Still Deconstructing the Map: Microfinance Mapping and the Visual Politics of Intimate Abstraction

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J.B. Harley's (1989) "Deconstructing the Map" opens with a map that speaks to us, using the language of modernist cartography to transform sea, sand, and rock into calibrated measurements recorded on a page, a "cold thing" calling out for our belief in its visual truths. From there he builds a now-familiar path for critical cartographers: a call to engage cartography not as technical practices for moving seamlessly from reality to representation but rather as situated expressions of power/knowledge produced at the intersection of the socio-political and technical (Foucault 1982). He urged us to engage cartography as a discourse whose rules for representing knowledge create openings and closures in what can be known and acted on (Foucault 1978), and to read maps as texts whose signs and symbols constitute culturally situated meanings (Derrida 1976). From these foundations, Harley traced the tight linkage of post-Enlightenment Western cartography to the epistemological hierarchies of science (objectivity, expertise, quantification, measurement, classification, and precision) and to political projects of hegemony, from colonization to the Cold War and beyond (see also Wood and Fels 1986; Haraway 1988; Sheppard 1993).

Harley's theoretical frame has long been a productive two-step for critical cartographers. We tack between discursive and visual textual analysis of cartographic objects and their epistemological openings and closures, and analysis of their historical, geographical, and institutional situatedness. This approach has illuminated a wide array of additional cartographic epistemologies and visual politics, including artistic, humorous, and counter-cartographies (Kingsbury and Jones 2009; Dalton and Mason-Deese 2012). It has been usefully combined with other theorizations to consider the politics of performative or post-representational cartographies (Lin 2013; Caquard 2014). Elements of Harley's framing also undergird closely related critical studies of GIS (Schuurman 2000), the geoweb (Leszczynski 2014; Perkins 2014), and "big data" (Kitchin 2013; Barnes and Wilson 2014).

For me, the enduring significance of "Deconstructing the Map" is that its central propositions *still* form a theoretical base from which to discern the visual and knowledge politics of maps and mapping. The interactive digital map of today is a very different object/praxis than the "cold thing" Harley examined. It is a live thing held in a palm, explored and modified in virtual space, sometimes moving and changing before us. Wilson's (2014, 8) recent call to critical scholars bespeaks the persistence of our Harleyian roots, as he asks us to re-engage this map, and to examine digital mapping, "as an aporia, a difficulty, a perplexity" that actively assembles particular visions and makes others un-seeable. I take up this call here, as a way of both considering the visual politics of interactive digital maps and demonstrating Harley's framework as a still-productive foundation from which to do so.

As I began new research on poverty and class recently, I thought I was leaving the map behind. Yet maps and mapping interfaces are seemingly everywhere in contemporary anti-poverty and development practices, from the World Bank's e-Atlas of Global Development[1] to the reports in which local non-governmental organizations prove their "accountability" to funders. Maps mediate countless cell phone apps aimed at providing financial and information services in the Global South, and also microfinance Web sites through which privileged people (usually in the Global North) respond to the loan requests of impoverished individuals. Microfinance is part of what Roy (2010) calls millennial development – a new orthodoxy of poverty alleviation that is fraught with contradictions. Microfinance is seemingly intimate, as microlenders broker supposedly person-to-person connections in the form of small loans. It is simultaneously a globalized big business, in which investors seek to capitalize on impoverished borrowers as a new "asset class" (Roy 2010). Marketed through discourses of self-help, empowerment, and accountability, microlending programs closely monitor the behaviours and material resources of recipients. Increasingly, these practices involve digital technologies. Mobile devices track borrowers' financial and other activities. Borrowers' personal stories, needs, and activities are disseminated online. Individual donors can broadcast their loans via social media or monitor the loans made by others, and large investors can track the performance of their portfolios online.

I focus here on one of the central mediums of microfinance – the multimedia digital map – and its visual politics. I cast a critical cartographer's eye on these microfinance maps and situate them vis-à-vis some of the now-familiar knowledge politics outlined in "Deconstructing the Map." In particular, I argue that these digital maps are troubling cartographic hybrids that reinscribe the abstract "objective" rationalities Harley decried, while simultaneously advancing affective visual epistemologies intended to mobilize emotion and action. In this sense, these microfinance maps are Latourian "hybrids" (Latour 1993) that trouble the distinctions of modernist thought, such as science/emotion, technology/humanity, feeling/acting.[2] Yet, paradoxically, these hybrid epistemologies are deployed in ways that reinscribe deeply modernist commitments to objectivity, measurement, precision, quantification, and so on. As I show below, the visual politics of microfinance maps invoke elements of a science/objectivity paradigm but in combination with visual strategies aimed at producing a sense of intimacy and transparency. Situated in the problematic poverty politics of millennial development, these contemporary cartographies *still* capture us in the service of hegemonic knowledge projects, but they do so through a blended visual politics.

These hybrid epistemologies are exemplified in a visualization that animates six years of Kiva loan and repayment data, titled "Intercontinental Ballistic Microfinance" (Telepresence Options 2012).[3] Atop a map of the world, each funded loan generates a point moving from lender location to borrower location. Each repaid loan generates another point moving from borrower back to lender. The map quickly fills with tiny moving objects that burst into colour when they hit a destination. On one level, these visual strategies operate in the conventional registers of cartographic authority. The significance and legitimacy of this map are staked on its global scope and volume of data (four million "unique lender–borrower connections" by 620,000 lenders and 615,000 borrowers, as reported at the start). The disembodied war imagery suggested in the explosion-like colour bursts and underscored by the title revives cartography's historical linkages to conquest – albeit directed at a war on poverty. Simultaneously the map operates in an emotive register. Set to music from the finale of the *William Tell* Overture (which many will recognize as the theme music from the television/radio show *The Lone Ranger*), it signifies microlending as exciting and liberating and lenders as heroic. In the horde of dots we feel the frenetic activity in which these heroes are engaged and in which we, the viewing heroes-to-be, might participate.

Conventional map animation is a form of cartographic abstraction used to represent relationships such as the direction and volume of flow between two places. But relationality is obscured in the disaggregated swarm of dots in "Intercontinental Ballistic Microfinance." We see

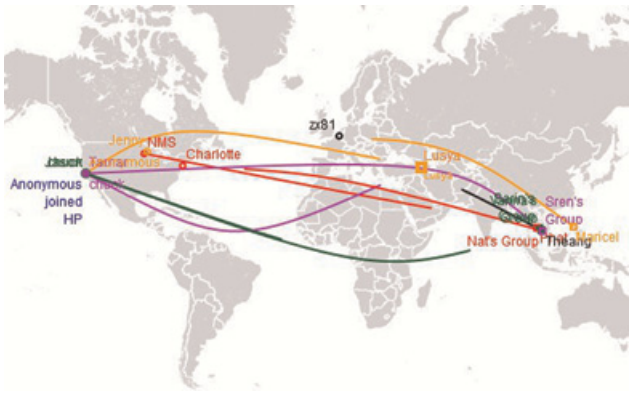

Figure 1. Kiva's "Happening Now" map. Source: http://www.kiva.org/live, used with permission.

all the data, quite literally, but the animation prevents us from seeing relationships or patterns, particularly the uneven global relationships of poverty and privilege around which microlending is structured. Here, map animation is an affective technique, signifying microlending and its agents as heroic, liberating, or civilizing, and impressing through the sheer volume of represented activity. These cartographic blendings of measurement and music, objectivity and emotion, God's eye and (prospective) giver's eye, both represent and constitute an epistemology of intimate abstraction that lies at the heart of millennial development's contradictions.

These hybrid visual politics are also at work in Kiva's own interactive map interface, "Happening Now" (http://www.kiva.org/live). As data on completed loans are live-streamed to the map, animated lines connect lender and borrower (Figure 1). The lender's name appears on the map, a line moves across the globe to arrive at the recipient's location, and then the borrower's name appears as the loan "arrives." A microblog posts each new loan, showing a picture of lender and borrower as well as a description of what the loan makes possible (e.g., "Louise made a loan, which helps Thanh pay for school tuition and buy educational materials"). Various metrics are constantly updated, including seconds between loans, loans per minute, and "trending" lender/borrower countries and sectors (food, agriculture, etc.). Nearly every visual object is hyperlinked to additional data. With one click we can explore the number and value of loans by country or sector; borrower profiles, needs, and repayment histories; lender profiles with metrics and maps of loans given; and the ranked performance of self-created "lending teams."

Like "Intercontinental Ballistic Microfinance," this interface deploys core elements of the conventional science-objectivity-abstraction paradigm that Harley traced. The world base map offers us a supposed God's-eye view of Kiva's all-encompassing global impact. The loan metrics

purport to know by measuring, generalizing, and categorizing. Their representation as charts, graphs, and maps invokes the privileged position of visual epistemologies. But "Happening Now" also advances a visual politics of (supposed) intimacy, through representations meant to give a sense of interpersonal connection, presence, and immediacy. Each animated loan line and microblog update seemingly situate a lender and a borrower in direct relationship and immediate interaction, through formulaic text: "[Lender] made a loan, which helps [Borrower] buy." This sense of interpersonal familiarity and connectedness is strengthened by the use of first names, pairing of lender and borrower photos, and hyperlinked personal profiles. Immediacy and urgency emerge through words like *trending* and through temporal metrics set to very short time horizons, such as loans per second or new lenders since the page was last loaded.

The actual process of a Kiva loan is quite different than these visual practices suggest. Multiple intermediaries and aspects of the process are obscured behind the cartographic performance of seemingly transparent person-to-person connection and immediate engagement. Loans are pre-disbursed to borrowers by an intermediary organization, and the borrower's profile and request are translated and vetted by Kiva. By the time a loan request appears on this map, it has already been funded. The lender's money reimburses the intermediary organization, through Kiva. Behind their representational fiction of being real-time interpersonal connections, the animations on "Happening Now" are instead affective visual strategies intended to capture the viewer's attention and engagement. They operate through the sympathy or empathy evoked by a borrower's photo and story, lenders' pride in seeing their good deeds published online, or their sense of efficacy at seeing their anti-poverty efforts marching across the map in their lending profiles. The feeling subject hailed through these affective attentional devices is meant to act, with various immediacy cues urging this potential lender to act *now*. In sum, the visual politics of these microfinance maps operate through intimate abstractions that blend scientific objectivity and affect, expert and exploratory epistemologies.

More broadly, these maps represent and reproduce dominant poverty knowledge. Mainstream poverty research, policy, and alleviation programs have long centred on conceptualizations of poverty as an ontological state to be defined, measured, and acted on, theorizing it as a material condition that exists apart from cultural or political relations of inequality or situated geohistories (O'Connor 2002; Lawson 2012). From this basis, dominant poverty knowledge has unsurprisingly privileged quantification, measurement, abstraction, and generalization. The visual politics advanced in "Intercontinental Ballistic Microfinance" and "Happening Now" invoke and reproduce the notion that poverty can be comprehensively known,

Figure 2. "Reversal of Fortune" map. Source: Stephanie Rothenberg, used with permission.

monitored, and acted on from individual to global scales. These maps count, categorize, and globalize in the name of monitoring accountability, (global) impact, and individual efficacy. Yet their blended visual politics allow them to do more. The simultaneous deployment of affective visual strategies seeks to mobilize viewing subjects as supporters. Prompted by the representational fictions of close connection and by feelings of empathy, pride, admiration, or urgency, viewers are meant to become participants in the dominant poverty knowledge and one of its newer programmatic innovations, microlending. These digital hybrids reproduce a sharply limited poverty politics structured around individualized acts of giving and receiving that leave underlying structures and relations of inequality unexamined and untroubled. Their intimate abstractions urge us to see, feel, and supposedly know for ourselves, while invoking markers of conventional knowledge hierarchies to reassure us of their accuracy, authority, and impact. We are meant to act, not to question.

Yet not all interactive digital maps advance these problematic visual politics. An epistemology of intimate abstraction can also be put to work in the service of questioning or troubling dominant poverty knowledge. Artist Stephanie Rothenberg's "Reversal of Fortune: A Garden of Virtual Kinship" offers a powerful counter-example (Rothenberg 2014). This installation is an experiential map that grows on raised platforms in the shape of the continents of the world (Figure 2). Live plants protrude from holes in the continents and are connected via plastic tubing to a tank of water and computerized irrigation system. This system mines data from the Kiva Web site, and when a microloan is funded, it delivers an amount of water calibrated to the funds given. Over time, this data-mediated flow of water makes life in microloan-receiving places on the globe literally flourish or end. Graphics such as pie charts are video-projected atop this global garden to document the flow of capital from North to South. This experiential digital cartography explores the contradictions of microfinance, showing its (partial, limited) life-giving transfer of resources and its often-overlooked costs and disadvantages.

More broadly, Rothenberg's installation illustrates that a different visual politics is possible. Like the two previously discussed maps, "Reversal of Fortune" is an epistemological hybrid that mixes global, categorized, calibrated, and data-driven representations with affective, immediate, experiential encounters of single lives. Whereas the swarm of loans careening around "Intercontinental Ballistic Microfinance" obscures the directionality and unevenness of microfinance relationships, in "Reversal of Fortune" these asymmetrical relationships emerge before our eyes. The person-to-person animations of "Happening Now" obscure the institutions and translational processes that separate borrower and lender. In contrast, "Reversal of Fortune" reminds us of the mediated nature of these relationships – water comes not directly from prosperous plants located in rich countries on the globe but through a cyborg-looking water tank that bristles with tubes and wires. The calibration of irrigation to funds loaned is a "counting" that invokes a science/expertise paradigm, yet this counting is meant to call our attention to the living and dying of the represented subjects of microlending. In contrast, the metrics, graphs, and charts published at Kiva's "Happening Now" seem to count mainly to draw attention to the magnitude of lenders' individual and cumulative good deeds. Whereas the affective visual work of "Happening Now" prompts us to feel and *act*, the affective visual experience of "Reversal of Fortune" seems aimed at prompting us to feel and *question*. Here, a visual politics of intimate abstraction is put to work in the service of revealing rather than obscuring, and of posing questions about the relational practices through which microfinance connects people and places.

How might Harley deconstruct a map like "Reversal of Fortune" today? Given his persistent emphasis on the obscuring work performed by any representation, he would certainly remind us that "Reversal of Fortune" is full of "silences [that] are inscribed on the page" (Harley 1989, 14). He would perhaps ask, as he did in "Deconstructing the Map," "where, on the page, is the variety of nature, where is this history of the landscape, and where is the space-time of human experience [. . .]?" (14). Yet I wonder whether he might see "Reversal of Fortune" as advancing a different cartographic knowledge politics from those he so roundly critiqued, because of its openness about its silences and its orientation towards posting questions rather than trumpeting truths. In addition, I think "Reversal of Fortune" troubles Harley's much-critiqued tendency to frame (hegemonic) cartographic power/knowledge as absolute and inviolable. For critical cartographers today, the robust presence of counter-mapping like "Reversal of Fortune" and performance/practice-based theorizations of maps and mapping has enriched and nuanced our understanding of cartographic power/knowledge, and perhaps Harley's own framings would have moved with us on this journey.

More broadly, critical scholars' attention to digital cartographies and visual politics such as those in "Reversal of Fortune" has the potential to return us to what I see as the most significant enduring piece of Harley's contribution. In drawing our attention to maps as particular situated constructions and offering conceptual resources for *de*-construction, "Deconstructing the Map" tacitly suggested that they remain open for *re*-construction. Feminist scholarship around the same time sounded this call even more directly, as in Haraway's (1991) insistence that because cyborgs are *made*, they can and must be *remade*. In the ensuing years, geographers, artists, activists, and others have been deeply engaged in re-constructing cartographies towards different visual politics and in the service of counter-hegemonic knowledge projects, as Rothenberg's garden map does with respect to microfinance maps. Such interventions are the still-urgent work of critical cartography going forward – a door Harley's essay helped open over two decades ago.

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Notes

1. This collection of map-making tools and applications can be accessed at http://data.worldbank.org/products/data-visualization-tools/eatlas.
2. It would be equally generative to theorize microfinance maps as cyborgs, following Haraway (1991), opening the door to some of the same feminist critiques that form the basis of much critical poverty theory (O'Connor 2002).
3. I was unable to obtain a high-quality image of this map for inclusion here, and I strongly encourage readers to view the animated video online.

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