

## 14 Performing the City: Exploring the Bandwidth of Urban Place-Making through New-Media Tactics

Per Linde and Karin Book

Discourses on political participation, urban studies, innovation, and ICT development are becoming more and more entangled. Although social and cultural studies have recognized the importance of material entities in organizing and performing civic engagement for quite some time (see, for example, Marres 2011), we can also observe how the notion of *publics* is gaining more and more influence in the fields of design and technological development (see, for example, Le Dantec 2012). Within the context of urbanity, much falls into the realm of “smart cities,” but the notion of “smart” is contested. We have heard about the number of people with Internet access, the number of devices talking to each other, and the potential revenue achievable for future service providers over and over again. It is not surprising that a transaction-based business rhetoric prevails, but we can also observe how the potential of networked communities, online or offline, is becoming an increasingly important factor in debating the concept of “smart cities.” Halpern (2005), for example, understands the combination of ICTs and networked communities as a form of social capital, and his take on smartness, which is shared by many others, stresses the potential of local interaction:

... ICT networks may have great potential to boost local social capital, provided they are geographically “intelligent,” that is, are smart enough to connect you directly to your neighbors; are built around natural communities; and facilitate the collective knowledge. (ibid., 509–510).

This takes us one step beyond a mere technology-centered perspective. Furthermore, we can, together with Marres (2011), claim that participation is located in everyday material practices and that these are connected with other modalities of action, such as innovation or democratization. In this respect, material participation challenges the long-prevalent assumption that “the notion that participation can in principle be contained in a singular space of political or moral engagement (i.e. a public debate forum)” (ibid., 514). Participation in publics “takes place.” Whereas spaces might be stumbled upon, places are produced and constructed, and today such spatial practices are diverse and intersecting in cities. When different people and organizations develop their own spatial practices, the same urban space will be subject to diverging

and at times conflicting agendas for how the space can be used. In this chapter, we will address how participatory devices are part of this place-making and what relation places have to the everyday practices of urban youth. After reflecting on the concept of smart cities, we will highlight the complex entanglement of relations that are characteristic of emerging new publics in cities. We will provide stories from two different design experiments in which rather simple technological prototypes have been used as means for collaboratively sketching how new-media applications can be used for temporarily appropriating public spaces. In the first experiment, a grassroots youth movement used BluePromo—a technology probe for distributing self-produced media via Bluetooth—at various urban places. Some specific qualities of the probe will be discussed, as will the importance of performing public experiments. In the second experiment, Urblove, a mobile gaming platform was used by some young people for storytelling about mundane local places in their neighborhoods. A focus for this case is to describe what kind of places that were chosen for the games produced and the meaning the places provide for the youths. Both cases can be conceptualized as “design things.” Through the emerging design, associating both to the co-creation process and the potential of the product/game engine, possible controversies in the use of urban space are put forth. Not the least does the public experiments, where prototypes are tried out by different youth groups, bring forth narratives and storytelling of alternative use of urban space.

The impact that ubiquitous wireless network technologies and mobile phones have on our experience of the modern cityscape has been a driving force in many research projects in recent years. It seems safe to claim that such technologies are no longer considered to be neutral layers in urban living, but are rather an integrated part of the materialities of architecture and urban planning, in the social dimensions of city life, and in emerging cultural frameworks. Arguably, we have reached a point at which digital designs may be regarded as elements of our everyday construction of place in the urban setting. Castells (2007, 171) has described these aspects of city spaces as a “space of flows,” addressing how the materialization of social interaction is performed also with and through combinations of networked telecommunication technologies and new media. These spaces can be said to be hybrid spaces, being influenced both by their physical manifestation and the digital content accessible, and to bring forth the fundamental question of how meaning can emerge in the interplay between people, artifacts, and place. From this perspective, what we refer to as *new-media tactics* can also be a way of temporarily appropriating places within the city space for a variety of different groups, at times questioning hierarchical structures of ownership of public spaces.

Emergence and temporality are coming more and more into focus as the building of fixed and inflexible large-scale infrastructures has resulted in many costly failures, but also because democratic sharing of public spaces calls for other strategies. Citing the “master builder” Robert Moses, Eric Paulos (2008, xxiv) writes “When you operate in

an overbuilt metropolis, you have to hack your way with a meat ax." But those meat axes are no longer the only way to go. Instead, Paulos points to how "today's urban informatics effect change at the other end of the spectrum." "Instead of rewriting space with a few large-scale strokes," he continues, "they allow us to re-engineer an infinite number of small-scale relationships."

In this re-engineering of small-scale relationships, new publics will arise, and they will overlap with processes and "things" of design. The use of quotation marks around "things" is deliberate. The etymology of the word, originating from the Nordic pre-Christian culture, can be traced back to the meaning of an assembly, which was decided on beforehand to take place at a certain time and at a certain place to deal with certain "matters of concern" to a specific community. In the book *Design Things*, we suggest that we revisit and partly revert to the etymological history of things (A. Telier 2011). A major challenge for design today has to do with what is being designed: it is not just an object or a product, but also a thing—that is, a socio-material assembly that deals with matters of concern—in the original meaning of the word. Things are, thus, not only the results of understanding human relations and then developing a product addressing the relations such as in user-centered design. Rather, they are performed by socio-material "collectives of humans and non-humans," including both designed artifacts and the places where they are used. At the same time, a designed artifact is potentially a thing made public, since once it is delivered to its users it becomes a matter of concern to them with its new possibilities of interaction.

Consequently, in emerging publics, there is a complex entanglement taking place between citizens, public spaces, and things. Furthermore, if objects are seen as an effect of an array of relations, it follows that they do not exist in themselves; they are, rather, performed and emerging. They are also spatial, in that they establish the necessary conditions for creating and transforming space, which is also not given or fixed but, rather, performed. According to Bruno Latour (2004), we are accustomed to smooth and risk-free objects that are characterized by having clear boundaries with a well-defined essence, in which the producer becomes invisible when, for example, a product is released. In contrast, Latour puts forth the concept of tangled objects, or risky attachments, with no clear boundaries to the environment and where the producers are part of the definition. "Mad cow disease" and contaminated blood may be two examples of such tangled, complex, hard to manage objects. They are subject to constant translation and re-definition and are not detached from the consequences they trigger. In many cases, the triggered consequences take the form of revealed issues and controversies in relation to how public spaces are planned and used.

Carl DiSalvo elaborates another reference to Latour, developed in co-operation with Weibel, while considering their question "How things are made public?"—a question that addresses how complex situations of present-day society are made visible in a way that permits people to take actions on the situations at hand. DiSalvo (2009)

complements that question with another one: “How are publics made with things?” What he aims at is how the processes and products of design might contribute to the formation and construction of publics, and thus also how a relationship might arise between design and collective action. His tentative answer on the relationship is that “projection” (as in representing possible alternative futures by creating scenarios) and “tracing” (as in revealing the origin of an issue) are valuable and designerly methods of constructing publics around issues. Both “projection” and “tracing” can be performed through participative and public design experiments. Relating to the design cases analyzed in this chapter, they can take on the form of questions such as “What if the local community could decide what media content can be accessed on the city buses?” and “Why is this neighborhood planned without regard to where youths could hang out?” For other actors, the questions could be posed differently, because that is the nature of issues and publics: several publics can be formed around the same issue, and the people belonging to the same community will have different takes on similar controversies. This says something about the emerging character of publics, which is also hinted at in chapter 13’s mention of totem poles; they are not fixed or eternal entities, but are emerging. Furthermore, the cases mentioned here highlight other aspects of design as a socially motivated practice. They both invite marginalized groups (immigrant youths, skateboarding girls) to participate. Design is also seen as “design of tool kits” for participation in non-commercialized contexts, even though designs that most of the times are used within a commercialized context are applied in attempts to re-direct the power of consumer technologies (and thus indirectly to re-politicize consumer citizenship).

It is from this perspective we shall interpret the title “Performing the city” and the concepts of urban place-making and new-media tactics. Whereas strategies are planned from above, with strong power hierarchies inherent in the planning, tactics have a bottom-up character, supporting citizens in experiencing and living in the city in the way they want to (de Certeau 1984). If a public is formed from a heterogeneity of perspectives and actors, how can we designers act in a way that supports them in populating the same public spaces despite their different agendas and desires? How can we support them in appropriating these spaces in ways that may be completely different from the intention of the original “master planners”? How might the re-engineering of small-scale relationships, hinted at here, take place?

### **De-Euclidiating space: the BluePromo case**

Fundamental to our design experiments is how the “everyday man” can, either temporarily or long-term, appropriate public urban spaces, which traditionally are designed for a specific purpose and are governed by official policies on how the space should be used. This appropriation can only partially be imagined mentally. A stronger approach

would be to regard the temporal appropriation as an act of performance. We therefore would like to conceptualize the “performance” of space as an innovation practice in constructing emerging publics. From this perspective, as well as from the perspective of interaction design that has been a driving force in the projects, it becomes necessary to address the use of public urban spaces as something lived and experienced and something that through the potential of the design experiments can be re-experienced as possible and different futures. It must be possible to rehearse alternatives of spatial use. In recent years we have seen a huge variety of design projects dealing with combinations of geographical coordinates, mobile phones, and digital media, most often under the umbrella of mobile computing or locative media applications. In many cases, however, and perhaps because of the fact that augmented maps provide such a strong potential, space is often related to the more abstract idea of maps. What is needed is a perspective that treats space not as mathematical coordinates, as in Euclidian geometry, but as social and lived spaces that empowers emerging publics to try out alternative use of those spaces.

One such perspective is the concept of *place-centric computing*, which argues for a place-centric perspective on digital designs in which digital technology is regarded as an element of the ongoing social construction of place (Messeter 2009). Place-centric computing may be described as a class of digital designs in which functions, as well as the information these functions provide, are inherently grounded in place-specific



**Figure 14.1**

Right: The 101 yard (Per Linde, CC:BY-NC), which is not easily represented on the map shown at left (map data copyright 2013 Google).

social and cultural practices, and account for the structuring conditions of place construction—social and cultural as well as material.

Such a perspective stands in contrast to the general anytime-anywhere perspective of commercial mobile services, as well as much of the current research in location-aware systems and location-based services, where usually generic functions serve users with place-specific content. The perspective of place-centric computing partially overlaps with the growing discipline of urban informatics (Foth 2009), which considers the present-day city to be a dense ecology of impersonal social interactions occurring within recognizably public places, thus looking upon the urban environment as an appealing design resource. A shift in perspective is advocated, replacing the emphasis on urban form with an emphasis on urban *experience*. In particular, this chapter takes inspiration from Paulos' notion of participatory urbanism, which "promotes new styles and methods for individual citizens to become proactive in their involvement with their city, neighborhood, and urban self-reflexivity" (2008, 420).

Consequently, one challenge for us designers becomes to stage a design process in which we can, together with users, explore the new possibilities of integrating digital media services and content with the city landscape, and shape place-centric interactions for city dwellers, commuters, and visitors. Envisioning these place-centric interactions, arguably, requires live experiments in real-world settings with design representations that evoke experiences beyond everyday commercial mobile applications. Therefore, it is important to develop design formats robust enough to be used in live experiments, but sufficiently open to re-interpretation to allow a constructive dialogue between users and designers.

With these directions as a starting point, we launched the BluePromo project to explore place-centric interactions in the city of Malmö together with an interaction design company and a grassroots youth movement. The goal of the project was to set up a participatory process that would spur the project's participants—end users, designers, and technology developers alike—to be able to imagine and stage a wide array of use situations and service models for distributing media in public spaces. In urban planning, public space is often regarded as "neutral ground" such as squares and parks, or as public or semi-public institutions such as museums, schools, and shopping malls. Reviewing the literature reveals a bias toward shared central places, but we wanted to include backyards, public toilets, isolated streets, and deserted places. We avoided general conceptions of city population such as "anyone" or "museum visitors," just as we avoided general activities such as "leisure time in the park." Rather, we chose to cooperate with the grassroots youth movement RGRA (Rörelsen Gatans Röst och Ansikte, meaning "voice and face of the street movement"). RGRA is formally run as a nonprofit organization, but is in reality a rather loosely structured organization with several subgroups. Thus, the organization could be characterized as consisting of "clans" or "tribes" rather than as an organized community. Its members are

youths between 12 and 20 years of age, many of them born in Sweden but with parents born in non-European countries. What unites them is a shared interest in hip-hop culture. Since many of the members are producing music themselves, even though they don't have contracts with record companies, alternative ways of distributing media are highly interesting to them. Many already do so, using MySpace and similar online platforms. Their consumption of music is highly mobile, but the old "boom box" is mostly replaced by the mobile phone.

In one of the first workshops, the youngsters came up with the idea "What if we had a radio tower of our own?" A first experiment was performed on city buses. Hip-hop songs that had been produced in one of the neighborhoods that the bus went through were distributed to passengers. In the discourse around place and space, many places have been disregarded as being too transient for having any significance for human life. The anthropologist Marc Augé, for example, talks about "non-places," such as highways, hotels, or supermarkets (1995). Many consider public transport to be such a non-place.

In our view, the notion of non-places is not necessarily true in the case of RGRA. The youngsters spend a significant amount of time each day on the city buses, and the buses are not just anonymous vehicles for transport. You get to know the drivers and your fellow passengers. You sit down in specific seats, if available, and the routes taken become part of the complexity of rhythms that shape the patterns of movement in the cityscape. The bus ride is, as such, a place for possible inhabitation, even though it has a highly temporary character. The hip-hop artist Rap-Tor articulated that very theme



**Figure 14.2**

Left: The BluePromo box. Right: Snapshots from the experiment on the bus. Per Linde (CC:BY-NC).

in a song titled “On the Bus.” The experiment was quite successful and was enjoyed by the producers, the passengers, and the bus company.

To highlight issues of “ownership” of the bus as a public space, and to spur the creation of a wide set of use situations, the bus company was invited to participate in the project. At the start, the bus company insisted that it “owned” all advertising space on the bus, including wireless channels of distribution, while RGRA maintained that anyone going on the bus could distribute music to other travellers on the bus, using a wireless service. Despite initial hopes on cooperation between conflicting interests, the focus of the project became how RGRA could use the opportunities provided by the device—a Bluetooth box—developed in the project. It became obvious to them that the specific device was just one of many possible instances where their mobile phones could be used for augmenting public participation at specific events and at certain places.

After the experiment on the bus, we tried out a variety of places and settings where RGRA used the Bluetooth box to set up temporary streams of digital media, thus appropriating places within the city for shorter time periods. In doing so, the media enriched the youth’s feelings of being in control of the events set up, as well as the visitors’ experience of RGRA as the organizer and sender of the media.

Even though the content primarily has been self-produced music, other content such as jingles for their radio station or pictures of hip-hop artists within RGRA has been used. While alternative music distribution, beyond records and online accessibility, were the starting point of the project, an explorative learning process commenced. What emerged was a tactical thinking within the community, where it was continuously experimented with how these place-specific media streams could be used as a tactic for appropriating urban places for a short while.

In terms of design products, the Bluetooth box was developed within the project and has been used in a variety of settings. But even more important, from the perspective of emerging publics and possibilities to “perform the city,” a learning process started together with RGRA on how they could benefit from mobile wireless technologies while appropriating urban places. Their growing attention to how to benefit from such technologies started a long-term process, in which we (in 2014) are still involved.

In another example of the use of Bluetooth technology for creating an overall experience of a place rather than of a “system,” we, together with RGRA and the interaction design company Do-Fi, worked on “The Parliament of the Suburbs,” an event aimed at increasing participation in democratic processes among youths in suburbs. While the box was used to push a jingle for RGRA’s then new radio channel, several other wireless installations were present for other purposes. For example, you could send a text message to a display located on a stage where a debate between youths, politicians, and representatives from the police was taking place. Other examples of Bluetooth-based services were the BlueWall, where you could push images from a mobile phone to a public



**Figure 14.3**

Narrowcasting “taking place.” Per Linde (CC:BY-NC).

display, and BluekeBox, which made it possible to push a song from a mobile phone to the playlist of a public jukebox. The variety of wireless devices created opportunities for participation at the event and encouraged use of mobile media, as part of experiencing the place. Just as important, it provides means for grasping the mechanisms and the possibilities for the flow of push and pull of digital media through wireless technologies. Equally important is that such events provide a learning situation where it becomes possible to grasp and understand the mechanisms and the possibilities for the flow of digital media through wireless technologies. This can then be the topic of discussion and re-design in workshops, but, most important, it supports the youth’s ability to actually appropriate the technology beyond the scope of the singular device.

Here, it is interesting to address an observation in our experiments that adds to the discussion on the so-called physical-digital divide. It came to our attention that for the user it becomes more and more complex to understand what is digital and what is not. For example, it is hard to perceive invisible phenomena, such as Internet connectivity, as belonging to a specific device.

For developers, a focus on constant connectivity of the smartphone as a discrete device is understandable, but entering into a network of humans and other devices, the perception of what is connected to what gets blurred for the human user. When connectivity is mediated by other devices, such as a Bluetooth pushing device or an SMS-engine connected to a gaming platform, the user achieves a portion of the connectivity, and in most cases that is good enough. Having the functionality working in a wanted way is enough. You don’t have to worry about the Internet as a matter of device capability as long as results of actions are satisfying. The focus is more on the phone as just another element in the networked ecology of humans, places, and technology and the relations that entangle them all. There is no longer a distinction between what is digital and what is not. This is also stressed by Ragano (2002), who recounts how Japanese i-mode developers avoided presenting e-services as “Internet things” and instead presented bundles of phone features as if they were material things.

Furthermore, these hybrid spaces are characterized by yet another layer, that of the social:

A hybrid space, thus, is a conceptual space created by the merging of borders between physical and digital spaces, because of the use of mobile technologies as social devices. Nevertheless, a hybrid space is not constructed by technology. It is built by the connection of mobility and communication and materialized by social networks. (de Souza e Silva 2006, 265)

These social networks can be either present or absent, either known or unknown, because what arises is that places are constructed of a variety of different contexts, which no longer are inaccessible. Instead, the meaning of places can be addressed in terms of the potential for absorbing the many folded connections and relationships. Thus, it is worthwhile to stress both the spatiality and the multiplicity of connections in these networks in order to understand how meaning emerge in interaction with hybrid spaces:

Networks are spatial structures, and what guides their existence is the large number of connections embedded in them. A hybrid space is also a networked space, constituted by a mobile network of people and nomadic technologies that operate in noncontiguous physical spaces. (ibid., 272).

What takes place is a kind of re-contextualization. Places are made aware of, and accessible for, each other, and people are drawn into their respective “world of places” (Wikström 2009).

From the perspective of emerging publics, the instantiated learning process among all stakeholders has been important. But, as designers, we also learned to work with the qualities of simplicity and “underdetermination” while putting technological prototypes into play. It is indisputable that the extremely extended functionality of mobile devices increases complexity, and in many cases the computational material is hidden. Johan Redström (2008) comments on how the perspectives on form and material are in conflict with each other to the extent that they create a boundary that tangible interaction design cannot pass. This is, of course, even more so in the case of multi-functional devices such as mobile phones. Redström argues that the shift from carburetors to fuel injection in motor vehicles “offers far less D.I.Y. (do-it-yourself) opportunities for the more mechanically oriented” (ibid., 123). While this creates a complexity in interfaces, there is also another side of the coin, namely the tendency to design even further complex bodies of functionality. Chang et al. (2007) describe a phenomenon, common among students, that they call “featuritis”: a tendency to emphasize the number or the novelty of features over usability. They recognize that this tendency is prevalent not only among students but also among design professionals. This can become an even more potential hazard when we approach the field of user-driven innovation, where users’ potential to learn about possibilities and constraints in design materials is crucial for their ability to appropriate technology. Ron Wakkary (2009, 16) writes about the concept of the everyday designer, and how underdetermination (as opposed to multi-complex and overdetermined design) creates a space for people to “perform themselves

through the use of the technology.” Wakkary suggests two design goals: “simplicity” (designing artifacts to be simple and to have the potential to be combined with other artifacts to better support unique and complex needs) and “undirected affordances” (that is, trying *not* to leverage specific affordances to perform tasks, instead trying to be open for more diverse use and interpretation). The goal of simplicity resonates well with Fitzmaurice and Buxton (1997, 47), who state that “the ultimate benefit may be to have a collection of strong specific devices creating a strong general system.” Imagining aspects of combinations and bricolage, instead of thinking “one device with complex functionality,” was the goal for the BluePromo project. Here we have not dwelt much on the design as such; rather, we have argued for how the “underdesign” of the probe and the public participatory experiments both figured in a collaborative “rehearsing of the future” (Halse et al. 2010).

In our project, we did not start out from the design-as-problem-solving perspective. Rather, we aspired to set up a design space that took “possibilities for change” as a starting point, rather than try to solve existing problems within a specific practice. That required exploring what such a transformation could mean, not only for designers and developers but also for user groups such as RGRA. If the design is aiming at radical transformation rather than incremental improvement of an existing practice, the object of study, of course, disappears, but the design also limits the user’s understanding of what can be achieved with the design.

Action science, which for many designers seems more relevant than the traditional philosophy of science, seeks knowledge that serves action. It is argued that knowledge is developed with not only general knowledge in mind, but also with the human in mind. The discipline also tries to facilitate learning about change from within practice. The knowledge achieved should be relevant also for forming purposes, just as much as achieving purposes already formed. In doing this, forming of purposes, the actor also enacts values. As new technologies and thus new ways of performing practice are introduced, we should, while trying out the technologies, reflect on the context in where they are used. Is the current way of working or doing things really appropriate? Answering the question “What shall I do?” gives rise to formulating an intentionality that might be congruent with the existing practice, or it might express a deviation from the current norm of practice (Argyris et al. 1985).

Argyris et al. (*ibid.*, 237) claim that action science “must devise some process (1) that will allow participants to make explicit the data they select and the meanings they impose and (2) that will enable them to negotiate the differences in meaning that arise so that they might reach agreement.” Foundational for a practice is that it concerns both an established and specific context of doings and also the common understanding which permeates the doing in sometimes tacit ways and thus makes it possible. It is both activity and the reflection necessary for understanding it. This is a knowledge that must be understood socially. It is produced, but it is also re-produced, since it includes traces of previous practice.

The arguments above also point in the direction of another definition of hybridity. In cultural studies, 'hybridity' refers to fluid and performative subjectivity that resists the rigidity of any fixed and static categories of identity, such as gender, race, and nationality (Kwan 2004). In performative acts, a public presentation of the self takes place, but strong forces of ideology also are at play. Butler (1997) highlights political aspects of performativity in addressing how often conventions, at times tacit and taken for granted, also are enacted, for example, in terms of gender issues. But at the same time, as conventions have the potential of being strengthened and unconsciously affirmed, deliberation and boundary breaking become possible. Since performative acts relate to conventional power, the very conventions themselves can be reiterated and re-lived, which opens up possibilities for appropriation and for alternative (often unauthorized) use. As an example, Butler (*ibid.*, 147) cites Rosa Parks: "When Rosa Parks sat in the front of the bus, she had no prior right to do so guaranteed by any ... conventions of the South. And yet, in laying claim to the right for which she had no prior authorization, she endowed a certain authority on the act, and began the insurrectionary process of overthrowing those established codes of legitimacy."

In "performing" the city and the technologies accessible there (now exchanging the more traditional "moving through" or "using" as in describing a city in terms of its functional components), an ongoing exploration of the liminal aspects of a city is unfolded. Victor Turner (1988) articulates the concept of liminality in his work on anthropology and performance. Liminality can be described as a passage and a "no man's land" between the known and the potential. Typically, the concept can be referred to a transitional space or state of identity, as in initiation rites in which an individual passes from childhood to adulthood or as when a public space is temporarily turned into a site for a carnival. Fragmentation, estrangement, and hybridization are all qualities put into play in liminal acts. On the learning of metapatterns, Turner (1998, 103) writes that "metapatterns are akin to what some call 'frames[,] the metaphorical borders within which the facts of experience can be viewed, reflected upon and evaluated," and that "they are liminal, in the sense that they are suspensions of quotidian reality, occupying privileged spaces where people are allowed to think about how they think, about the terms in which they conduct their thinking, or how they feel about how they feel in everyday life" (Turner 1988, 102).

Notions of metapatterns and liminality have several implications for "city-based" development of mobile technologies, which is, we argue, strongly related to the emergence of new publics. First, the focus may shift from the final product and the de-contextualized computable artifact to the qualities that make them open to citizens' participation "before use," in open and public experimentation with prototypes during design time, and their potential for appropriation and configurability "during use." This has been addressed in the discussion of the BluePromo project. Second, analysis can move "away from totalizing explanations or representations and towards decentralized performativity, which 'forces one to consider the space that would otherwise

simply be glossed over as void” (Galloway 2004, 398, quoting Joost van Loon). These spaces are, thus, not voids. Quite the contrary, that is where much of everyday life takes place, and these spaces are the in-betweens where social innovation might occur.

### **Storytelling neighborhoods: The Urblove project**

Working with RGRA enabled us to study an informal group’s patterns of movement and its strategies for appropriating urban places. We have continued the cooperation with RGRA in several other projects, of which one addresses the notion of mobile urban gaming. In present-day urban life, we can observe a tension between habitual patterns of movement and possible expansions of such movements. An observation on urban living is how many youth groups move primarily within the same blocks they are living in. This is especially true in many suburbs dominated by immigrants, which at times also are being marginalized by media, with social isolation as a result. As major Swedish cities are becoming increasingly segregated, how designers can support urban exploration beyond the “home turf” is an important question. One exciting prospect is to let inhabitants of a neighborhood create “game routes” within the neighborhood—routes to be experienced by others playing the game, thus inviting to a more true perception of the places and cultures within different city districts. With this ambition, the Urblove project sought to explore the possibilities of a service that combines urban exploring and mobile gaming with the possibilities inherent in participatory cultures and the potential of user-created content. The project was carried out in cooperation with the gaming company Ozma, with RGRA, with two school classes, and with a group of girl skateboarders. Two goals of the project were to develop a platform for mobile games and to develop a number of specific game route examples. Other goals, from the perspective of emerging publics and public space, were to study youths’ urban spatial practices and to achieve an understanding of their relationship to different local places and how their means for temporary appropriation of those places could change through use of new media. What places did the youths choose for the games, and how could that be interpreted?

Urblove takes concrete urban places as its starting point for developing and playing games. We set up participatory processes where youths took on the role of co-designers. Using an SMS engine complemented with a Web platform, the youth groups created “routes” for playing and crafted narratives that take players through local neighborhoods or more central parts of the city. The game “stories” are presented in fragments and sent to the players via text messages. Each message contains a part of the story and a puzzle to be solved in order to obtain the next part of the story. The riddles, which can only be answered by being at a specific place, are answered through sending a text message, and new riddles are sent, resulting in the narrative unfolding piece by piece along with the players moving through a dedicated area in the city. The game engine calculates points to the teams playing in relation to the amount of right

answers and the time spent on the game. The games also draw upon the capabilities of mobile phones to produce and consume new digital media formats, and use of a phone's camera is often a central component of a game. Cheap-to-use technologies, such as SMS, make the games easily accessible.

Just as in the BluePromo case, the notion of the public experiments was a driving force for all actors in the project, which demanded lots of engagement and cross-community communication. Engaging with known places in new ways provided means for recognizing the places as having meaning and for being further invested with value through the games. Throughout the project, cross-community communication helped participants to invite others to play the games. For example, RGRA created games that the girl skateboarders were invited to play. While the skateboarders were in a part of Malmö they had never visited before, they were exposed to people in that neighborhood. The girls then produced their own games and invited RGRA youths to play. Skateboarders from other parts of Sweden were invited to play during a big skateboarding event.

For outsiders exploring the appropriation of urban public spaces, understanding the everyday spatial practices of local communities is a challenge. In an article about urban exploring, Pinder (2005, 391) cites an interview in which an urban exploring project is described as "about trying to find what's marvelous, life-affirming, or at least exciting about seemingly mundane places."

Three different groups of young people were invited to create routes and play the game: (1) a group of young men from RGRA (age 15–20) living or at least being connected to the area of Hermodsdal, (2) a group of young female skateboarders in their twenties, and (3) two school classes in secondary schools located in different areas (the inner city area Rörjsjöstaden and the low-status area Rosengård). The focus here will be on Hermodsdal and the skating games.

### **The Game Routes in Hermodsdal**

The first group to create a game route and a story connected to it was made up of young men in Hermodsdal. The area is considered to be quite low in status. It has about 3,000 inhabitants and consists of multi-family houses. To outsiders, the area is—through mass media—primarily known for criminality, violence, and vandalism. When going to Hermodsdal to observe the group developing games, we thought about possible strategies for selecting places/spots. Two strategies were identified: either the boys would select nice (as in interesting, beautiful, or otherwise attractive) spots in order to show that Hermodsdal is better than its reputation, or they would use the area's reputation to create fear, excitement, and perhaps even respect. The first strategy could be referred to as a place-marketing way of selecting spots—a positive image production. The second could be referred to as a way of strengthening the conceptions and perceptions of the place—a negative image production.

The boys were divided into two groups. Both groups selected similar and in most cases identical places/spots:

the 101 yard (“everyone knows this yard”)

a small grocery shop

the place and clock in front of a larger grocery shop

the underground passageway under the road separating Hermodsdal from Gullviksborg

the sign at the entrance of Gullviksborg

a bus stop

the sign outside the police station

the statue in the school yard

a flagpole

a free-standing church bell

These places are by no means extraordinary or exciting. They are neither intimidating nor nice and attractive. Why didn't the participants select more interesting places?



**Figure 14.4**

An everyday view in Hermodsdal. Karin Book (CC:BY-NC).

One probable reason is that these are the most common and well-known places in the everyday lives of the people living in the area.

As Crang (1998) points out, it is common to define oneself through a place. The place is not just geographical hardware but is also loaded with meaning. It reflects the people living there, but it could just as well be a reflection of preconceived notions and stereotypes of the place and its inhabitants. Seen from this perspective, the youngsters in Hermodsdal do not have an illusion of something more than the very everyday and basic. Their choices probably just reflect the sense of place by the inhabitants, or the preconceived sense of place. It might just be that they see meaning in those places that an outside observer cannot see. It might even be a provocative act to choose such mundane places in order to get a reaction, but in this case there were no signs of a hidden message.

Lefebvre (1991) developed a conceptual framework for describing how spaces are produced, perceived, and used. In order to use that conceptual framework to discuss the chosen places in Hermodsdal, we will simplify it.

Lefebvre's so-called spatial triad contains three levels, or types, of spaces:

*Spatial practice* or *perceived space* refers to the observable practices of space.

*Representations of space* or *conceived space* refers to a conceptual space. The simplest way of exemplifying representations of space is by means of maps and diagrams. Also, a more complex view of this type of space has been presented; conceived space, as the concept indicates, is about how space is pictured or reproduced by certain individuals or groups. The received representation tends to be that of experts—for instance, planners, architects, and urban researchers. Also, media could probably be added to the list of those producing recognized representations of space. To sum up, conceived space is a dominating conception, and connected discourse, about what a certain space is and how it should be interpreted on the basis of power, ideology, and knowledge.

*Representational space* is the *lived space* in the ordinary life of the residents and users. The lived space is, of course, based on the spatial practice, but also on symbols, images, and experiences by the users. The lived experiences developed in space are results of a dialectic relationship between spatial practice and the representations of space, or, as Zhang (2006, 221) puts it, "the third term of lived space is balanced carefully between the two poles of conceived space (purely idealism) and perceived space (pure materialism)." A material space is given social meaning.

When going to low-status areas such as Hermodsdal and Rosengård, outside visitors often have a certain conception about the areas and the places within them—conceptions based on the expert and media discourse on these low-status areas, which were developed during the 1960s and the 1970s. The common notions based on this discourse are mainly negative and almost threatening. As was noted above, the boys in Hermodsdal selected ordinary places when creating their game routes, and what we as observers perceive is purely the material, spatial practices. The places seem ordinary

and, to an outsider, without social meaning. To the young people who selected the places, however, they were important and loaded with meaning, both in a practical way and in a social way. For the residents, the places constitute representational, lived space. The bus stop is not just a bus stop; it is an important meeting place where information is exchanged and relations are developed. The tunnel is not just a tunnel for cyclists and pedestrians; it is a symbol of the connection—but also the division—of two neighborhoods. When a teacher at one of the schools involved in the project complained that the youngsters had selected boring places, she, like us and other adults involved in the project, expressed her perception of what a nice, interesting, or exciting place is—a perception based on a superior discourse.

How representations of and discourses on space are produced, and by whom, probably are undergoing changes in the era of modern communication technologies. Now, it is not only people with power and the “right type” of knowledge and networks who have the opportunity to decide how a space should be represented and interpreted; others also have the opportunity to do so. Thus, two or more parallel representations of the same place/space can be produced in different forums and groups—one of them official and dominant among those with official power and valued knowledge, one or more unofficial. The unofficial representation could be the same as the lived space, but not necessarily. As it is produced in the intersection between the physical space and the communication technologies used, it could also be considered a hybrid space (de Souza e Silva 2006). Today, representations of space aren’t just about the tension and interplay between physical and social space, as Lefebvre wrote; they are also about the digital space. The technologies make it possible to create individual representations of space—for instance, personalized maps highlighting an individual’s favorite spots.

### **The Game Routes of the Skateboard Games**

One day a group of female skateboarders gathered to create routes for Urblove games for other skateboarders. Among skateboarders, the places used for skating are referred to as spots. The spots occurring in the games were the following:

the hump in an inner-city park called Rör sjöparken (“unknown among skaters,” according to one of them)

the parking garage underneath the Triangeln shopping center (described by one skateboarder as a “well-known, exciting spot where skating is actually not allowed”)

Steppen, an illegally or spontaneously built skatepark, located at an old industrial site, which after the official skate parks is Malmö’s best-known and most extensive skateboarding facility

a smaller illegally or spontaneously built skatepark along a bike lane between a railway and an industrial site

the humps in a public playground

an indoor skatepark called Bryggeriet

The selected spots thus included officially built skateparks, unofficially built skateparks or spots, and facilities built for other purposes but usable for skateboarding.

When we asked the skateboarders about the selection of spots, two reasons were prominent. One was externally oriented: to display Malmö as a skate city by emphasizing less well known spots and those not officially established. It was for this reason that the internationally recognized Stapelbäddsparken and the skatepark in Sibbarp were left out. The other reason was more internal-oriented: the spots had social importance for the skateboarders, who associated them with social activities—meeting with other skateboarders, barbecues, and so on.

When the skateboarders talked about their game routes, they gave them special names, such as “The humps” and “Steppen.” Borden (2001, 50) notes that the naming of skate spots seems to be important in “providing a consensus label by which skaters could refer to locations.” However, the labeling could also be about keeping spots hidden from people not included in the skateboarding community. The skateboarders know the names; others often don’t. However, the proliferation of social media has made it harder to keep a spot hidden—pictures and film clips of the spots are widely available.

Among skateboarders, where one skates seems to be as important as the skating itself. One of the female skateboarders taking part in the game commented that “skating around to look for spots is the foundation of skating.” Borden (2001, 47) argues that places have always been important in skateboarding: “The spatial tactics associated with skateboarding were ... initially those of reconnaissance, roving the city to identify new spaces for skateboarding.” Another of the female skateboarders said “a spot that is too challenging or not at all challenging could still be a place where I spend time because it is a cool place to be, rather than a good skating experience.” Social



**Figure 14.5**

Left: The Steppen skatepark. Right: an illegally or spontaneously built skatepark along a bicycle path. Karin Book (CC:BY-NC).

media help skateboarders to find spots, but some of the cachet of a spot depends on its uniqueness. Thus, in one sense social media are important tools for skateboarders, but in another sense they are quite the opposite.

Different kinds of skateboarders seem to have different relations to space. Borden (2001) notes that street-skating is more based on everyday activities and spaces and could be said to be a part of the urban fabric and movements, whereas more spectacular and extreme forms of skating are done at purpose-built facilities and in special events. The skate spots of the Urblove games follow the logic of street-skating. One of the most interesting aspects of the skaters' (or more specifically the street-skaters') relation to the urban space is that they give space a new meaning and a new scope of use. According to Borden (2001, 187), skateboarders "implicitly realize the importance of the streets and neglected architecture as a place to act." As Lefebvre (1991) and Lieberg (1992) note, border areas between residential areas are used in identity processes. Some skateboarders tend to skate at abandoned and derelict places and urban structures; Malmö's Steppen is an obvious example of that. Modernist urban structures, which have found to be inappropriate for a vibrant urban life, sometimes are brought alive by skateboarders.

On the subject of time and space in relation to skateboarding, Borden (2001, 198) comments that skaters "construct a different temporal rhythm by staying longer in an urban plaza as others hurry through." Skaters also use places (for instance, a commuter bus station, a plaza in a business district, or the parking garage used in in the Urblove games) at times when few others use them, such as nights and Sundays.

One of the skateboarders involved in the Urblove project described her favorite skate spot in her home town. A spontaneously developed, self-organized skate park at an empty industrial site, it is located in a hidden place, which is well-known among skateboarders but fairly unknown among others, though information about it has been spread by means of blogs, Facebook, YouTube, and the local newspaper. The place is a bit messy and rough, but according to the skateboarder that is good—it sends the message "This is our place; keep out." Until recently, skateboarders used the site illegally. They were threatened with ejection by the owner of the property, but after discussions with city officials and the owner the skateboarders were allowed to use the site for the time being. That skate park, like several others that have been mentioned, could be considered as a hybrid space developed at the intersection of physical space, digital space, and social networks.

In connection with Borden's discussion of the importance of abandoned and shabby places, it may be fruitful to mention a number of concepts pointing at similar phenomena. Högdahl (2003) uses the term *creative loopholes* to suggest that these places inspire creativity. Cupers and Miessen (2002) talk of *spaces of uncertainty* and *margins*. De Sola Morales (1995) refers to *terrain vague*, and Jarnäng (2010) to *undefined spaces*. These concepts pertain to left-over spaces, or interspaces, that have lost their former functions and have been invaded by new groups and uses. As was briefly mentioned above, old

industrial sites, abandoned railyards, parking spaces, and derelict parts of a residential area may fit into this category. New users may imprint a space and redefine it. Therefore, *redefined space* is probably a more suitable term than *undefined space*, insofar as the space is defined though perhaps not in an official way.

According to Jarnäng (2010), an undefined spaces (or what we prefer to call a redefined space) may be useful as an alternative public space; may provide opportunities for self-organization, creativity, and spontaneity; may be suitable for temporal and flexible activities; may have an identity-building function; and may have a narrative function.

If we go back to the conceptual triad developed by Lefebvre (1991), the concept of undefined or redefined places, or places of uncertainty for that matter, are undefined or refined or uncertain in relation to something else, namely the official view of the function of the place. This view could be deduced in official planning documents or maps (straightforward representations of places) or is a common understanding—a dominating discourse—of how a certain place or space should be defined and used. There are few places in our Swedish cities without a planned function, which in turn give few opportunities to spontaneous, flexible, and identity-developing activities, without going against proper or even allowed behavior. Moreover, there are few places without commercial powers behind them. Commercialism is a powerful force in the development of urban discourses and public spaces. In this context, the redefinition of places into alternative public spaces by skateboarders is important in the creation of identities and symbols of their own. The redefined spaces are definitely lived spaces for the skateboarders, who, according to Borden (2001, 219), “undertake a discontinuous edit of architecture and urban space, recomposing their own city from different places, locations, urban elements, routes and times.”

Lieberg (1992) uses a study of activities and spaces of teenagers in a residential area in a medium-size Swedish town to divide the youngsters into three groups: the home-oriented, the organization-oriented, and the friends-oriented. This division is similar to the one used by Hermansson (1988): the parent-oriented, the *Umwelt*-oriented, and the friends-oriented. If we use these divisions in regard to the two groups of young people in the Urblove project, the young boys in Hermodsdal are friends-oriented and the girl skateboarders are *Umwelt*-oriented. According to Lieberg and Hermansson, the friends-oriented youngsters spend a lot of their time in their neighborhood, socializing with friends in public spaces or in the local youth recreation center. In contrast with the *Umwelt*-oriented youngsters, they do not participate in organized activities. Lieberg refers to Alberto Mellucci's concept “nomads of the present” to describe these youngsters as living in the present, engaging in what is happening right at the moment. Life revolves around the friends (or the “gang”) and certain meeting places in the neighborhood. Lieberg describes it as an informal, non-organized rationality. They develop a certain sense of place at the neighborhood level.

Inspired by Pinder (2005) we thought about the aim and use of different spots in the Urblove project. What is the player expected to do at the spot? Is the expected doing about the place, or the activity? One might pass by in a fairly passive way, one might see something, or (a bit stronger) one might observe something. One might use the place for a given or a not-given activity, or experience the place, or think about it, or change it in some way. Here we can see a difference between the games in the residential areas and the skating games. Whereas in the Hermodsdal games the places were seen as places to pass by quite passively or to observe only briefly, in the skateboarders' games the use of the selected spots was more active, including not only observing but also using and experiencing. The skate spots and the communication around them, not only in the Urblove games but also generally, have a clear performative ingredient. However, the lack of activity and performative content in the games in Hermodsdal doesn't necessarily mean that the places are without content and not used for activities. As was noted above, the places have social meaning and content that are not reflected in the games, at least not to an outsider's eye. Perhaps this is attributable to a lack of competence to communicate the meaning and the use of places, or perhaps the meaning is taken for granted.

#### **'We's, 'me's, journeymen, and mastership**

Social media, mobile technologies, and games such as those in the Urblove project have great potential to communicate messages about places. The sense and the meaning of a place are locally embedded and not always obvious to outsiders. Therefore, the perspective of insiders is important in analyzing, understanding, and developing the city. However, it is also an important tool for helping insiders, such as users and residents, to reflect on the places of everyday life and to bring content and meaning to life. On the basis of the Urblove experience, we can say that reflecting on places and communicating about them require practice, courage, and probably pride. The skateboarders were used to do so and by doing so they are proactive and provide examples on how urban space can be re-defined or re-contextualized. For the young men in Hermodsdal, to communicate about their places and neighborhood, as in the Urblove case, is a new experience. The means for doing so, if developed and practiced, have a great potential in the process of re-contextualizing the mundane city and discovering the liminality. A higher degree of self-reflexivity has to take place in order to call it participatory urbanism, but it is a first step.

This is not to say that self-reflexivity doesn't take place. It does, but it is a highly enacted and performed reflexivity. For the participants in the project it would've been beneficial to allocate more time discussing and analyzing the possible social effects, both of the technologies themselves and the here described place-making. Long-term

interactions between researchers and local initiatives are needed in order to support collaborative sense-making and reflection. Full engagement in design must be complemented by distancing from the experiments and technical issues in order to jointly address the underlying issues and societal challenges that emerge through the activities. The design researcher should be capable of taking on such a role, and communities such as RGRA have certainly shown themselves worthy of the task. We can observe how their engagement in co-design open up opportunities for a new understanding and interpretation of the spatial differences and the local effects in the city, seen through the experiences and desires of the local citizens, leading to new forms of empowerment for those citizens. The latter, in return, enables the citizens to build up the social capital and the capacity necessary to become co-creators and co-producers of new and innovative services, but even more important in raising questions such as “Who gets to use public spaces?” and “How can values be enacted in public spaces?” To an extent, the alternative use of ordinary consumer technologies strives at re-politicizing citizen consumership. It also affords ways of acting upon those issues, and the “empowering tool kit” aspect is an important one. Youths in RGRA are already quite skilled and creative in using mobile and social media, and taking part in innovation increases their tinkering skills even further. If not yet masters, they can surely be seen as journeymen with high potential for crafting public spaces through distributing mobile media. An example is



**Figure 14.6**

Old and new artisans: rope-making and urban place-making (left: public domain; right: Per Linde, CC:BY-NC).

how they appropriated the idea of the BluePromo box and spontaneously integrated it into the Urblove project. Another example comes from a later experiment with a “public boom box” in a skatepark. RGRA members immediately searched for flaws in the prototype of shared music selection. In only a few minutes, they discovered that constantly “disliking”, which could be done by “like” or “dislike” buttons, an item in a playlist moved it down in the list, making their own choices move up. This also hints at a governance aspect we want to address in further research: In engaging with emerging publics, who gets to participate and who is excluded?

Nancy Fraser (2011), in commenting on Habermas’ notion of publics, addressed how open access to the public sphere rested upon a bracketing of indifferences in social status—a bracketing that was not efficient, since the public sphere was governed by protocols which themselves were correlating markers of social inequality. In our experiments, we have focused on marginalized groups and non-commercial contexts that don’t hide social inequality.

Also questioned by Fraser was the possibility of a single homogeneous public sphere. Both Urblove and BluePromo contest the idea of a homogeneous use of public spaces, and the parallel place-making creates new alignments and nodes and overlapping places.

Another unexplored issue is the blurring of private and public. In our experiments we have deliberately worked towards supporting collaborative issue formation, and elaborating challenges in local urban life, as an integral part of co-design activities. Yet it is important not to enforce agendas and to support individual exploration of possibilities and self-expression in less politicized formats. In the picture reproduced here as figure 14.7, a girl is trying out a “public expression” tool—an installation that permits a person to take a photo inside a photo booth and compose a 140-character message to accompany it. The photo and the message are then displayed, in large format, on a screen near the installation. People passing by can then comment on them, and the comments are layered on top of the displayed image and text. (The girl shown in the photo reproduced here simply wrote “This is me.”)

It is fair to say that the research described in this chapter still has numerous white spots that must be addressed in future work. One example is the governance problematic hinted at previously. From the point of governance, a lot of the research, including the here presented work, has not yet been successful in integrating decision makers and local initiatives in the same public. The “weaker” publics (grassroots organizations and NGOs) are in many ways still constrained to mere opinion forming or informal expressions not leading to permanent change. Much work lies ahead, but some narratives on emerging publics and public space have been told that can form a starting point in this future work. Finally, a focus on marginalized groups also can have the effect of stabilizing marginalization. It is not unproblematic to have groups representing marginalization and humble attitudes are needed. It is clear that a long-term building of trust is crucial.



**Figure 14.7**

Old artisan and new journeyman: stonemasonry and opinion expressing (left: public domain; right: Per Linde, CC:BY-NC).

Place can be said to be the experienced, lived, shared, and communally understood spaces in everyday life. Even “spaceless places” can give a feeling of place. This resonates well with parts of the thinking of de Certeau (1984, 97), who quotes Virgil: “The goddess can be recognized by her steps.” De Certeau elaborates the example of the pedestrian appropriating a city by walking. Walking in the urban system is equivalent to what the speech act is to language. It allows a play with pre-defined systems. Referring to goddesses is actually a bit inappropriate, since de Certeau is concerned with power relationships and how the “weak” make systems designed by authorities their “own.” The walker uses “tours” and “detours” as “tactical” strategies in an operation on space. By contrast, urban systems are developed through “strategical” tactics as the governing authorities infuse power programs in the city plan and its monuments. Mobile technologies, locative media, and place-centric strategies can support place-making from a variety of perspectives and in a negotiation of fluent ownership of public spaces.

## References

- Argyris, Chris, Robert Putnam, and Diana McLain Smith. 1985. *Action Science: Concepts, Methods, and Skills for Research and Intervention*. Jossey-Bass.
- A. Telier (P. Linde, P. Ehn, T. Binder, G. de Michelis, G. Jacucci, and I. Wagner). 2011. *Design Things*. MIT Press.

- Augé, Marc. 1995. *Non-Places: Introduction to an Anthropology of Supermodernity*. Verso.
- Borden, Iain. 2001. *Skateboarding, Space and the City: Architecture and the Body*. Berg.
- Butler, Judith. 1997. *Excitable Speech: A Politics of the Performative*. Routledge.
- Castells, Manuel, Mireia Fernández-Ardèvol, Jack Linchuan Qiu, and Sey Araba. 2007. *Mobile Communication and Society: A Global Perspective*. MIT Press.
- Chang, Angela, James Gouldstone, Jamie Zigelbaum, and Hiroshi Ishii. 2007. Simplicity in Interaction Design. In Proceedings of the First International Conference on Tangible and Embedded Interaction, Baton Rouge.
- Crang, Mike. 1998. *Cultural Geography*. Routledge.
- Cupers, Kenny, and Markus Miessen. 2002. *Spaces of Uncertainty*. Muller & Busmann.
- de Certeau, Michel. 1984. *The Practice of Everyday Life*. University of California Press.
- de Sola-Morales, Ignasi. 1995. Terrain Vague. In *Anyplace*, ed. C. Davidson. MIT Press.
- de Souza e Silva, Adriana. 2006. From Cyber to Hybrid: Mobile Technologies as Interfaces of Hybrid Spaces. *Space and Culture* 9 (3): 261–278.
- Di Salvo, Carl. 2009. Design and the Construction of Publics. *Design Issues* 25 (1): 48–63.
- Fitzmaurice, Geraldine, and William Buxton. 1997. An Empirical Evaluation of Graspable User Interfaces: Towards Specialized, Space-Multiplexed Input. In Proceedings of the ACM International Symposium on Computer-Human Interaction. ACM Press.
- Foth, Michael, ed. 2009. *Handbook of Research on Urban Informatics: The Practice and Promise of the Real-Time City*. Information Science Reference.
- Galloway, Anne. 2004. Intimations of Everyday Life—Ubiquitous Computing and the City. *Cultural Studies* 18 (2/3): 384–408.
- Halpern, David. 2005. *Social Capital*. Polity.
- Halse, Joachim, Eva Brandt, Brendon Clark, and Thomas Binder, eds. 2010. *Rehearsing the Future*. Danish Design School Press.
- Hermansson, Hans-Erik. 1988. *Fristadens barn: Om ungdomars livsstilar, kulturer och framtidsperspektiv i 80-talets Sverige*. Daidalos.
- Högdahl, Elisabeth. 2003. *Göra gata*. Wallin & Dalholm.
- Jarnäng, Marie. 2010. *Stadens odefinierade rum*. Sveriges Lantbruksuniversitet.
- Kwan, Mei Po. 2004. Beyond Difference: From Canonical Geography to Hybrid Geographies. *Annals of the Association of American Geographers* 94 (4): 756–763.
- Latour, Bruno. 2004. *Politics of Nature*. Harvard University Press.

Le Dantec, Christopher. 2012. Participation and Publics: Supporting Community Engagement. In Proceedings of ACM Conference on Human Factors in Computing Systems.

Lefebvre, Henri. 1991. *The Production of Space*. Blackwell.

Lieberg, Mats. 1992. *Att ta staden i besittning. Om ungas rum och rörelser i offentlig miljö. Byggnadsfunktionslära*.

Marres, Nortje. 2011. The Costs of Public Involvement: Everyday Devices of Carbon Accounting and the Materialization of Participation. *Economy and Society* 40 (4): 510–533.

Messeter, Jörn. 2009. Place-Specific Computing—A Place-Centric Perspective on Digital Designs. *International Journal of Design* 3 (1): 29–41.

Paulos, Eric. 2008. Citizen Science: Enabling Participatory Urbanism. In *Handbook of Research on Urban Informatics*, ed. M. Foth. IIGI Global.

Pinder, David. 2005. Arts of Urban Exploring. *Cultural Geographies* 12: 383–411.

Ragano, Dmitri. 2012. Growing Up in the Age of the Keitai ([http://www.thefeaturearchives.com/topic/Archive/Growing\\_Up\\_in\\_the\\_Age\\_of\\_the\\_Keitai.html](http://www.thefeaturearchives.com/topic/Archive/Growing_Up_in_the_Age_of_the_Keitai.html)).

Redström, Johan. 2008. Tangled Interaction: On the Expressiveness of Tangible User Interfaces. *ACM Transactions on Computer-Human Interaction* 15 (4).

Turner, Victor. 1988. *The Anthropology of Performance*. PAJ.

Wakkary, Ron. 2009. Anything Is a Fridge: The Implications of Everyday Designers. *ACM Interactions* 16 (5): 12–17.

Wikström, Thomas. 2009. Mobilen och staden—Om mobilitet och konnektivitet i det nya stadslandskapet. MobiScape research report (<https://idisk.mac.com/ptomasw//Public/files/MobiScape%20arbetsrapport%20layoutversion%2019%20dec%202010.pdf>).

Zhang, Zhongyuan. 2006. What Is Lived Space? *Ephemera* 6 (2): 219–223.