

Getting Out of the City: Meaning and Structure in Everyday Encounters with Space

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ABSTRACT

In an article on the informational aspects of the biodiversity movement, Bowker (2000) notes a fundamental iniquity in biodiversity spending. Although there are literally millions of species of beetle, it's hard to get funds to preserve their diversity, while it's easy to generate support for protecting species like elk, moose, or bison. These are what are known in biodiversity circles as the "charismatic megafauna." Similar charismatic prototypes tend to be evoked when we think of urban space, engendering a focus on San Francisco, New York, Paris, Madrid, Tokyo, and other "charismatic megalopolis," at the expense of others – Shanghai, Istanbul, Jakarta, San Palo, Mexico City, KL, Cairo – and an even wider range of other urban spaces, both big and small, within our comfort zones and without.

Here, we want to focus not so much on a celebration of urban form, but on human encounters with urban (and other) environments. We are concerned with people's experience of urban and other landscapes; not least because it is this experience that is disrupted and transformed when new technological opportunities enter those spaces.

At the heart of this is a concern with the many layerings of infrastructures in any urban environment. This is a layering of many sorts. First, a physical layering; most cities exhibit complex topologies that operate on more than simply three dimensions. Second, there is a historical layering; physical settings reflect aspects of their historical evolution. And third, there is a layering of many forms of cultural experience – religious, secular, commercial, civic, communal, familial, and more.

Kevin Lynch has perhaps most famously explored this question of the urban environment as encountered by the people who occupy it (Lynch, 1960.) In Boston and other cities, he conducted studies of the imageability of the city and the ways in which people thought about its structure in terms of their own movements through it. The Boston that his subjects describe is not a Boston of grids and precise measures; it is one of loosely-defined regions, paths, landmarks, and networks. Lynch helps illuminate how the ways in which people encounter a space, and find it structured for them in terms of their opportunities to act, can yield many different ways to see it and experience it.

In his book "Imaginary Cartographies," Daniel Smail explores the emergence of a primary aspect of our

experience of urban settings – street addressing – in medieval Marseille. In the 1400's, street addressing as a form of reference had yet to emerge. In the records that Smail explores, there are three competing forms of location identification. The first is a form of navigation by regions and neighborhoods; informal understandings of the city in terms of the people who live there, the work that they do, the churches that they attend, and so forth. The second is a form of navigation by landmarks; squares, statues, churches, civil buildings, and so forth. The third is based not on streets but on "islands," what we would call city blocks. Interestingly, this view seems to color the entire experience of the city; businesses cluster not on streets, but on islands, so that one has the Island of the Shoemakers, or fish merchants, and so on. Lynch talks of the ways in which people imagine cities, but these imaginary cartographies are much more radically different from our own, and really condition our experience of the city.

In Smail's Marseille, the idea of streets as the primary way in which location should be described emerges only slowly, and its appearance seems to be conditioned by a couple of factors. One is that there is little need for most people to be able to refer to location anyway, because they simply don't exhibit the kinds of mobility that we associate with cities. That is not their experience of the city; they don't roam around it. The first people who need to be able to identify locations are those who own the buildings; but they tend to own islands, so that's just fine. Streets start to become more relevant to the notaries who draw up contracts for a wide range of interactions and exchanges (far more than we would, today, appeal to a lawyer for.) They need to be able to identify people by their residences. But – and this is the key part – the notaries do move around the city. They are the first people who, on a consistent basis, start to think about the city in terms of navigation, and for whom the streets become figure rather than ground.

Cities, then, are layerings of infrastructures (McCullough, 2004). We read infrastructure broadly here: not just power, water, and sewage, but other infrastructures that define elements of the experience of space. The naming of streets is an infrastructure for encountering and experiencing the city – street naming defines patterns of sameness and difference that critically define what you see when you look around you. Of course, some urban areas never name their

streets at all but rely on a set of socio-spatial directions to guide an individual or mark a journey. In this way, certain cities become untraversable to those not already resident within them – the location markers are not abstract demonstrations of the city, but concrete manifestations of social relationships, historical events and institutional memories.

We have many different infrastructures that define one's experience. Transportation systems are an obvious example. For example, when first visiting London and traveling on the Underground, one's experience of the city is of a series of islands connected by Tube stops – until one day you walk down the street, realize that some of those stops were only a couple of blocks apart, and start to experience the city as a continuous phenomenon. Religious sites, or institutions (i.e. churches, temples, mosques) suggest a different sort of urban infrastructure. Not simply as destination in and of themselves – fixed points on a particular sort of encounter within a city as resident, tourist or pilgrim – but also as manifestations of inter and intra-urban connections. School children in Britain, and ironically all over the former British Commonwealth, grew up with mnemonic to remember the various sounds of London's churches – a city's soundscape reflected as nursery rhyme so one was never lost. In contra-distinction, mosques all over the world orient themselves to Mecca – Islam's holiest city – suggesting a different kind of invisible geography or infrastructure rarely accounted for in current theorizing of the city or the mobile technologies therein. Traffic flows, parking patterns, service times, calls to prayer, regions and neighborhoods, these are all things infrastructures that shape one's experience by making it meaningful in different ways.

Ubiquitous computing technologies add new infrastructural layers. Ever had to wander around an unfamiliar city trying to guess where there might be an Internet café? Or used your G3 handset to locate Mecca and discern the appropriate local time to pray? Or how about having to step around the corner to get a better cell phone signal? Choosing a hotel on the basis of 802.11b or GPRS coverage? Wireless technologies impose new physical infrastructures that are invisibly layered on the existing visible physical world. How could you walk across the room without ever letting the cell phone in your pocket come within range of another Bluetooth device?

The central argument here is that spaces have structure and meaning for us in terms of our relationship to a variety of infrastructures of action and interpretation. Schegloff (1972) notes the range of ways in which place is formulated in conversation, and shows that the interactional determination of an adequate formulation is much more than simply a selection from a hierarchy of degrees of ambiguity. Critically, this experiential aspect of space is not simply a feature of urban living; it applies too in thoroughly non-urban settings. Through a range of telling examples, Goodwin (1994) argues that “the ability to see a meaningful event is not a transparent, psychological process but instead a socially situated activity

accomplished through the deployment of a range of historically constituted discursive practices.” Australian aboriginal peoples, for example, experience the land in terms of the way that their lineage lines confer a ritual responsibility for the land; not just for protecting it, but for dreaming it into existence. On a more local level, they also experience it in terms of the intersection of patterns of habitation and kinship structures; places where I might encounter my second cousins, etc. This structuring of space is every bit as meaningful and present as my experience of cities as the set of places reached via the J Line, or those areas where we might expect to find a good martini.

From these perspectives, we draw a number of conclusions. The first is that space is organized *not just physically but culturally*; cultural understandings provide a frame for encountering space as meaningful and coherent, and for relating it to human activities. Cross-cultural explorations of urban experience can draw attention to these issues.

The second is that *architecture is all about boundaries and transitions and their intersection with human and social practice*. That's really what we're talking about when we talk about mobile computing and networking in urban settings. We need to think architecturally about the mobile and wireless technologies that we develop and deploy, the human side of infrastructures.

The third is that *new technologies inherently cause people to re-encounter spaces*. This isn't a question of mediation, but rather one of simultaneous layering. The fascinating thing about the move from the systems we built on the wired internet to those that we experience through wireless and mobile networks is that we are creating not a virtual but a thoroughly physical infrastructure, and we need to think about it as one that is interwoven with the existing physical structure of space.

Finally, there is *already a complex interaction between space, infrastructure, culture, and experience*. The spaces into which new technologies are deployed are not stable, not uniform, and not given. Technology can destabilize and transform these interactions, but will only ever be one part of the mix. We need to design not simply for settings, but for the processes by practice and meaning evolve.

References

- Bowker, G. 2000. Biodiversity Datadiversity. *Social Studies of Science*, 30(5), 643-683.
- Goodwin, C. 1994. Professional Vision. *American Anthropologist*, 96(3), 606-633.
- Lynch, K. 1960. *The Image of the City*. Cambridge: MIT Press.
- McCullough, M. 2004. *Digital Ground: Architecture, Pervasive Computing, and Environmental Knowing*. Cambridge: MIT Press.
- Schegloff, E. 1972. Notes on a Conversational Practice: Formulating Place. In Sudnow (ed.), *Studies in Social Interaction*. New York: The Free Press.
- Smail, D. 1999. *Imaginary Cartographies: Possession and Identity in Late Medieval Marseille*. Ithaca, NY: Cornell.