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HyperCities
Thick Mapping
in the Digital
Humanities



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or represented by the employment of technology); instead, HyperCities is about the possibility of telling stories, of narrating places, and of producing new configurations of knowledge in which every past, present, and future is a place. In this sense, mapping history is about curating places, conjuring and caring for ghosts.

Thick Mapping

Mapping is not a one-time thing, and maps are not stable objects that reference, reflect, or correspond to an external reality. Mapping is a verb and bespeaks an on-going process of picturing, narrating, symbolizing, contesting, re-picturing, re-narrating, re-symbolizing, erasing, and re-inscribing a set of relations. On its most fundamental level, a map is a graphical representation of a set of relations. Maps are visual arguments and stories; they make claims and harbor ideals, hopes, desires, biases, prejudices, and violences. They are always relational, in dialogue or in contact with someone or something. They may or may not attempt to reference, reflect, or represent an “external reality” (however one defines that), but they are fundamentally propositions, suffused with world-views, structuring epistemologies, and ways of seeing. Maps are representations of a world, which reference other such representations. When we georeference historical maps, we are not “correcting” them or making them “accurate”; instead, we are keying one representation to another representation (not to reality).

The history of cartography indicates a clear recognition of the material substance or media of the map. The very terms “map” and “chart” derive from their materiality: the Latin word *carta* denotes a formal document on paper or

parchment, while the term *mappa* indicates cloth.³ Prior to the printing of maps in the late fifteenth century, maps were often drawn on parchment or cloth or etched in wood, metal, or stone. In Renaissance Europe, the circumnavigation of the world and the production of accurate projections for empirical exploration went hand-in-hand with the engraving of world maps and the production of celestial and terrestrial globes. With the development of the printing press and the scientific revolution in the Age of the Enlightenment, mapping began to assume a central role in developing accurate statistical methods (such as the census) and the proliferation of mappable data, both of which played a critical role in the expansion of the European nation-state and the colonial conquest of the “unknown” world. Not until the late nineteenth and early twentieth centuries did non-print technologies (particularly, aerial photography and film) play a role in producing maps of the world. This would be taken to a new level with the deployment of remote sensing Global Positioning Satellites (GPS), allowing accurate determinations and targeting of any point on earth according to latitude, longitude, altitude, and time. With the development of the first computational tools for producing digital maps and analyzing troves of geo-data in the 1970s, the material history of mapping entered a new chapter: mapping was transmogrified into computational processes and Geographic Information Systems (GIS). Today, web-based mapping applications such as Google Earth, OpenStreetMap, and WorldMap have brought the analytic tools of GIS to the general public and are changing the way people create, visualize, interpret, and access geographic information.

Digital mapping offers a significant break in the history of cartography precisely because it fundamentally changes the materiality and media of mapping. Unlike artifactual

maps on paper, cloth, or parchment, digital maps are extensible, mobile, and networked. As such, new data about location (ranging from traffic reports, crime statistics, voting patterns, and housing prices to user-generated routes, historical photographs, and personal stories) can be instantly added from a range of web-enabled devices. But until recently, these tools have primarily served utilitarian purposes (like driving directions), as well as, more ominously, micro-level surveillance and population monitoring. Following the 2012 presidential race, massive amounts of GIS data, strategically keyed to and targeted at the granularity of a given household, were touted as critical determinants for Obama's reelection. And following the revelations of the scope of the NSA's dataveillance programs, we now know that we live in a world in which everything and everyone can be watched, monitored, tracked, and mapped. "Thick mapping" has an underbelly of unmitigated paranoia and unchecked control.

On its most basic level, "thick mapping" refers to the processes of collecting, aggregating, and visualizing ever more layers of geographic or place-specific data. Thick maps are sometimes called "deep maps" because they embody temporal and historical dynamics through a multiplicity of layered narratives, sources, and even representational practices.⁴ But "thickness," as we are using the term here, is not quite tantamount to "depth." Depth models, of course, abound in the history of modernism: Freud imagines psychoanalysis as an archaeological enterprise, likened to unearthing ancient Rome, in which the latent desires of the subject can be probed ever more deeply; hermeneutical models in the sciences and certain historical disciplines imagine their methods as excavations of hidden processes and meanings; the aesthetic forms of modernism—the black square on a black canvas, the glass box, but also the montage form—stemmed

from a world in which deep, total, and utopian “solutions” were still imaginable and possible. Postmodernism, on the other hand, is supposedly all about surface, the infinite play of signifiers, the total loss of historicity, and the schizophrenic subject called to cognitively map the world in order to somehow brook resistance to the leveling effects of capitalism. It privileges categories of spatiality precisely because the mutation in the global spaces of multinational capital requires the development of new perceptual habits to find orientation, develop agency, and map this space.⁵

HyperCities draws from both modernism and postmodernism: it is inspired by a depth model rooted in the idea of archaeological coring and can be seen as a response to the crisis of historicity. And yet it is infinitely extensible and rhizomatic in practice, simultaneously moving vertically and horizontally, down and across. Intertextual play exists side-by-side with historical layers of meaning-making; practices of cognitive mapping are both global and local but never simply mimetic, as if a stable external reality can be reliably and definitively mapped.

Instead of positing another depth model or yet another celebration of postmodern hyperspace, the HyperCities project strives for “thickness.” Thickness means extensibility and polyvocality: diachronic and synchronic, temporally layered, and polyvalent ways of authoring, knowing, and making meaning. Not unlike the notion of “thick description” made famous by anthropologist Clifford Geertz, thickness connotes a kind of cultural analysis trained on the political, economic, linguistic, social, and other stratificatory and contextual realities in which human beings act and create.⁶ By eschewing any kind of universalism, it is a kind of analysis that is intrinsically incomplete, always under contestation, and never reaching any kind of final, underlying truth. Thick mappings, like

thick descriptions, emphasize context and meaning-making through a combination of micro and macro analyses that foster a multiplicity of interpretations rather than simply reporting facts or considering maps as somehow given, objective, or complete.

Thick maps are conjoined with stories, and stories are conjoined with maps, such that ever more complex contexts for meaning are created. As such, thick maps are never finished and meanings are never definitive. They are infinitely extensible and participatory, open to the unknown and to futures that have not yet come. And perhaps most importantly, thick maps betray their conditions of possibility, their authorship and contingency, without naturalizing or imposing a singular world-view. In essence, thick maps give rise to forms of counter-mapping, alternative maps, multiple voices, and on-going contestations. Thick maps are not simply “more data” on maps, but interrogations of the very possibility of data, mapping, and cartographic representational practices. In this sense, “thickness” arises from the never-ending friction between maps and counter-maps, constructions and de-constructions, mappings and counter-mappings.

Digital Humanities

The conjunction of “digital” and “humanities” raises fundamental questions for documenting and analyzing the cultural record of humankind. “Digital” is a shorthand term that connotes the domain of the computational governed by binary numeric form and the electronic technologies that operate according to this logic. The Internet and the World Wide Web are, of course, digital technologies but the digital refers, more broadly, to any computational or algorithmic

procedure to encode, present, distribute, and analyze data. This logic is, ostensibly, antithetical to the “humanities” which are, at least traditionally, the domain of the arts, philosophy, literature, and culture more generally. The humanities are characterized by creative energies and critical practices that relish ambiguity, subjectivity, and interpretation. They cannot be reduced to ones and zeros.

But over the past decade, the methods, media, and materiality of humanities research have undergone dramatic change, with massive new possibilities emerging for authorship, creative design, meaning-making, data curation, interaction, and dissemination of scholarship. The world of print culture has not vanished, but it has become transformed in fundamental ways and supplemented by new technologies that allow researchers to ask entirely new questions about the cultural record, at a scale that requires computation. As such, the humanities have developed new research methods through their encounter with the computational sciences, not only creating large and complex cultural datasets for analysis but also fostering humanistic approaches to algorithmic thought, which interrogate the governing assumptions built into technologies, data, and computational practices themselves. “Digital Humanities” is an emerging field that explores the deeply productive tension and precarious linkage between computational practices and humanities scholarship. The HyperCities project is a product of this linkage.

This is why HyperCities is not primarily a “technological” or “computational” problem but foremost a “humanities” problem, namely one of memory, narrative, archival practices, knowledge design, and, finally, ethics. The Digital Humanities for which I am arguing is not simply about computational processing of data but about the design of something new, an “insertion”—as Hannah Arendt might say—of a new

potentiality, of a future that remains open to possibilities,
even new worlds. We thus begin by inserting ourselves into
the world.