

Maps can document transformations

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You ain't seen nothing yet. If the transformation wrought on society by COVID feels hard to cope with, think again. This may turn out not to be the transformation that it seems – the post-pandemic world will still look much like its predecessor, even if some people are still working from home, or wearing masks on public transport. A true transformation will require a complete rethink of the way we do things – what we eat, where we live, work and play, and how (or even if) we travel. The COVID-induced changes may turn out to be quite minor compared to those required to meet an altogether greater challenge – reengineering almost every aspect of our lives to create a zero carbon society as a response to the risks of climate change. Although this will not happen overnight, if we are to limit global heating and avoid destructive environmental changes, most of this transformation has to be made in the next thirty years.

The pandemic has affected our sense of place and our horizons – philosophically as well as geographically. If we can no longer safely hop on a train to London or a plane to Los Angeles, are we trapped or do we build deeper roots in our local community? If, in its early days, there were gaps on supermarket shelves, did we really need to eat Kenyan beans or Peruvian asparagus? And do we need to party in Prague, rather than in our back gardens? We have all been confronted with maps showing infection rates, borders and boundaries – *“you should stay at home, you cannot go there.”*

This narrowing of place during the pandemic may be temporary – budget airlines have not all gone bust, and international supply chains proved more resilient than expected. But the next transformation may prove to be much deeper and longer lasting. Scientists have shown that the world is heading for a global climate catastrophe unless it rapidly reduces its emissions of carbon dioxide (CO₂) and other greenhouse gases, principally associated with the use of fossil fuels (CCC, 2020; IPCC 2014). This will require huge changes to energy systems – at home, at work and in how we travel.

I am professionally involved in facilitating this energy transformation, including encouraging the move away from internal combustion engines in road vehicles to lower carbon forms of propulsion, such as electric vehicles. However, for transport this is just the latest transformation in mobility – in earlier times we have seen the move from foot or horse to rail, the arrival of bicycles – which created a demand for leisure travel, at least among the European middle classes – and then the move from horse buggy or bicycle to automobile. Many of these earlier transformations have been mapped, too.

That brings me to my research. As well as being a sustainable energy professional and environmentalist, I am a PhD student at Canterbury Christ Church University, researching into twentieth century road maps, primarily those issued by petrol and oil companies. Everyday maps such as these reflect and report upon historical changes – minor transformations, perhaps, compared to COVID or climate change, but ones showing the rise of diesel or LPG,

the spread of dedicated motorways, the introduction of lead-free petrol or the introduction of filling stations at supermarkets, for example.

A research theme that has emerged is the degree to which maps encouraged or supported the uptake of new fuels or forms of transport as opposed to simply reflecting their existence – how they communicate with their intended users. Maps supporting most twentieth century transitions were muted, perhaps implicitly accepting they were not transformational compared, say, to the Victorian revolution in personal mobility. For example, symbols marking petrol stations might grow a flag or an extra underlining to show that new fuels were available. In other cases maps were produced for users – but diesel maps generally assumed the driver was piloting a truck, not the family car on a day out: the move to diesel as a mass market fuel went almost unremarked. Specialist fuels, such as liquefied petroleum gas (LPG) spawned equally specialist maps – these documented incremental change, not a full blown transformation.

So what are we to expect from the next transformation, away from fossil fuels?

Just as motorists seeking diesel or lead-free petrol needed a map to find a refuelling station, so do owners of electric vehicles. However from the viewpoint of a cartographic historian, there is one major difference: the digital transformation has revolutionised how maps are produced and consumed. Whereas I can relatively easily find a Pratt's Perfection Motor Spirit road atlas from over 100 years ago, I cannot access the Zap-Map of EV charging points from even one year ago: being web-based, it has been already been lost for future researchers, just as have the interactive maps showing COVID infections. The situation for the resurgence of the bicycle is better: many local authorities have supported local cycling maps, and Sustrans has also produced maps of its long distance leisure routes. However there is a danger that much of this climate change-induced transformation will not be documented.

At one level, this may not matter. A map showing electric vehicle charging points is never going to affect our perception of the world as much as a mediaeval *mappa mundi* or one showing the expansion of empires, or even a map showing areas of high COVID infections, or cities at risk of flooding from rising sea levels due to climate change. At most, it might be seen as providing a limitation on our horizons – “I cannot go there, as I cannot recharge my car to return home” – as the thrill of the open road gives way to range anxiety. But there is a danger we will worry less about what happens in Pyongyang or even Paris if a COVID or carbon-constrained world makes them feel more distant. Zoom or Teams may have shrunk the world for some, but I for one will miss the discovery of real places previously only seen on maps: a less-travelled society may be a more inward looking one.

Despite this, maps have a role to play in keeping horizons open. A child with a paper map may indeed point to the blank spaces on the page:

'Now when I was a little chap I had a passion for maps. I would look for hours at South America, or Africa, or Australia, and lose myself in all the glories of exploration. At that time there were many blank spaces on the earth, and when I saw one that looked particularly inviting on a map (but they all look like that) I would put my finger on it and say, "When I grow up I will go there".'
(Conrad, 1899)

Conrad's maps were still showing a major transformation as Europeans were, quite literally, still colouring the map red. My transformations, evidenced on twentieth century maps, are quite minor even if they felt significant to those living through them. The next transformation – from a fossil fuelled world to the cleaner, renewably powered one needed to reach net zero by 2050 – will require carbon and energy savings equal to 2020's COVID-induced reductions every single year. Without a concerted effort, we will need to redraw maps – not to show mundane changes, such as EV charging points, but to reflect changes to coastlines and cities, as the very countries we live in are transformed by climate change. Compared to the changes of the past century: *you ain't seen nothing yet!*

References

- CCC, (2020), *The Sixth Carbon Budget - The UK's path to Net Zero*, Committee on Climate Change, London
- Conrad, J. (1899), *Heart of Darkness*, Blackwood's Magazine, Edinburgh
- IPCC, (2014), *Climate Change 2014: Synthesis Report*. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland