
Centering the map at *Nieuwmarkt* might be inappropriate in terms of amenities, but considering how network is organised, routes encircling or radiating outwards from the centre, this is almost perfect. One final logical step shapes the map: Basing the design on concentric circles distorts the line trajectories around the station, forcing contrived exits, and upsets shape of the canals. Concentric *U*s are an even better match for how the city is organised, but the satellite photograph shows that this should have been obvious! Always match the design rules to the network structure.

With each tram route given its own colour, the result is certainly brightly-coloured, but the thick bundles of lines cause problems for showing the famous concentric canals. Is this the best colour-coding method? Well, by coincidence, a paper linked to on the previous page says yes, provided that the task is to follow the individual routes. For the task of planning a journey, the answer might be different, watch this space.

Yet again I create a map that will soon be obsolete: *In summer 2018 the historic network will be, controversially,* reorganised and cut back to make way for the new North-South metro line. Overturning travel patterns that have developed over more than a century is a challenging task for a transport planner, and so I will be paying attention to see what happens. The December newsletter is my 50th edition, and something special is planned for Map of the Month. Newsletter subscribers will receive it in advance of Twitter followers, so add your name to my subscription list at [www.tubemapcentral.com](http://www.tubemapcentral.com) to make sure that you see it first.

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