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The contributions to this issue of Imaginations address the relationship between digital data and physical place. How is the economy of data storage organized in and across communities, regions, nations, and states? How does the industry reprise old relationships and forge new ones? How are boundaries and borders inscribed and encountered by users and creators along the way? How is information technology (IT) infrastructure built into environments, shifting social and natural terrain? By foregrounding spatial relations and infrastructures, these essays draw connections between globalized geographies of media distribution and localized impacts of IT on the ground.

Emplacing Data

The articles convened here join a growing conversation on the materiality of the internet. In recent years, scholars, artists, and activists have taken apart the once prevalent notion of an immediate and immaterial global network, challenging the ephemerality evoked by language such as “the cloud.” By treating the internet as an infrastructure, they have demonstrated its construction costs and environmental impacts; its affordances and limitations as a political tool; and the ways that race, gender, and other modes of embodiment remain as salient as ever, even online. These interventions have shifted our understanding of digital networks from an evocative but undifferentiated “cyberspace” to an uneven “global assemblage of digital flow” (Graham 78). The authors in this issue push this conversation forward in their specific and sustained attention to place. In doing so, they illustrate the necessity and potential of exploring the sites where our data is produced, transmitted, stored, parsed, and put to use.

In Yi-Fu Tuan’s classic formulation, place is space made meaningful (1977). Such meaning is inscribed through practices and products that concretize collective memory and organize spatial relations: statues, street names, and scientific classifications that codify territorial bounds. The contributions in this collection read IT infrastructures through such a framework, considering how objects such as data centres and fibre-optic cables and practices such as surveillance and location tagging create consequential senses of place. Since Tuan, however, scholars have critiqued the limited role that place has been assigned: defined by meaning inscribed upon it, place looks passive, static, bound. Instead, theorists have drawn another picture of places as relational configurations, always-already entwined in broader webs of power (Massey). Fundamentally social, place is also politically active. Far from opposites, the local and the global are intertwined (Brown). In this vein, the authors here also attend to the ways that place comes to shape data infrastructures. From local ideologies of connectivity to marketable images of nature, from specific conditions of wind and water to the inherited structures of past industries, the particularities of place are worked into IT—sometimes, as this issue illustrates, to unexpected and unruly effect.
The Visible, the Visual

The question of visibility has long been part of the conversation about digital data, often imagined as either invisible (see Parks; Starosielski) or hypervisible (see Holt and Vonderau). The risk when data is invisible is of a failure of collective citizen engagement in decision-making regarding the conceptualization, meaning, emplacement, management, and maintenance of these infrastructures. Similarly, hypervisibility, such as the high-gloss curation and self-representation of data centres online (Google, Facebook, Apple, etc.) reinforces the imaginary of a clean, controlled, and secure data infrastructure; people need neither physical access nor deep understanding of their policies and impacts. The pieces in this volume question this binary by re-embedding the visual aspects of digital infrastructure in their social, political, and environmental context. In keeping with the concept of Imaginations: Journal of Cross-Cultural Image Studies, the following articles open up the question of visuality, in both their content and their form.

Asta Vonderau, in “Technologies of Imagination: Locating the Cloud in Sweden’s North,” offers an ethnographic exploration of Facebook’s first European data center in Luleå. Her contribution shows how the Node Pole project picks up on longstanding tropes of Swedish character while promising specifically regional empowerment in the form of a “post-extractive modernity.” Yet such developments, Vonderau argues, are enabled by the industry giant’s infamous secrecy: strictly limited information about this effort heightens its imaginative potential while obscuring less welcome environmental effects.

Like Vonderau, Graham Pickren charts future-making efforts in “The Factories of the Past are Turning Into the Data Centres of the Future.” Examining the conversion of Chicago’s industrial-building stock into server farms, he traces the shape of material infrastructure as “a bridge that connects our digital present to our industrial past.” In doing so, Pickren maps continuities and transformations in uneven urban capitalist development. While the decline of manufacturing in Chicago has created the conditions for data storage to take its place, this new industry offers quite different configurations of investment and community impact. If data centres are the so-called “factories of the 21st century,” Pickren asks, “whither the working class?”

While Vonderau and Pickren demonstrate the political and analytic potential of “visibilizing” data infrastructure, Kris ten Veel and Alexander Taylor’s contributions complicate that imperative in their attention to data centre space. Veel’s “Uncertain Architectures: Performing Shelter and Vulnerability” critically reads the design plans of two data centers: the underground bunker, Pionen, and the prominent modular skyscraper, Data Tower. Her visual analysis contrasts two modes of relating to data: “enclosure and containment” on the one hand and “flexibility, flow, and modulation” on the other. Ultimately, Veel shows that these designs are performative, more representative of what we imagine about data than what it is. Taylor, too, takes up data centre architecture in “The Technoaesthetics of Data Centre ‘White Space’.” Critiquing the politics of exposure that characterize many popular and academic accounts, Taylor uses the “white space” of the data centre as a heuristic to explore the unresolved interplay between transparency and opacity in industry design. Whiteness sometimes illuminates, sometimes projects, and sometimes reflects back in dynamics more complicated than mere concealment. Making visible, he argues, is not the same as making known.

Evan Light, Jutta Lauth Bacas, Jeff Deutch, Daphne Dragona, Katrin M. Kämpf, Marta Peirano Valentina Pellizzer, Christina Rogers, Florian Sprenger, Jaron Rowan, and Abi-ol Lual Deng push the question of seeing and knowing in their Story Map of data flows across borders in the route from central Africa to Northern Europe. “Infrastructures of Dis/Connection: Of Drones, Migration, and Digital Care” analyzes migration as a process of connection and disconnection, in which access to communication infrastructures also exposes migrants to the threat of state surveillance. The movement of data, then, both facilitates and impedes the movement of people (many of whom are displaced by drone warfare, itself linked to some of the same infrastructures).
Michael Audette-Longo takes up another mode of mobility in “Hear the World’s Sounds: Locality as Metadata in Two Music Platforms.” Tracking the feature of location tagging across the applications Bandcamp and Soundcloud, Audette-Longo shows how regional meta-data works to create a “sense of place” for consumers in a new media economy. While tagging organizes a particular experience of connection, he argues that it is naturalized as the feature blends into each application’s interface.

The final essay in this volume, “Drones Caught in the Net,” offers an experimental exploration of information infrastructures from the perspective of the unmanned drone. Adam Fish, Bradley Garrett, and Oliver Case document their mapping of fibre-optic cables, landing stations, and data centres in the North Atlantic. They argue that the potential of drone imagery inheres not in some fresh perspective made possible by new technology, but in the “relative parallelism” at play between their aerial information infrastructures and those on land and underground. They conclude with a call to media theorists to “fold ourselves back into the stratigraphy of place.”

As part of the Elicitations component of our issue, Rafico Ruiz remembers Alberto Behar, a robotics engineer and polar researcher who was instrumental in generating early evidence of climate change. Ruiz explores Behar’s work posthumously through his archive of readings and images. Antonia Hernández offers another visual exploration of networks in the context of domestic space. Through a series of art experiments called *The Moldy Strategy*, Hernández invites the viewer to navigate mold, exposing microscopic entanglements of bodies and media.

As Shannon Mattern noted in her cogent essay, “Cloud and Field,” it has recently become a popular pastime to map the new infrastructures of our digital age (2016). Field trips and field guides now chart the nodes and networks that make up “the cloud,” often reproducing a colonial ethos of exploration and faith in the making of encyclopedic knowledge—faith that making visible is making clear. With this issue of *Imaginations*, we aim to do something different. By staging a conversation about place and data through a wide variety of engagements with both, we offer a range of experiments and explorations that tackle rather than take for granted the question of the visual; model the potential of local perspective on global networks; and emphasize points of encounter and engagement between the cloud and the ground.

We would like to thank the authors and practitioners who have contributed to this issue, whose works mark an important moment of interdisciplinary scholarly interests and interventions. Thank you also to the peer reviewers for their invaluable intellectual labour in this process. Finally, we would like to thank the staff at *Imaginations* for helping us put the issue together: Sheena Wilson (Editor-in-Chief), Brent Bellamy (Managing Editor), Tara Milbrandt (Elicitations Reviews Editor), Shama Rangwala (Copy Editor) and Éve Robidoux-Descary and Aurélie Lesueur (Translators).

We hope you enjoy the issue and look forward to your feedback.

**Works Cited**


