



Learning post-representational mapping from professional cartography

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Abstract

There is a sustained distancing of the discipline of geography from academic and professional cartography. Countering this geography-cartography separation, this article presents some of the findings from an ethnographic exploration with two professional cartographers, Molly O'Halloran and Daniel Huffman. The study highlighted the personal, as well as the processual and post-representational value of O'Halloran's and Huffman's map-making. Furthermore, O'Halloran's and Huffman's mapping practices can be described as *postdigital*: they both interweave digital and analogue techniques, expanding the application of the digital in mapping beyond for example geographic information systems (GIS), geovisualisation and virtual reality (VR). The affordances of postdigital mapping approaches for engaging research participants/collaborators and aiding exploration in the context of empirical geography research could be fruitfully further explored.

Keywords: Map Studies, Critical Cartography, Geography Methods, Post-Representational, Postdigital

1. Introduction

Map studies in the last twenty years or so have valuably contested several binary understandings of mapping (see e.g. Del Casino and Hanna, 2005; Dodge et al., 2009). The idea of binaries is taken up in this short article in relation to the concept of post-representational mapping, and to professional versus amateur cartography. For the purposes of this article, the term post-representational mapping can be understood as a challenge to the binary of representation and process: post-representational mapping attends to mapping as a process, as well as to maps as representations (Kitchin,

2014; Perkins, 2014; see Rossetto, 2015, for an exploration of the term "post-representational" in map studies). Attention to process has also a longer history in Indigenous mapping (see, for instance, Louis, 2017; Lucchesi, 2018; Pearce and Louis, 2008; Rundstrom, 1995).

Professional versus amateur map-making is a binary that is still evident in the map studies and geography literature. There is a sustained distancing of geography from academic and professional cartography in many contexts. Academic and professional cartography is not generally seen by (human) geographers and map studies scholars as a practice that demonstrates

more humanistic and affective mapping, which is usually perceived as the preserve of amateur mapping such as community or counter-mapping. Alongside this division, calls for more process-focused explorations of mapping, that use ethnographic, rather than for example representational textual approaches (Perkins, 2008; Dodge et al., 2009) have not resulted in many process-focused explorations of professional cartographic practice (three exceptions are Boria and Rossetto, 2017; Duggan, 2017; Lo Presti, 2017). I sought to add to this ethnographic corpus by conducting a remote ethnographic exploration in 2020 with two professional cartographers, Molly O'Halloran and Daniel Huffman (Miles, 2021).

I purposively selected these two cartographers on the basis that they author detailed blogs of their map-making processes – *mollyohalloran.com/posts* and *somethingaboutmaps.com* – which I explored in interview with them¹.

The study highlighted not only the personal significance of mapping to O'Halloran and Huffman, but also the value of process². Therefore, not only did this exploration apply the concept of post-representational as an analytic lens, but it pointed to potential practical deployments of post-representational mapping in other contexts, for example empirical geography research. In other words, O'Halloran's and Huffman's practices signal the potential of process-focused mapping activities. In addition, the following discussion also briefly explores the postdigital (Berry and Dieter, 2015; Cramer, 2015; Jandrić and Knox, 2022) in O'Halloran's and Huffman's map-making, since both their practices interweave digital and analogue techniques.

¹ This article is based on my reflections as a geographer/map studies researcher. For O'Halloran's and Huffman's reflections on their cartographic practice, see for example their blogs and contributions to the *North American Cartographic and Information Society* conferences (see *NACIS on youtube*).

² A full discussion of the study is beyond the scope of this short article.

2. Personal and processual mapping

Map-making is not only a professional practice to Huffman and O'Halloran, but also a personal one. Huffman, together with another cartographer, John Nelson, emphasises the personal, reciprocally-generative relationship between maps and their makers in the tagline of their blog *A Cartographer's Story (adventuresinmapping.com)*: "We make maps, but sometimes maps make us".

In this blog, cartographers can share how their work has emotional meaning, or is empowering, for them. Similarly, for O'Halloran, cartography is more than a way to earn a living. O'Halloran is often commissioned to produce maps for books about particular landscapes and she enjoys being involved in projects that explore people and places, such as a map commissioned for a book about *Barton Creek Watershed*, Texas, USA, that we explored in interview (Figure 1).

The processual was evoked by both O'Halloran and Huffman themselves. Many of O'Halloran's maps are created with water-colours, pencil and ink, and when I asked a general question about the materialities of her practice, O'Halloran brought up the (personal) significance of process herself:

"I just love [map-making] and I think it's definitely tied to a materiality and I just like the feeling of paper. I love, I've got a bunch of, I just love all the gear, I love it. I love using brushes ... I love trying out different pen nibs. Yeah, it has a lot to do with materiality for me, textures and feelings and process. *I really love process. Like the process of doing it*, the tracing paper (emphasis added)".

It is not surprising of course that O'Halloran enjoys the creative process of map-making, but she also values the process of learning about the places she maps as she is drawing and painting them.

Huffman evoked mapping process when we were discussing a map commissioned for an in-flight magazine (Figure 2).

He remarked

“when there’s a clear process to follow and you see immediate improvement or accomplishment during the process, which you do with this, and you draw a few lines and this area is now connected up, I did it and now I can move onto the next one, then that’s a nice place to be in”.

This way, he reflected the therapeutic potential of the creativity of mapping described by Iverson (2019).

3. Postdigital mapping

Huffman often experiments with new techniques in personal projects in which he creates maps of his own local area. In one such project, Huffman (Huffman, 2020 7 January) created a meticulously hand-made *Atlas of Great Lakes Islands*, in a “mission to articulate, in my own way, the beauty of” his Great Lakes homeland (Figure 3). It was very important to Huffman that the maps were “hand-printed, hand-wrinkled, hand-torn, and hand-bound (using hand-dyed thread)”. However, the maps were designed digitally. Huffman’s method here reflects one aspect of the concept of *postdigital*; he purposefully combines digital and analogue techniques. Postdigital also refers to the inseparability anyway of the digital and the analogue.³ Huffman describes his personal connection with this atlas: the atlas has “more of me” than any of his other projects. These maps also enabled a geographical exploration of Huffman’s local area: “I think of [the maps] partly as an exploration of geographic forms: the interesting aesthetics of the shapes nature has laid down” (Huffman, 2020 7 January).

O’Halloran’s practice can also be described as postdigital. For the *Barton Creek Watershed* map, O’Halloran first pencil-traced a print-out of selected features from online mapping. She then transferred the outlines to watercolour paper, before hand-inking and painting the map, which is finally digitally imaged. O’Halloran advocates the use of watercolours as an alternative to

particular GIS and *Adobe Illustrator/Photoshop*⁴ techniques (O’Halloran, n.d.). For example, in these mapping applications, cartographers compile digital layers that contain different features and that have varying degrees of transparency in order to illustrate intersecting geographical areas. However, in the *Barton Creek Watershed* map, successive layers of different watercolours were added to paper in order to depict the overlapping underground *Edwards Aquifer*, the watershed and the *Barton Creek Wilderness Park* (see Figure 2). Map labels though were added digitally since this is quicker than hand-labelling (which is only possible for the biggest-budget maps).

Both O’Halloran’s and Huffman’s approaches demonstrate a strong potential value in postdigital techniques for engaging research collaborators in exploratory research activities: such techniques enable collaborators to take advantage of the affordances of digital technology whilst also facilitating a more hands-on, intimate approach. Such an approach stands in contrast to the use of advanced technologies, from which participants and collaborators may feel more distanced. For example, Aitken and Craine (2009, pp. 141-148) caution that as developers create ever more sophisticated technologies, such as hyper-realistic geovisualisations and virtual reality (VR) used to evoke emotion, that users might, paradoxically, become “anaesthetised” to them. The authors remark that “spatial data visualized through geographic information systems – in cartographic form or otherwise – can be joyless and overcalculated, with a tendency for the program to overwhelm the content”. In contrast, Huffman’s and O’Halloran’s postdigital practices demonstrate how they themselves are part of their mapping. Furthermore, readily-available equipment that requires little to no training – what might be described as “low-tech” options – that can be deployed in a wide variety of settings with different participants and collaborators is valuable. For instance, Engman et al. (2023, p. 52) have used a “postdigital mapping” technique in a group activity that

³ Postdigital is a complex concept that is beyond the scope of this short article. See Berry and Dieter, 2015; Cramer, 2015; and Jandrić and Knox, 2022 for the history, as well as breadth of the concept.

⁴ *Adobe Illustrator* and *Photoshop* are graphic design applications commonly used by professional cartographers.

mapped career trajectories. In this activity, individuals' hand-drawn contributions were collated by photographing their drawn pieces and combining digital photos in a shared (metaphorical) map. Postdigital approaches to geographical mapping in place-based research might therefore facilitate a more personal and engaged exploration than more technological ones in some contexts.

4. Conclusions

The study highlighted the personal aspects of O'Halloran's and Huffman's map-making, as also demonstrated in Lo Presti's (2017) exploration of professional cartographic work. O'Halloran's and Huffman's practices also signal a value in the process of making maps, beyond the representational form of the map: map-making is an engaging learning activity. This is an affordance applicable to other contexts beyond professional cartography such as empirical geography research. The value of the process of mapping has also been observed in participatory mapping contexts: mapping projects have been beneficial for exploration and for building community capacity, as well as for the maps generated in and of themselves (Brown and Knopp, 2008; Haworth, 2018; Sletto, 2014).

My research with O'Halloran and Huffman contributed to my conceptualisation of contrasting practices of mapping and a post-representational *mapping space*, as proposed elsewhere (Miles, 2023a, 2023b). Mapping space is a space of collaboration and learning for transdisciplinary researchers, or for geographers with different research foci from across the discipline. As such, and reflecting Kitchin and Dodge's (2007) and Perkins' (2003) concerns regarding critical map studies' potential preoccupation with theory, this study suggests ways to widen critical mapping practice.

Rankin (2022) has argued that broadening the ways in which we do mapping is as important as expanding the diversity of people conducting mapping⁵. The number and diversity of people

making maps has accelerated outside of professional cartography in the last three decades or so, and very valuably in many contexts. This particular exploration *within* professional cartography here though has pointed to new mapping practices.

The breadth of mapping practice can additionally be widened by exploring alternative forms of digitality. O'Halloran's and Huffman's postdigital practice highlights additional digital mapping techniques to GIS, geovisualisation and VR for example. Postdigital ideas have been little explored either in mapping studies (Duggan, 2017, is one exception) or more widely in digital geographies. The affordances of postdigital mapping approaches for engaging research participants and collaborators and for aiding exploration could be fruitfully further explored.

⁵ Rankin (2022) is here writing in the context of national mapping, but the point can be applied beyond this context.

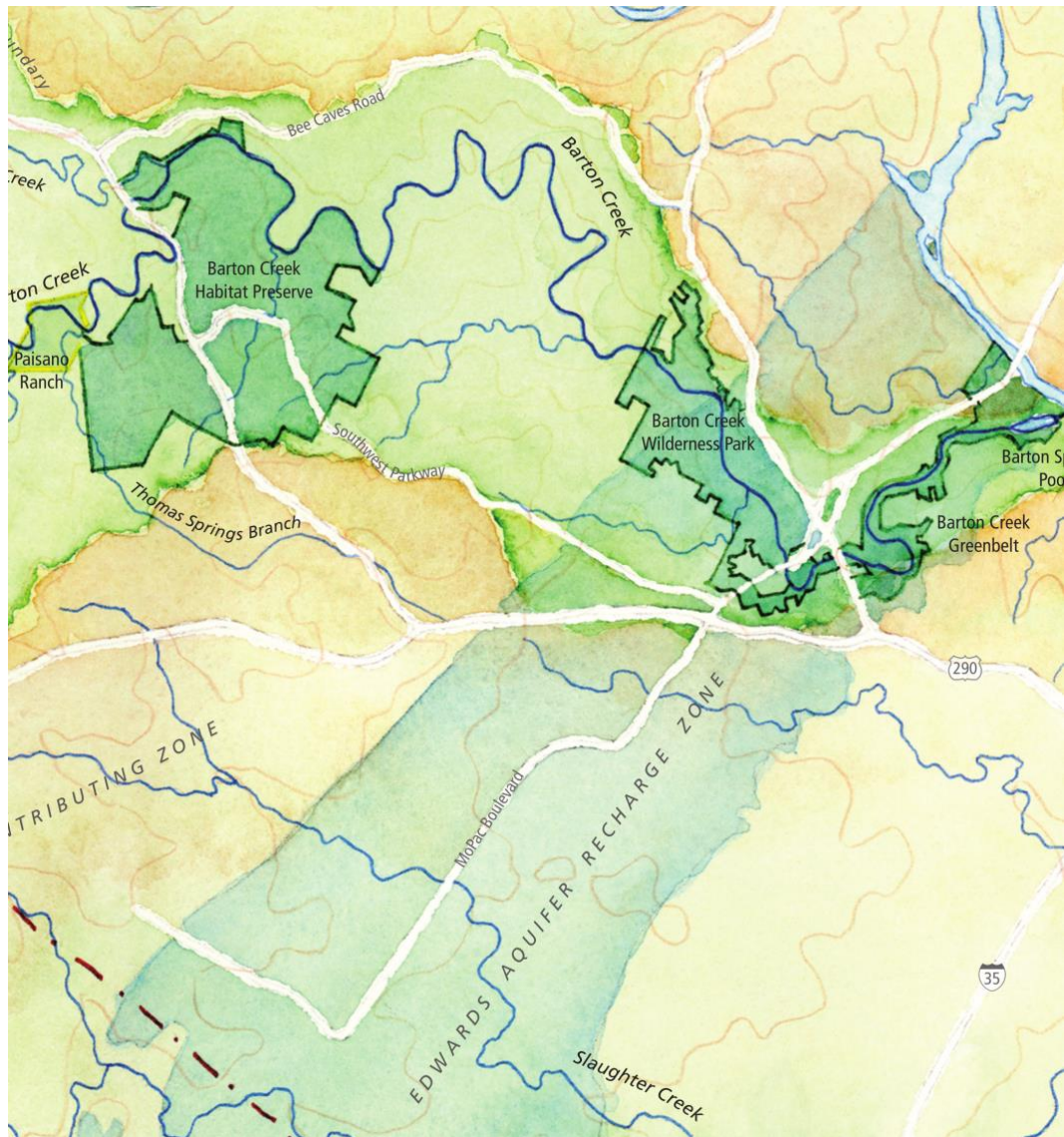


Figure 1. Excerpt from *Barton Creek Watershed* by Molly O'Halloran. Courtesy of the cartographer.



Figure 2. Excerpt of an airline route map by Daniel Huffman (version that Huffman preferred and wrote an account of, rather than client’s preferred version). Courtesy of the cartographer.



Figure 3. Hand-printed and hand-bound *Atlas of Great Lakes Islands* by Daniel Huffman (inset: part of the digital design process). Courtesy of the cartographer. For more of the process see <https://somethingaboutmaps.wordpress.com/2020/01/07/something-of-myself/>.

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