REVIEW ESSAY

Plus ça change: Defining Academic Cartography for the Twenty-First Century

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THE MAP READER: THEORIES OF MAPPING PRACTICE AND CARTOGRAPHIC REPRESENTATION / ed. Martin Dodge, Rob Kitchin, and Chris Perkins. Chichester, UK: Wiley-Blackwell, 2011. Pp. xxvi, 478; figs. (col.); index. ISBN-13 978-0-470-74283-9 (cloth), CAD$131.95, US$119.95, €96.00, £80.00. ISBN-13 978-0-470-98007-1 (ebook), CAD$131.95, US$119.95, €96.00, £80.00. See http://onlinelibrary.wiley.com/book/10.1002/9780470979587 for complete contents and ePub options.

The 1980s was a decade of intellectual crisis within Anglo-American academic cartography. The crisis stemmed from the realization that psychophysical design studies had largely been a dead end, from a growing dissatisfaction with the idea that the core of cartography was simply "communication," and from the critique levelled by a variety of commentators against the field's dominant ideologies and misplaced priorities. Fortunately the ongoing development of digital technologies had brought increasingly powerful computing capabilities onto desktops, and academic cartographers quickly grasped the opportunities they offered (Montello 2002, 294–95, 297; McMaster and McMaster 2002, 317; Dodge and Perkins 2008; Mennis 2011, 199). At the same time, academic cartographers in general rejected the critique of modern cartography as overly conspiratorial and irrelevant (*The Map Reader*, p. 5; also Edney 2005, 3–5). Some academic cartographers did accept the critique, leading to the movement for "critical cartography." Yet these proponents of critical approaches remain largely distinct from the rest of academic cartography; they look less to the specific field, and more to the wider discipline of geography, for validation and for publication outlets. Understanding this history and institutional divide is essential for understanding how *The Map Reader* has both undeniable value and serious flaws.

Martin Dodge, Rob Kitchin, and Chris Perkins are the primary proponents in the United Kingdom and Ireland of critical approaches to cartography. They have argued, in various authorial combinations, that the focus of cartographic studies must be relocated from the producers to the consumers of maps and from map artefacts to mapping processes. Such a *processual* approach (for want of a better term) is engaging and challenges us to reconsider completely our understanding of the nature and practices of map making and map use. With *The Map Reader*, they promise "a primer for students, academics and lay readers interested in understanding the appeal and power of maps" (p. xxi), which they will achieve, their subtitle suggests, through a collection of theoretical and conceptual readings, and perhaps some evocative primary sources as well, that address the nature of maps and the processes of map production and consumption. To engage such a varied audience, these readings would have to be drawn from several areas of scholarship to capture the wide breadth of interest in maps and mapping.

But what the editors have actually produced is a guide to the current state of academic cartography. *The Map Reader* defines the current intellectual concerns of the field today, rather than priming a broad audience about the potency of maps. The editors construct a rather subtle argument: presenting scholarship from both sides of the field's divide, they argue that the differences can be resolved through the adoption of a processual approach to cartographic studies; this way, all cartographic studies will become critical, but in a manner relevant to the pragmatic concerns of most academic cartographers (esp. pp. 5–6). For this argument to work, the editors must give equal credence to both sides of the field. In accommodating non-critical scholarship, however, the editors accept the preconditions underpinning that scholarship, which are precisely the things that critical scholarship refuses to take for granted (Crampton and Krygier 2006). In other words, the editors undermine their own argument by perpetuating the inadequacies of the modern cartographic ideal.

The primary content of *The Map Reader* is, of course, the selected readings themselves. The editors have brought together 55 readings, two-thirds of which were originally published after 1990 (Table 1). This is a great deal of content, and the editors have had to excerpt heavily from the original articles and book chapters. With one exception, to which I will return, they have done a good job in excerpting the original readings. The key question for any

Table 1. Chronological distribution, by half-decade, of essays within each section of *The Map Reader**

	§1 Concepts	§2 Technology	§3 Aesthetics	§4 Cognition & Culture	§5 Power & Politics	Total
2006–2010	2	1	2	2	3	10
2001–2005			3		1	4
1996–2000	2	5	1	2	1	11
1991–1995	1	3	1	3	4	12
1986–1990	3		1	1	1	6
1981–1985		1				1
1976–1980	3					3
1971–1975	2			1		3
1966–1970						–
1961–1965			2			2
1956–1960		1				1
1951–1955			1			1
1946–1950						–
1941–1945				1		1
	13	11	11	10	10	55

* Translated works are dated by their original appearance rather than by their English-language publication.

such collection, however, is which works were selected for inclusion.

The editors' basic requirement is that each reading make a positive contribution to cartographic studies in the early twenty-first century (p. xxi). While several of the selections do provide a historical perspective on the development of academic cartography since 1945, the editors make no attempt to provide a coherent history of the field. In particular, they are unconcerned with aspects of the field that are now manifestly irrelevant. The entire program of psychophysical map-design research accordingly makes just one brief appearance, in Robert Lloyd's (2000) "Understanding and Learning Maps" (§4.9). By contrast, the editors include several studies on the specific issues generated by new digital technologies that now hold academic cartographers' attention.

Pragmatically limited to works published in English – including a couple of previously translated works, although without the commission of any new translations – the collection has a self-admitted Anglo-American flavour. Scholars whose own work is omitted will undoubtedly feel slighted; personally, I'm very pleased by the inclusion of my own early essay "Cartography without 'Progress'" (Edney 1993, §1.10). Few readers will object to the presence of portions of undeniably key texts in twentieth-century academic cartography, such as Arthur H. Robinson's (1952) *Look of Maps* (§3.3); Jacques Bertin's ([1967] 1983) *Semiology of Graphics* (§1.2); Robinson and Petchenik's (1976) *Nature of Maps* (§1.3); Wood and Fels' (1986) "Designs on Signs" (§1.7); and J.B. Harley's (1989) "Deconstructing the Map" (§1.8). Nor should readers complain about the inclusion of what I consider to be "new classics," notably Benjamin Orlove's (1991) "Mapping Reeds and Reading Maps" (§4.7); John Pickles' (1992) "Text, Hermeneutics and Propaganda Maps" (§5.3); Nancy Peluso's (1995) "Whose Woods Are These?" (§5.6); and Del Casino and Hanna's (2006) "Beyond the 'Binaries'" (§1.13). I can readily accept the absence of personal favourites such as Barbara Bartz Petchenik's "Cognition in Cartography" (1977) or Robert Rundstrom's "Mapping, Postmodernism, Indigenous People" (1991), because their important themes are developed through other excerpts. Given the editors' position that maps work by making the "unseeable" visible (p. xx), I was surprised not to see an excerpt from Christian Jacob's *The Sovereign Map* (2006), which makes that argument so strongly. But these are minor cavils: it is impossible to include everything.

Then there is the content added by the editors to direct and shape the reader's comprehension. The editors provide brief introductions to each excerpt, to each of the five sections into which the excerpts are arranged, and to the volume as a whole. Each introduction explains the significance of the material that follows and outlines the particular insights that the reader should gather from them. The editors also supply each excerpt with four or five briefly annotated suggestions for further reading; the

section introductions have their own extensive reference lists. The editors are to be commended for introducing students, both directly and indirectly, to a significant portion of the cartographic literature.

While avoiding much overt "consideration … of the history of cartography" (p. xxi), the editors do draw some inspiration from historical studies (with §1.8, §1.10, §2.2, §2.9, §4.6, §5.2, §5.3, and §5.4). More importantly, they adopt a historical perspective in framing the readings. However, because they have not actively engaged with the history of cartography, and more especially the history of academic cartography, the editors end up rehearsing the now cliché history promulgated under the modern cartographic ideal, that the history of modern cartography is constituted strictly by technological change and progress. This is an uncritical understanding of cartographic history, and the editors' reliance upon it serves only to gut critical approaches of their power and effectiveness.

The editors subscribe to the argument that academic cartography's two post-1980 revolutions are interconnected rather than concurrent. Section 1, "Conceptualizing Mapping," deals with the first revolution through 13 entries that cover the main theoretical frameworks advanced by academic cartographers in seeking to define the intellectual core of cartography as, variously, the act of communication, visualization, or social criticism. With the section's last three works (§1.12–14), the editors address their own concern to establish that core as the process of creating meaning. The second revolution is the subject of section 2, "Technologies of Mapping." Here, excerpts from Waldo Tobler's prescient (1959) "Automation and Cartography" (§2.5) and the introduction to Mark Monmonier's (1985) *Technological Transition in Cartography* (§2.2) are used to set up the digital transition as a revolutionary expansion and reconfiguration of cartographic practices. The section's other readings are mostly from the 1990s and discuss new cartographic forms engendered by digital technologies; they especially emphasize the place of the Internet in fostering interactive map creation by users of mobile devices and Web-based mapping systems.

In their overviews of each of the first two sections, the editors do not go so far as to claim that the conceptual revolution was caused by technological change – the seeds of cartography's cultural turn had been planted in the 1960s and 1970s (see Edney 2005, 33–83) – but they do argue that recent digital technologies have opened up cartography to new approaches and to a more appropriate appreciation of critical approaches. As the editors work through the following three sections, technological innovation is repeatedly presented as driving conceptual change, and cartography is repeatedly presented as an inherently progressive endeavour. Technological change becomes the hallmark of cartographic progress.

The 11 excerpts in section 3, "Cartographic Aesthetics and Map Design," accordingly chart the recent development of new concerns for aesthetics, context-sensitive design, and user-defined mapping in digital environments. In doing so, the editors present, apparently without ironic intent, a disciplinary idealization – that "the user simply read the map, whilst the maker sought to follow best professional practices" (p. 197) – as a valid and accurate description of the actual state of affairs in the mid-twentieth century, a state of affairs that digital technologies have now subverted. Again, the 10 excerpts in section 5, "Power and Politics of Mapping," define modern cartography as a universalist endeavour that is now under technological assault. Social criticism of modern cartography has focused on its supposed "universal qualities" (p. 389) as a scientific endeavour that evolved during the Renaissance and Enlightenment. The editors establish this historical principle with a key excerpt from David Harvey's (1989, 241–59) *Condition of Postmodernity* (§5.2). They then indicate how modern technologies intensified those qualities to give rise to the modern surveillant society, before further technologies increasingly placed the ability to map in the hands of those once subjugated. Even as this argument recapitulates Denis Wood's (2003) polemic that "cartography" is dead, it nonetheless seeks to reserve a privileged place for the "cartographer."

The technological/progressivist argument is much less apparent in the 10 excerpts selected for section 4, "Cognition and Cultures of Map Mapping." These excerpts are broadly divided between cognitive approaches grounded in psychological experimentation, on the one hand, and, on the other, ethnographic analyses of cultural practices in map use. The second set is, to my mind, crucial in demonstrating that cartography must be understood as a process of creating and sharing meaning. The first set of excerpts does, however, sustain the technological/progressivist argument; here, the editors consider how cognitive research in cartography has been reenergized by the proliferation of new representational strategies afforded by digital technologies, for example with Nivala et al.'s (2008) "Usability Evaluation of Web Mapping Sites" (§4.11).

The editors' embrace of a progressivist and technologically driven structure for cartography's history is deeply troubling. The modern notion that there is a single endeavour of turning the world to paper – which we call "cartography" – is an ideological creation of the nineteenth century. It contributed significantly to the intellectual armature by which Westerners construed themselves as inherently rational and other peoples as inherently inferior (Edney 2009, 2012b). The ideal has persisted through the twentieth century and, since the 1950s, has been actively championed by academic cartographers (Harley 1989 [§1.8]). Yet the whole point of a critical approach to cartography is to recognize how this "cartography" is a mythic ideal that has no necessary validity in accounting for how people actually make and use maps. Map readers

have *never* "simply read the map": they have always been bound within circuits of communication with map-makers; context-specific design has always been the norm, in that map-makers have adhered to discursive conventions (including "best professional practices"); what is new in recent years is not the existence of those circuits but the manner in which digital technologies have tightened some of them (in the process returning to a situation pervasive in the Renaissance: see, e.g., Barber 2007).

If we are to seek new and effective strategies for studying and pursuing map production and consumption, we need to shed our ideological blinkers and study the *actual* circuits of communication and discourse that bind map-making to map use (Crampton and Krygier 2006; Crampton 2010). We must understand that there is no such thing as cartography, only multiple ways of mapping, and that each of these modes is constituted by and constitutes society, culture, and (yes) technology. Judging from their previous work, and in particular their conclusion to their recent edited volume, *Rethinking Maps* (Dodge, Kitchin, and Perkins 2009), the editors undoubtedly agree with these points and appreciate them deeply. Yet in *The Map Reader* they seem to have discarded this appreciation.

At best, the editors are guilty of insufficient historical nuance. (Indeed, repetition of thoughts and simple typographic errors suggest that the section introductions were hurriedly prepared.) This might explain their curious treatment of Denis Cosgrove's (2005) "Maps, Mapping, Modernity" (§3.9). The editors state that "the creative impulse [has been] important" in the development of new ways to represent data enabled by digital technologies; they then observe, "the worlds [of] art and science are no longer separate, *if they ever really were in mapping.* Cosgrove (2005) … belies claims of objective rule-based design" (p. 197; emphasis added). Yet if Cosgrove disproved the art/science dualism even at the height of modernity, then why do the editors reiterate (pp. 196–97) the hoary myth that "individualistic and artistic imagery" played a decreasing role in cartography with the steady development of more scientific and technological practices after the eighteenth century? To do so reaffirms the supposedly inherently scientific character of modern cartography without actually asking just what is this practice we call "cartography," just what makes it "scientific" (Krygier 1995), and just what happened to map-making in the eighteenth century (Edney 2012a).

At worst, the editors are guilty of historical distortion. Especially telling in this regard is their serious mistreatment of Wright's famous 1942 essay, "Map Makers Are Human" (§4.2) – which they turn from a clear statement of the need to discipline map-makers so as to prevent their subjectivities, idiosyncrasies, and political biases from infecting the scientific process of map-making (consciously and rather ironically reiterating Eckert 1908) into an assessment of the individuality of the map *user's* interpretation. The editors dehistoricize Wright's essay, both in terms of its original publication context, as a reasoned tirade against Nazi propaganda maps (see also Speier 1941; Quam 1943), and as one of the key defining texts for post-war academic cartography (see Pickles 1992 [§5.3]; Herb 1997). The essay can then be presented as having timeless and *essential* relevance to academic cartography. (I also have to ask how we can meaningfully suppose that an essay from 1942 remains relevant to cartographic studies *70 years* later.)

In perpetuating long-established disciplinary ideologies, the editors frame the wide array of critical essays that they do provide in an outmoded and inadequate appreciation of the histories of cartography and of academic cartography. In this formulation, the constant technological flux in cartographic practice parallels academic cartography's unchanging conceptual foundations. *Plus ça change, plus c'est la même chose.* However, the manner in which the editors had to recast Wright's essay to make it fit *The Map Reader* reminds us that academic cartography is not timeless and that cartography's development is not simply a question of technological progress. Rather, academic cartography has changed over the intervening decades, and what it studies is a multifaceted sociocultural endeavour rather than a unidimensionally technological pursuit. In other words, the volume construes modern cartography to have been in state A until digital technologies pushed it into state B; by contrast, a critical approach understands cartography to have *always* been in state B and recognizes that this has been actively denied by the modern cartographic ideal.

What all this means is that I have absolutely no problem with the editors' overall goal, that of promoting a processual approach to cartographic studies. In fact, I completely agree that a processual approach is key to developing a coherent (i.e., undivided) field. This is precisely my own argument in terms of studying map history: tracing the processes of producing, circulating, and consuming maps is the best way to study mapping in "state B" (Edney 1993, 2012b). Clearly, academic cartographers once again need to foster an active interest in history. Throughout the post-war era and into the 1980s, historical studies represented a substantial component of academic cartography; for example, about one-third of articles in the dedicated journals addressed historical subjects (Gilmartin 1992). Historical studies fell out of favour in the 1980s as academic cartographers turned increasingly to digital technologies; it seemed unnecessary to study the past when the future had so much to offer. *The Map Reader* indicates that academic cartographers can no longer afford just to draw broad inspiration from historical studies; they need to engage actively with historical inquiry to create an understanding of their discipline that escapes the intellec-

tual and historical straitjacket of the field's still-dominant ideologies. Only then can a truly critical cartography flourish.

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