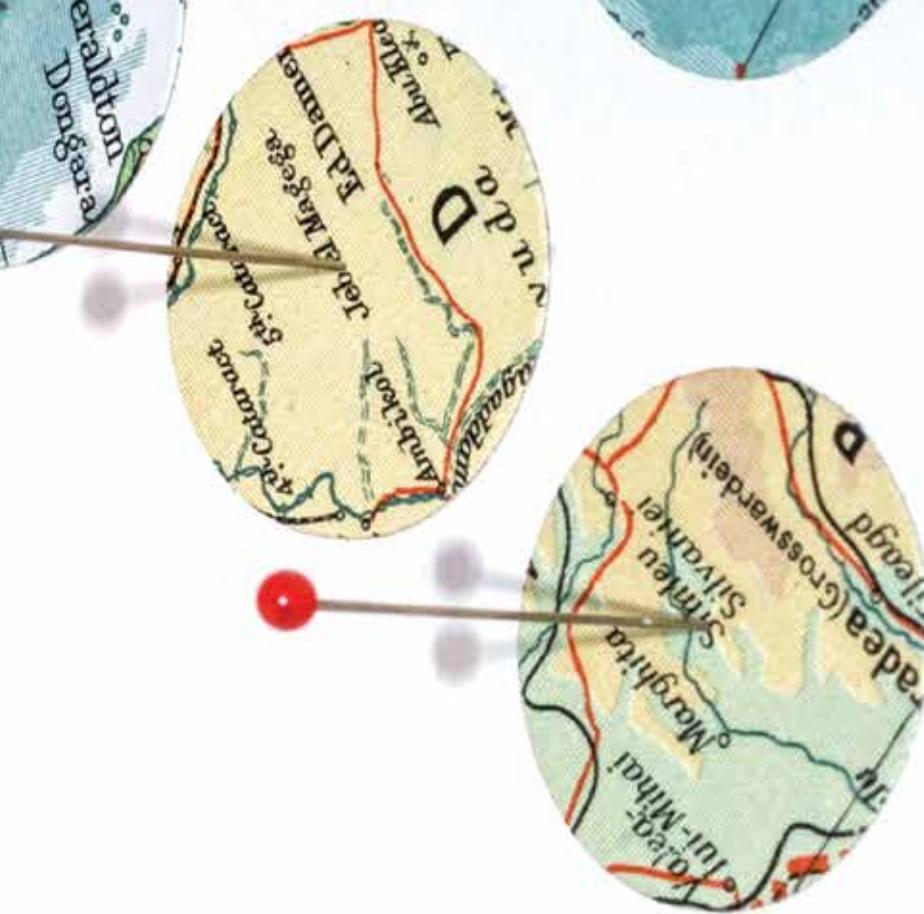


REDRAWING THE MAP

NEW TOOLS CREATE
A NICHE FOR
THE CARTOPHILE

GERMINATE

Adapted from *Germinate*, 2010,
by Shannon Rankin;
www.shannonrankin.com.
Photo courtesy of the artist
(no relation to the author)



by William Rankin

Given the proliferation of GPS devices and interactive mapping online, it's easy to declare the traditional map obsolete. Intuitive turn-by-turn directions have replaced road atlases, Google has upgraded the static map with everything from real-time traffic to restaurant reviews, and Wikipedia has taken the place of the hefty geography textbook. Is there any hope for a cartophile? Will the stand-alone map, lovingly produced and custom designed, be only a niche product for rich collectors and Luddites?

Framing the question that way is misleading because it conflates two separate changes in recent geographic knowledge. One is the shift from paper to the screen. And yes, even though wall maps still have an important size advantage, it is, indeed, difficult to see much future for the traditional coffee table atlas, road map, or topographic quad. But the other shift is much more important, and here the digital realm offers a huge advantage.

The proliferation of new spatial tools—everything from the GPS and GIS (Geographic Information System) to the easy availability of statistical and environmental data sets—is making certain kinds of mapping more relevant and ubiquitous than ever. We are not facing the decline of maps, but a shift from maps as repositories of geographic fact to maps as interpretive, argumentative, and unapologetically partial. Cartographic authorship has changed dramatically as well,

since scholarship, design, and craft are now increasingly mingled. Mapping is no longer a specialist pursuit anxious about its scientific credentials; it is instead a powerful form of everyday communication. Whether these new maps appear on paper or online is largely irrelevant.

For a good example of the waning ideal of the map-as-fact, consider the massive project known as the International Map of the World. Although little known today, for most of the 20th century it was the flagship project of scientific cartography. The idea was relatively simple. Instead of every mapmaker starting from scratch, cartographers and mapping agencies agreed to a comprehensive set of standards that would allow maps from around the world to contribute to a single atlas of unprecedented detail. The project was first proposed at the fifth International Geographical Congress in 1891, and by 1913 nearly every country in the world had signed on. The graphic standards were even given the force of international treaty.

The maps themselves are nothing terribly unusual—they use a uniform 1:1,000,000 scale and show cities, railroads, boundaries, and elevation using familiar colors—but that was exactly the point. One of the first maps ever produced showed Boston, and it was hailed by the press as “the beginning of a more accurate map of the United States than any that now exists.” What made the map worthwhile was its trustworthiness and authority. The graphics were internationally certified,

and the content was endorsed by governments and geographers alike. At its most ambitious, the hope of the project was that nearly all geographic questions could be answered with just one map.

This model came to be seen as seriously flawed as early as the 1950s. Treating maps as comprehensive databases made them cluttered, inflexible, and confusing. Map designers in the US military were especially concerned that high-speed jet pilots and far-flung soldiers needed maps tailor-made for specific tasks, not universal knowledge. By the 1960s, the International Map was being dismissed by prominent mapmakers as nothing more than “cartographic wallpaper,” and the project was finally canceled altogether in 1986.

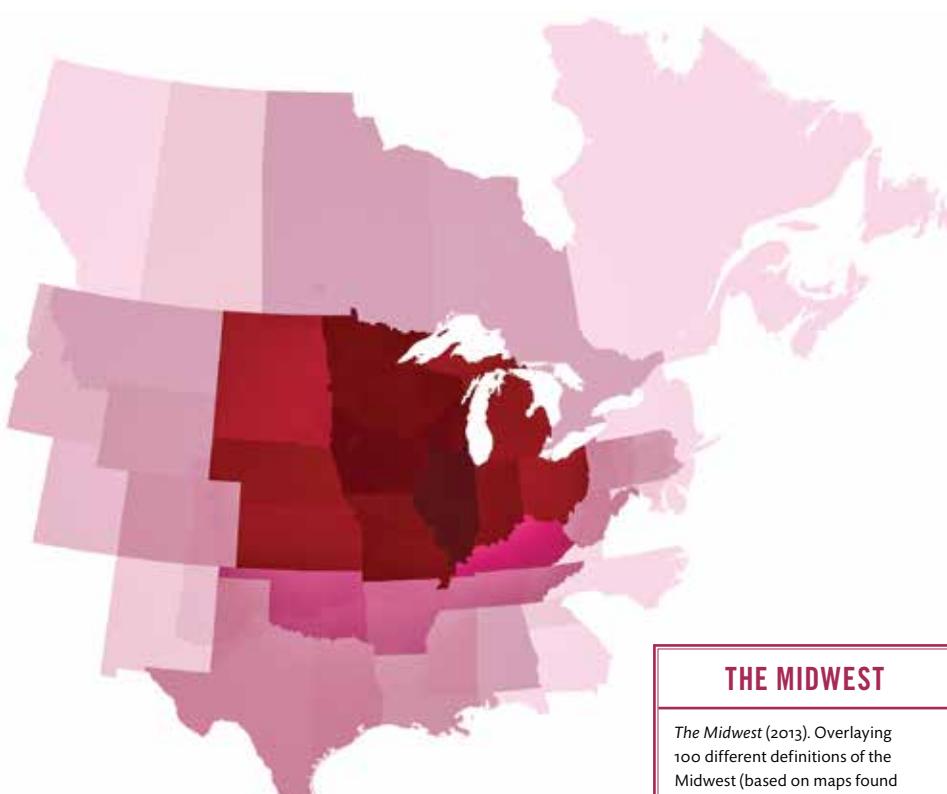
By that time, new computerized databases were seen as much more suitable for the kind of “look-up” tasks that once relied on standardized reference maps. Jacques Bertin, a famous French theorist of graphics, separated cartography into two parts—“inventory” and “message”—and saw each as requiring its own techniques and tools. Barbara Petchenik, another well-known cartographer, predicted the “extinction” of the traditional atlas and thought that the static maps of the future might be useful only for providing “conventions and fixed points of view” for schoolchildren.

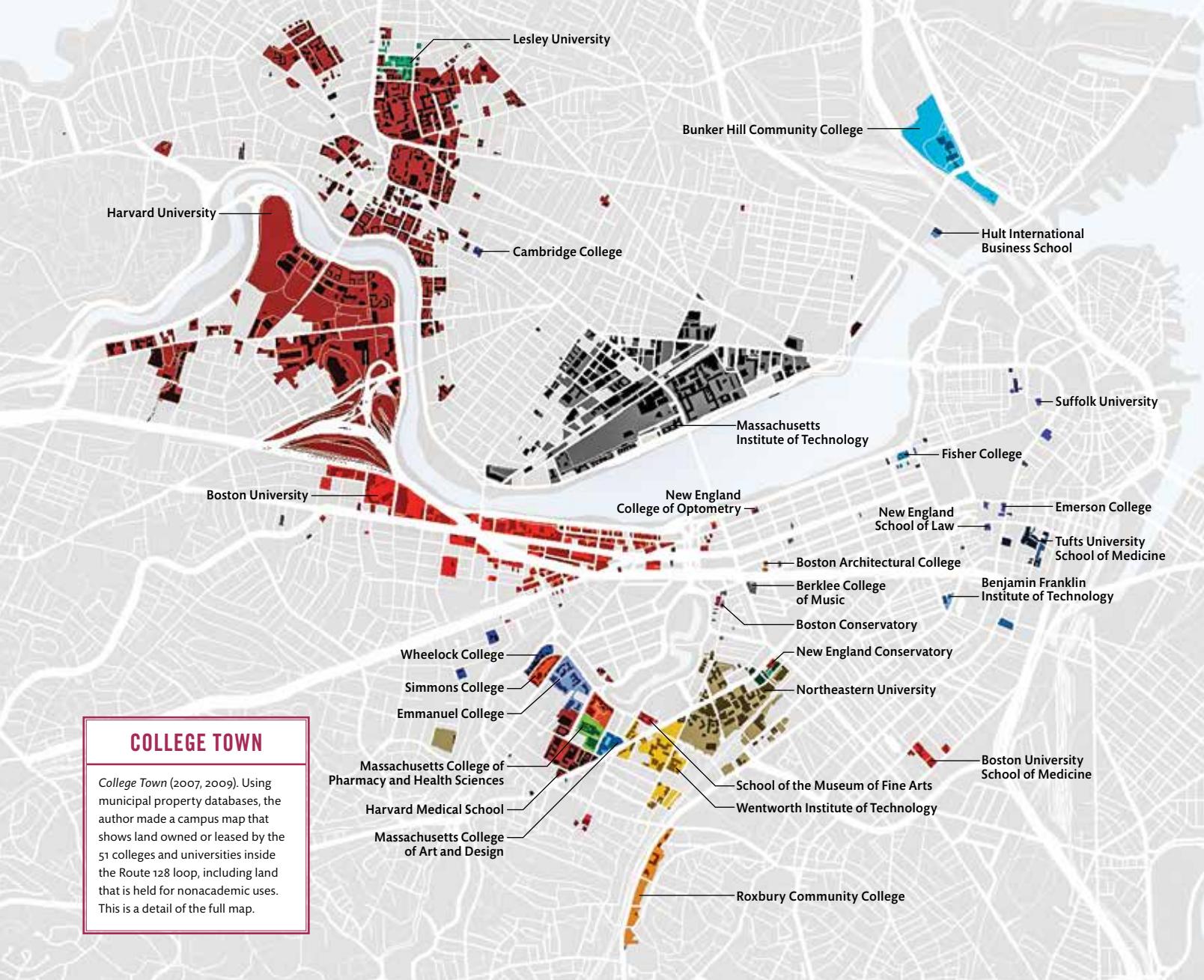
In hindsight, those predictions seem, if anything, rather too conservative, as GIS and online mapping have made “inventory”

information available not just to specialists but to everyone with a smartphone. But the imagined future of “message” mapping missed a crucial development. Today, “message” maps are not being made by large organizations to teach children, but instead by designers, programmers, journalists, and artists participating in vigorous public debate. The largely unofficial nature of these maps has given them an unexpected power, since they can easily use others’ data while bypassing the traditional appeals to neutrality and comprehensiveness. “Inventory” and “message” have indeed diverged, but they have diverged socially and politically, not technologically.

Two examples from my own work show what “message” can mean in the age of Google. The first is a map of universities in Greater Boston. At first glance it may seem like a simple locator map, but this is not just a compilation of campus diagrams for prospective students. Instead, it shows every parcel of land owned by colleges and universities, even commercial or industrial land that is not used for any academic purpose. Making this map required trawling through huge online databases of property records and doing research on holding companies and expansion plans—especially Harvard’s controversial developments in Allston and MIT’s properties in Cambridge. The resulting map is easily legible and perfectly factual, but it intervenes into debates about property taxes, nonprofit status, and the changing social purpose of higher education. “Message” here means taking data collected for one purpose (municipal property assessments) and repurposing it as part of a broader discussion. Since I first posted this map online, it has been used by journalists, historians, planners, and even in conversations between Harvard and the surrounding community.

The second example presents an overlay of 100 different definitions of the Midwest. The source material here is maps that I found scattered around the Internet, mostly from government agencies, nonprofits, and corporations—everything from the regional divisions of the Census Bureau to the sales areas of Plunkett’s Pest Control. The goal was to reflect on collective identity, geographic imagination, and the difficulty of privileging one point of view over all others. Although Illinois emerges as the most Midwestern state, appearing in almost every map, there is in fact no area that was included in all definitions, and at its most expansive, the Midwest might stretch all the way from Newfoundland to New Mexico. This is how culture works: Different people carry around different mental geographies, each with





different histories, narratives, and meanings. The map doesn't just show the Midwest as a geographic area; it also helps us interpret the Midwest as a living cultural idea. This project has now been enrolled in a variety of conversations about history, identity, and design—everywhere from a small museum in South Dakota and local public radio in Michigan to best-selling books about visual journalism.

Together, these two maps show that even traditional cartography—static maps showing geographic relationships—faces no competition from smartphones or crowdsourcing. Yes, one could imagine property-record data being available as an overlay on Google Maps or Zillow, but it still requires a cartographer to find interesting patterns and provide the “fixed point of view” necessary to make a visual argument. It seems even less likely that something like the Midwest map would emerge from an algorithm or a location-aware app. There is a slightly paradoxical relationship here: My maps are

possible only because of the accessibility of data and software, but most of my work is about making that data and software do things that they were never meant to do.

It is not enough to say that cartography can still flourish or that map lovers should look to the future with excitement. More radically, I would suggest that the cartographer's sensibility is becoming ever more crucial to public life. We are awash in data, and all our “look-up” needs can be fulfilled in a matter of seconds. But we also rely on maps when making sense of the world—we use them to orient ourselves historically, socially, and politically as well as geographically. This has always been the case, but what is new today is the opportunity for unusual, provocative, or minority points of view to reach a wide audience.

Pick an issue—anything from drone strikes abroad to the Olympic bid in Boston—and imagine a map that reframes the debate. Now go make that map. For the cartophile, loving maps should mean producing them, too. ■