CHAPTER FOUR

Disruptive Play: The Pervasive Games

Play, radically broken from a confined ludic time and
space, must invade the whole of life.

-Guy Debord, "Contribution to a Situationist Definition of
Play" ([3))

4.1 Urban Computing and Situationist Play

In theory, the field of ubiquitous computing aims toward computer functionality everywhere. But in practice, certain kinds of locations have generated more research interest than others. In particular, the public and shared spaces of *cities* have emerged as highly attractive sites for experimental ubicomp design. For researchers investigating the effects of increasingly mobile and pervasive networks on everyday human relations, urban social life has become a focal point for prototypes, interventions and ethnographic study.[1]

Since 2004, every International Conference on Ubiquitous Computing has featured a workshop specifically on the space of urban computing: "UbiComp in the Urban Frontier" (2004), "Metropolis and Urban Life" (2005), and most recently "Ex-Urban Noir" (2006). From the mission statement for the seminal 2004 workshop:

> The timing of the Urban Frontiers workshop is aimed at capturing a
> unique, synergistic moment – expanding urban populations, rapid adoption
> of Bluetooth mobile devices, and widespread influence of wireless

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[1] Significant and seminal research in the urban computing field includes Anne Galloway's "Intimations of Everyday Life: Ubiquitous Computing and the City" (2004) and "Postcard From The Urban Frontier" (2004); Anthony Townsend's "Digitally Mediated Urban Space: New Lessons for Design" (2004); Giles Lane Lane's "Urban Tapestries" (2004); and William Mitchell's *Me++: The Cyborg Self and the Networked City* (2003). Intel Research, particularly through the work of Ken Anderson and Eric Paulos, has played a major role in developing urban computing as a special field of study and experimental design.

technologies across our urban landscapes. The United Nations has recently reported that 48 percent of the world's population currently live in urban areas and that this number is expected to exceed the 50 percent mark by 2007, thus marking the first time in history that the world will have more urban residents than rural residents. Current studies project Bluetooth-enabled devices to reach 1.4 billion units in 2005. Nearly 400 million new mobile phones are scheduled to be sold worldwide this year alone. WiFi hardware is being deployed at the astonishing rate of one every 4 seconds globally. We are gathering for an event to expose, deconstruct, and understand the challenges of this newly emerging moment in urban history and its dramatic influence on technology usage and adoption (Paulos, Anderson and Townsend 2).

Here, the authors situate their work at a critical historical nexus, in which both social and technological infrastructures are growing increasingly and simultaneously dense. But what topics and modes of research will best mark and explore this confluence of massively-scaled human and digital networks?

The organizers of the first workshop on urban computing take as their primary subject a range of socio-technological topics addressing the intersection of the *personal* with the *collective*. How are these two kinds of identity *reticulated*, or drawn into a networked pattern, through an individual's public encounters with city architecture, neighbors and strangers, pedestrian choreography, traffic flows, crowds and abandoned spaces? The organizers argue that "urban landscapes contribute to our own formulation of identity, community, and self," and therefore, "the introduction of mobile computing tools upon

our urban landscape affords new methods of viewing our city, community, and neighborhood. They can empower us to better understand our social relationship to community, place, and self" (5). Typically, ubicomp research has focused on the social life of the technologies themselves, as I discussed in Chapter One, or on the intimate relationships that grow between users and their technologies, as I discussed in Chapter Three. But as articulated here and reiterated in subsequent workshops statements, *urban* ubicomp research concerns itself first and foremost with *human* social networks.

Ubiquitous computing thus becomes a tool for both understanding and experimentally re-organizing the infrastructures through which social identities and relationships are configured and maintained. Social perception is a particularly key concept in developing these investigations and interventions. In "UbiComp in the Urban Frontier", for example, ubicomp technologies are said to afford new methods of "viewing" urban experience. Urban computing is interested not only in social experience in general, but also in particular with *sensory* experiences of the city as they contribute to social formulations—especially the *visual* aspects of urban encounters.

If the goal of urban computing research is to better understand the perception, construction and social experience of self and community through technological infrastructure, then what strategies of design and deployment will best interrogate these subjects? The "Ubicomp in the Urban Frontier" mission statement famously suggests two tactics borrowed from the twentieth century Situationist movement, tactics which have become integral to the playful interventions that characterize the space of urban computing research and art practice. The authors explain:

Guy Debord and the Situationists sought to reinvent everyday life in urban spaces by constructing situations which disrupted the ordinary and normal in order to jolt people out of their customary ways of thinking and acting. Using *dérive* (the urban flow of acts and encounters) and *détournement* (rerouting of events and images), the Situationists developed a number of experimental techniques that stressed the relationship between events, the environment, and its participants – our urban community (6).

Explicitly borrowing from the political and art-historical work of the Situationists, urban computing stages and studies exploratory movement through city spaces (the *dérive*) and resituates and recontexualizes various urban images, objects and social practices (the *détournement*).

What does this highly mobile, locative and *relocative* framework look like in practice? Here, it helps to quote from the description of the research activities of the 2006 urban computing workshop, Ex-Urban Noir.

The workshop is planned to run over two days, with a significant amount of time involving actively engaging the environment through "deep exploration" and urban actions…. On the afternoon of the first day we will venture out in groups with people native to Orange County who might have alternative views on the city and richer than a tourist view. On the morning of the second day, we will adventure into our own groups of 4 into and across "The O.C." to collect, discover, uncover, map, spy, follow, trace, etc. in an effort to construct a discourse through doing. Participants will get dirty and hands-on with the urban environment. On the afternoon

of the second day participants will discuss their findings through a series of "visual speculations" assembled from their experience of Orange County. The tangible outcome of the workshop will be a series of designs, scenarios, and/or artifacts (Anderson, et al 3).

This workshop agenda reflects a thoughtful research appropriation of the techniques of the Situationists. In true *dérive* fashion, the participants will allow the built environment of the city guide them in a mobile exploration of urban conditions and communities. And in typical *détournement* style, the participants will take urban iconography and found objects out of their original situated contexts, recombining them in a visual layout designed to produce insight and provoke fresh perspectives about computing and the city.

While the recent urban computing research movement represents the most explicit and formally developed use of Situationist technique in the field of computer science, ubiquitous computing has in fact embraced Situationist ideas from the start. A decade before the first urban computing workshop, seminal ubicomp researcher Rich Gold opened a major lecture for the *Ars Electronica* by citing Situationist leader Guy Debord's critique of the spectacle. Gold's first slide reads: "*In societies where modern conditions of production prevail, all of life presents itself as an immense accumulation of 'spectacles'. Everything that was directly lived has moved away into representation. -* Guy Debord, The Society of the Spectacle" ([1]). In citing Debord, Gold adopts a rhetorical position similar to his earlier citation of Magritte's painting in the *Communications of the ACM* essay "This is Not a Pipe". There, as I explored in Chapter One, Gold used Magritte's representation of a pipe to lament the loss of the physical affordances and material interactivity offered by real pipes. Here, Gold uses Debord's

critique of spectacle to address the chief failure of contemporary computing culture: the inability of digital semblances to replicate the diversity of direct experiences afforded by physical objects. Debord's writing, in general, resonates strongly with Gold's call to replace mass-reproduced imagery with mass-reproduced functionality. In *Society of the Spectacle*, Debord defines spectacle as "a *separate pseudoworld* that can only be looked at" (2). By psuedoworld, Debord means a social structure that cannot be directly engaged by the masses. Like Gold, Debord contrasts direct engagement with visual perception. "Since the spectacle's job is to use various specialized mediations in order to *show* us a world that can no longer be directly grasped, it naturally elevates the sense of sight to the special preeminence once occupied by touch" (18). For Gold, the phenomenological differences between ubiquitous imaging and ubiquitous computing are perfectly captured by Debord's contrast between sight-only spectacles and sensory-rich situations. Therefore, we can understand Gold's ubiquitous computing to be a situation-based computing practice, one which constructs opportunities for embodied, social participation.

The Situationists' primary objective, of course, was to create situations, or encounters in which such material participation could take place. From Debord's 1957 "Report on the Construction of Situations and on the International Situationist Tendency's Conditions of Organization and Action":

> Our central idea is the construction of situations, that is to say, the concrete construction of momentary ambiances of life and their transformation into a superior passional quality. We must develop a systematic intervention based on the complex factors of two components

in perpetual interaction: the material environment of life and the behaviors which it gives rise to and which radically transform it ([47]).

Here, the turn toward designed, collective encounters with the material environment parallels Gold's vision of an engineered, social experience of physically embedded computing. Indeed, judging from Gold's prominent citation of the Situationists, the notion of a "situation" to a non-trivial degree inspires and informs his ubicomp agenda.

The Situationists were particularly interested in urbanism—hence, urban computing's interest in the Situationists. Gold was not so invested in cities above other potential computing sites. But Gold, as I have argued, *was* deeply invested in the idea of a more playful computing culture. And likewise, the Situationists viewed organized play as an essential design tool for moving culture away from mass-produced spectacle and toward more meaningful participation.

The Situationists, in fact, wanted to accomplish with play then precisely what ubiquitous computing wants to do with technology now: to achieve a seamless integration into everyday life. In "Contribution to a Situationist Definition of Play", Debord argues precisely this point: "Play, radically broken from a confined ludic time and space, must invade the whole of life" ([3]). And just as ubiquitous computing dedicates itself to imagining and constructing a technological infrastructure for the future, so too do the Situationists aim toward a future eventuality of more ubiquitous play, what they term "the coming reign of leisure" ([3]). Debord writes: "The work of the Situationists is precisely the preparation of ludic possibilities to come" ([5])

Debord wrote "Contribution to a Situationist Definition of Play" in 1958. Is it too early—or too late, for that matter, considering that the Situationist movement officially

dissolved in the late 1970s—to ask precisely which ludic possibilities have already come in the wake and in the spirit of the Situationist movement? Where might we find examples of play radically breaking free of the magic circle and pervading the whole of everyday life? In the 1960 "Situationist Manifesto", Debord et al write: "So what really is the situation? It's the realization of a better game" ([5]). Here, the Situationists use the term game metaphorically as a way to understand the potential for a more participatory culture and a more fully engaging quality of life. By a better game, they mean a better social structure. But I want to suggest that examining contemporary projects designed and deployed as real, experimental games offers an excellent opportunity to explore the Situationist philosophy in action as well as to understand urban computing's application of Situationist techniques. Therefore in this chapter, I will explore the emerging category of *pervasive games*, a genre of city-based, ubicomp-inspired games that invade public spaces with highly mobile and visible play.

The Integrated Project on Pervasive Games (IPerG), a leading pervasive games design research group, defines their category of work: "Pervasive games are a radically new game form that extends gaming experiences out into the physical world" ("iPerG Welcome"). I want to make several points about this proffered definition.

First, the introduction of digital gameplay into the material environment can be understood not only as an interest in a more embodied gaming practice, but also and more importantly as a desire for more *integrated* gaming. IPerG writes: "Our vision: to produce entirely new game experiences, that are tightly interwoven with our everyday lives" ("IPerG Vision"). This vision statement strongly echoes the Situationist play strategy as well as quintessential ubicomp claims, such as Mark Weiser's statement that "the most

profound technologies are those that… weave themselves into the fabric of everyday life until they are indistinguishable from it" (94). The physical world is appealing to pervasive game designers, then, primarily for the opportunity it provides them to create digital gaming that is not as easily *compartmentalized* as screen-based play. Material affordances of everyday *things*, I will demonstrate, are not necessarily explored or exploited by pervasive game design. Materiality is significant, instead, for the new *sites* and social *contexts* it provides, suggesting new arenas and occasions for gameplay. Indeed, pervasive games embrace the friction and fusion that occurs as a result of this relocation of digital gaming into novel physical settings. This creative relocation is what I call the gaming *détournement*.

Second, the verb used by IPerG in its pervasive gaming definition to describe the work of the genre is *to extend*. As this diction implies, the pervasive genre is an active exploration of how far boundaries can be pushed. To accomplish this exploration, the games use what urban computing researchers Eric Paulos and Tom Jenkins call "urban probes" to break the magic circle. Urban probes are "rapid, nimble, often intentional encroachments on urban places"—in the case of urban computing, designed to provoke awareness and discussion, and to collect data, about the role of technology in city life (""Urban Probes: Encountering Our Emerging Urban Atmospheres" 1). In the case of pervasive games, urban probes provoke awareness and discussion about when, where and how it is appropriate to play. But because these are gaming probes, rather than gaming installations, we will see in each pervasive game's design a sense of mobility, of *designed routes* for channeling the flow of gameplay through different parts of the urban environment. This designed flow is what I call the gaming *dérive*.

Third, it is important to note how the IPerG definition adopts a rhetoric of design revolution. Just as the Situationists saw breaking the magic circle as a *radical* intervention, so do pervasive game developers. In the tradition of urban computing, pervasive games explore urban identity, critique habitual behaviors, and seek to construct experimental social structures. Such construction often requires highly disruptive design. Indeed, a sense of breaking the rules and defying social norms is fundamental to all of the pervasive games I will discuss in this chapter. These urban projects aim to shock the public into new ways of seeing and socializing; as a result, the aesthetic of these projects tends to be *big* (scaled) and *visually arresting* (spectacular).

Finally, in my examination of the goals, design practices and social impact of pervasive games, I will suggest that the category ultimately finds itself in a strange holding pattern between the stages of ubiquitous imaging and ubiquitous computing. (These are two opposing worldviews of replicated *representation* versus replicated *affordance* that, in Chapter One, I explored through Rich Gold's essay "This Is Not a Pipe".) To critique and to disrupt the traditional assumptions and goals of the ubiquitous computing, the games must indulge in ubiquitous imaging, even at the expense of achieving a truly radical break from conventional gaming boundaries.

Through a close reading of the design and implementation of four major pervasive games, I will demonstrate that pervasive games operate on two different, and often conflicting, levels: as both situation and spectacle. The former affords public game play opportunities, while the latter offers the public perception of someone else's game. Measuring the degree and the ends to which a pervasive game creates an open situation versus the extend to which it operates as a closed spectacle is ultimately, I will propose,

the most important evaluative tool for analyzing the socio-technological work of projects in the genre.

Can the aesthetics of public spectacle, when combined with iconic game imagery and interaction patterns, be used to organize and to inspire direct participation in a playful situation? If so, what kinds of urban communities and technological relations will emerge in and around this participatory spectacle? To begin to answer these questions, I turn now to the *Big Urban Game*, which many consider to be the originary pervasive game.

4.2 'A Surreal Spectacle': *The Big Urban Game*

In September 2003, the University of Minnesota's Design Institute invited residents of Minneapolis and Saint Paul to participate in a giant, urban board game. Three thousand, three hundred and six members of the public registered to play the *Big Urban Game* online and were divided into three teams: red, yellow, and blue.[2] Each massively-multiplayer online team partnered with a dozen real-world runners, who would be responsible for moving their team's 26-foot-tall inflatable game piece around a 108-square-mile game board. Every morning for five consecutive days, the online players studied a digital map of the Twin Cities and voted for one of two potential racing paths. Every evening, after the votes were counted, the real-world runners raced through the city streets following the route chosen by their online counterparts (see figure 4.1).

In between the races, the giant game pieces were installed at high-visibility outdoor sites: in front of a fire station, at the lakeside band shell, in popular public parks, at the downtown sculpture garden. Casual social activities, conducted at each installation site

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[2] Unless otherwise noted, all gameplay statistics, including the size of the game board, the height of the game pieces, and the number of registered online players, are quoted from the Design Institute's official web site dedicated to documenting the September 2003 performance of the *Big Urban Game*: http://design.umn.edu/go/project/ TCDC03.2.BUG .

4.1 A Race in the *Big Urban Game*. Street runners move a 26-foot-tall inflatable game piece through the streets of Minneapolis. (The Design Institute, 2003)

4.2 Dice Rolling in *Big Urban Game*. At the conclusion of evening races, local residents meet the runners at the temporary board-game "square". They participate by rolling oversized, inflatable dice. (The Design Institute, 2003)

directly before and after the running of the game pieces, encouraged city residents to interact with the game pieces and to spend face-to-face time with team members in a diverse range of urban locations. The centerpiece of activity at these checkpoints was a community rolling of inflatable, giant-sized dice (see figure 4.2). On-scene game officials tallied the dice rolls and awarded bonus "time boosts" to teams with the highest totals. Meanwhile, online players logged onto the central game website to get the daily race times and roll results.

This *Big Urban Game*, or the *B.U.G.* for short, is one of the best-known and most frequently cited projects in the area of real-world, computer-enabled gaming. Commissioned by the Design Institute and created by the New York City-based design team of Nick Fortugno, Frank Lantz and Katie Salen, the *B.U.G.* is typically presented as an early and quintessential pervasive game—so quintessential, in fact, that "big urban games" has been adopted by many game designers and researchers as a generic name for the whole genre.[3] But while the basic facts of the project circulate extensively in game studies and ubicomp literature, the design strategies and play values of the *B.U.G.* are rarely discussed in depth or subjected to critical analysis, beyond the designers' own public statements about the project.

This lack critical discourse surrounding the *B.U.G.* may be due in large part to the immediate accessibility and strong minimalism of the game concept. The image of giant game board pieces being raced by players through real city streets has such a delightful visual clarity to it, and the "this-or-that?" voting mechanism is so straightforward a mode of participation, that the project may not seem to require closer scrutiny or deeper

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[3] See, for example, "Pervasive Electronic Gaming" (Julian Bleecker, 2006); "Sustainable Play: Towards a New Games Movement for the Digital Age" (Celia Pearce, et al 2005); and "Locative Media" (Steve Dietz, 2003), all of which use "big urban games" as a generic term for the genre.

consideration. But the elegant simplicity of the project's design belies what is in fact a more complicated set of interactive strategies and socio-technological critiques. Because the *B.U.G.* is such a seminal project, it deserves a much closer reading than it traditionally has received. Therefore I propose to use the designers' statements, the official game instructions, player blogs, and other archived *Big Urban Game* media to explore both the *intended* and the *actualized* attributes of the game, particularly as signified by the project's three title words: big, urban, and game. How *big* was the experience, and according to which dimensions? In what ways was the gameplay specifically *urban*, and for whom? And finally, how much actual *game* play occurred, as opposed to other kinds of designed and emergent interaction?

By closely analyzing the degree and the ends to which these three claimed attributes are successfully enacted, I will articulate a set of *disruptive* aesthetics and a *spectacle-based* design philosophy that can be applied as a critical framework across the entire category of pervasive gaming. To strengthen and complicate this framework, I will follow my analysis of the *B.U.G.* with a critique of selected design strategies and play values from three other significant, and more recent, pervasive gaming projects: Improv Everywhere's *The Mp3 Experiment 2.0* (2005); New York University Interactive Telecommunications Program's *PacManhattan* (2004); and street artist Poster Child's grassroots project *Super Mario Blocks* (2004-2006).

How Big?

At the heart of the *B.U.G.*'s massively-scaled concept and design is the desire to play with a particular dimension of bigness: *visual scale*. Created as part of an urban design festival and intended to provoke public discussion about how the design of city spaces

could be improved, the Design Institute's *Big Urban Game* website invites residents of Minneapolis and St. Paul to "See the Twin Cities from new angles, with a dramatic shift in scale" ("Background" [6]). Here, the project's call to action encourages the public to approach the game first and foremost as a novel *perceptual* opportunity. It explicitly invites seeing, rather than doing.

Indeed, visual language dominates the original game materials. The official project statement defines the *B.U.G.* goals as follows: "to promote visual awareness of the Twin Cities' urban environment, frame new perspectives, provoke fresh perceptions" ([4]). The archived *B.U.G.* website proudly proclaimed success in achieving these goals, announcing at the conclusion of the game: "It's changed how we *see* the Twin Cities!" ("Archived Project" [1], emphasis mine). Here, *insight* emerges both through and as *sight*. To better understand and to reconceive the urban environment, residents must, literally, come to see it in new ways. In *Philosophy in the Flesh*, linguist George Lakoff and philosopher Mark Johnson address the Western cultural tradition of using visual metaphors to describe learning, insight, and revelation. They write:

> That this conceptual metaphor should be so pervasive makes perfectly good sense, given that vision plays such a crucial role in so much of our knowledge of our world. Our language about our mental activity is thus pervaded with expressions based on this underlying vision metaphor…. It is the commonality and experiential grounding of this ubiquitous metaphor that makes it an ideal candidate for sophisticated philosophical elaboration in a wide variety of theories of mind and knowledge (394).

The ubiquity of what Lakoff and Johnson call "the Knowledge is Seeing metaphor" explains to a large degree, I think, the intense visual orientation of the *B.U.G.* Given its objectives, the project must make a bold visual statement to excite the public and to incite a novel way of seeing, and hence thinking about, urban space.

In a retrospective essay on the project, co-designer Lantz calls the game "a surreal spectacle that shifted players' perspectives on their urban environment" ([7]). This characterization perfectly captures the visual bigness to which the *B.U.G.* aspires. "Surreal" is a term that evokes an often distinctly visual aesthetic, in this case the surprising juxtaposition of iconic, oversized game pieces against an ordinary city backdrop. (Think here of the gaming *détournement*.) Meanwhile, "spectacle", with its origins in the Latin *spectare* (to look), underscores that this game was designed above all to be looked at. And Lantz is clearly using "perspectives" here in the visual sense of the term, that is to say, the viewing position that determines the way in which objects appear to the eye.

The explicit visual orientation of the project clearly influenced the project's reception. During the five days the *B.U.G.* was played, for instance, each team of real-world runners posted daily commentary on the project website. These official "daily *B.U.G.* log" blog posts demonstrate a very clear focus on the visual aspects of the game. The first post from the red team notes: "Day 1 Red, launched by University of Minnesota President Robert H. Bruininks in the shadow of the Witch's Hat water tower in Prospect Park, soon cruised the Transitway in remarkable time, tracked from above all the way by the Fox News helicopter" ("Red" [1]). Here, the suitability of the massively-scaled gameplay for sweeping aerial photography calls attention to the visual impressiveness of the *B.U.G.*—it

is a newsworthy sight. Subsequent red team blog posts center around the reactions of city residents to this visual impressiveness: "Day 2 proceeded along route B to cheers and clinked glasses from diners at the bars on Main Street by the river's edge, then received gasps from bus riders as it was flawlessly tipped horizontal to duck traffic lights at the Hennepin Avenue Bridge" ([2]). On Day 3, "Smart folk took the high ground, watching from Siah Armajani's bridge", while on Day 4, "clever drivers dodged into side-streets and caught glimpses of Red as it crossed street junctions en route to Nicollet Avenue" ([3-4]) The visual tracking, gawking, watching and glimpsing documented by the real-world runners emphasizes the impact of the game on those who *saw* it rather than the impact of the game on those who actively played it. The sights offered by *B.U.G.*, the runners note, were sufficiently arresting to disrupt their conversations, their daydreaming, and their normal traffic patterns. The red teams' *B.U.G.* log is primarily a record of gameplay sights seen, and efforts made to obtain those sights, rather than of the gameplay itself.

On the other teams' blogs, the most passionately recounted details are also those which describe the visual pageantry of the game. Consider the following excerpt from the blue team's Day 4 blog post: "We witnessed the most intense moment of the B.U.G. game so far—a moment of Matthew Barney-esque choreography: the passing of the Blue and Yellow pieces at the very center of the Ford Parkway bridge, one heading east into St. Paul, the other west into Minneapolis" ("Blue" [4]). I want to comment on two aspects of this report. First, the blue team blogger describes the two teams' interplay as a visual performance, rather than as a competitive ludic encounter. The use of the term 'choreography' evokes a moment that is intentionally designed as a performance,

intended to be seen by an audience and appreciated aesthetically. The player also cites visual artist Matthew Barney, whose digital videos often depict a sense of "inner, antagonistic forces at play" within urban architectural landscapes (Spector 1). By referencing Barney's work, the blog post emphasizes the *imagistic expression* of competition against the striking backdrop of the bridge, rather than the *personal experience* of those antagonist forces. The player does not address the question: What did it *feel* like to be apart of the most intense moment of the game so far? Here, and secondly, I want to linger on the fact that an active player describes the moment as a rather passive experience: "We *witnessed* the most intense moment of the B.U.G. game so far" (emphasis mine). Why does this player use the term 'witnessed' instead of a more active verb, such as 'experienced', 'created' or even 'orchestrated'? Why should a member of the blue team directly responsible for bringing such a moment to life, an active performer of the "Matthew Barney-esque choreography", speak of *observing* it rather than *enacting* it? This slippage between performer and witness provides compelling evidence, I believe, of the primacy of visual experience even for the street runners, those participants who were most directly and completely engaged with the gameplay action. Even the real-world players were transformed into spectators of the game, even in the very moment of active participation.

As Debord argues, "the spectacle is not merely a matter of images…. It is whatever escapes people's activity" (*The Society of the Spectacle* 18). Here, I want to suggest that the massively-scaled imagery of the *B.U.G.* is so intense that even the most active portion of the game—the street running—oddly seems to escape a phenomenological sense of

activity. From inside the game spectacle, as much as from outside the game spectacle, the drama is observed, rather than directly lived.

In addition to visual scale, there are three other major scaling dimensions to the project. First, there is the spatial dimension: The 108-square miles of city landscape marked off as the *B.U.G.* board is a considerable scaling up from a traditional table-top playing area. Second, there is the temporal dimension: The duration of the game from start to finish is 105 hours, which represents a considerably longer timeframe than we normally associate with a single instance of a board game. Third, there is the participatory dimension: the number of players associated with each game identity averages out to be 1000, a significant shift in the scale of people traditionally associated with a single game piece or avatar. (Imagine more than 1000 people seated around a table arguing where on a game board to move a single, shared playing piece next, and you get a good idea of the inventiveness of this particular scaling effort.) These diverse scaling efforts all worked to achieve the same goal: to make the dramatic game imagery visible to the largest audience possible, in order to change the most urban perspectives.

Consider the expanded game space. A promotional map from the game depicts all thirty possible routes available to the game pieces during the five-day event. One peculiar feature of the game pieces' potential urban paths is that there is almost no overlapping terrain among them. By overlaying the map on graphing paper, I calculate that only three percent of the total board game space consists of potential shared territory. But such exclusivity was by no means a necessary design decision. Teams could have shared the same paths at different times, or some of the same paths at some of the same times, or even all of the same paths all of the time. Each of these alternative design choices would

significantly affect important aspects of the *B.U.G.* experience. Take, for example, the perceived level of head-to-head competition during the races. Although the three teams of runners knew they were competing against each other, the game board was laid out so that they could not actually see their opponents. Would it have been a more lively and competitive race if the teams could have seen each other, or perhaps even attempted to interfere with each other's progress? Consider also the legibility of the game to onlookers. For observers, seeing the spatial relationship of the three giant inflatable game pieces would make it possible to read the current state of the game. Which piece is closer to the finish line? Are they neck-and-neck, or does one group have a substantial lead? The huge spatial separation of the pawns results in a suspension of game information; there is no way to read the relationship of one team to the next. Finally, separating the game paths significantly diminishes the density of players and supporters in any given space. What if, instead, all three teams' supporters were congregating along the same paths? And what if they were able to show up at a single shared checkpoint for the community activities, thereby creating a more massively-social opportunity?

The design of exclusive urban paths comes at the cost of any of these play-expanding possibilities. However, I believe this cost was acceptable to designers as a necessary trade-off for making the game imagery, as a whole, more pervasive. By more pervasive, I mean replicated across more real-world territory, occupying more discrete physical spaces. Pervasive games, I have argued, are designed as urban probes. In the *B.U.G.,* each team served as a separate probe, exploring and disrupting nearly three times as much urban space as a completely shared-path map would be able to cover. Of course, the designers could have increased the distances traveled by the real-world players so that

they could share territory while still covering 108-square-miles. However, real-world gaming is constrained by some physical factors that strictly digital gaming is not—such as the fact that the average human body can only comfortably travel so far on a hot, late summer day while hauling an oversized game piece. Rather than stretch the physical limits of the runners' bodies, then, the designers separated the running routes to stretch the game across a wider space. In short, prospects for greater intensity, legibility and density of gameplay were not developed. Instead, design focused on extending as far as possible the geographic reach of the game imagery. More probing took priority over more play.

The scaled up temporal dimensions of the game arguably serves the same purpose, and at similar experiential costs. The actual real-world gameplay, that is to say the movement of the pieces, comprises a very brief part of the overall event—about forty-five minutes an evening for a total of three and a half hours in the full 105-hour period.[4] That is roughly four percent of the total duration of the event. The other ninety-six percent of the time, the pieces sat still, installed at their various checkpoints. This ratio of movement to rest creates a temporal *intensity* that is quite low. We could easily imagine a more challenging and arguably more exciting race, for instance, in which the five legs were run back-to-back, without time gaps. Not only would this be more physically demanding for the runners, it would also require online players to make their strategic voting decisions under a significantly greater time pressure.

The periodic nature of the chosen design also limited the potential temporal *diversity* of the game. The five legs could have been spaced out over a single 24-hour period, for

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[4] The total running times for each team, according to the archived project page, were 3 hours and 11 minutes for the blue team; 3 hours and 24 minutes for the red team; and 3 hours and 42 minutes for the yellow team.

instance, allowing for races to be run at dawn, in the middle of the night, and other unexpected hours. Such a smaller scale would enable *B.U.G.* to investigate *urban time* as well as *urban space*. Or, the legs could have been run unpredictably, instead of at the same appointed hour each evening. Such unpredictability would require would-be spectators and supporters to be alert throughout the day, more on guard for eruptions of play.

But the actual design precludes these other intriguing possibilities in order to focus on creating a visual impact on the greatest number of players. A five-day duration with so much gameplay down time significantly increases the likelihood of any given Twin Cities resident accidentally stumbling upon the game piece. Meanwhile, for those spectators and supporters inclined to actively seek out the races, the stability of the brief running window, at the same convenient after-school, after-work, but before-dark hour, also improves the chances for maximum public exposure. Given the duration of down time, it is highly probable that most Twin Cities residents encountered a still game piece rather than witnessed a moment of live game play. But if playing with visual scale is the main goal of the project, then an immobile, oversized pawn installed in an unexpected urban environment arguably frames the environment and shifts perspective as well as, if not better than, a moving pawn. In a sense, then, the brief eruptions of play that take place around the pawns are secondary to their visual function. With their utterly iconic form, they signify play as much when they are still as when they are moving.

Finally, recall that the *B.U.G.*'s designers chose to modify traditional board game participation by dramatically shifting the number of players associated with each game piece. This design choice can be contrasted with an alternate approach to participatory

scale: the option to simultaneously scale up the number of *game pieces* on the urban game board as the number of participants increase. This design strategy would entail maintaining a traditional player/avatar game ratio of 1:1, while increasing the number of avatars. A total of 3306 registered online players would mean 3306 individual game pieces occupying urban real estate, with 3306 runners (perhaps the registered online players themselves, instead of real-world proxies) racing through the streets. In comparison with this hypothetical scenario, the actual design of three game pieces and thirty-six runners in a 108-square-mile space seems a relatively sparse distribution of play.

Of course, as with any real-world installation, material resources and local regulations restrict the possibilities for just how big an urban game can be. Producing thousands of 26-foot-tall game pieces would be cost-prohibitive. And gaining formal permission from the city to take up that much city space—no doubt disrupting more foot and automotive traffic, possibly preventing normal use of important public spaces, or even worse, causing accidents—seems an extraordinarily difficult prospect. (As it was, co-designer Nick Fortugno explained to me in a personal interview, the *B.U.G.* team worked very closely with city officials to ensure minimal traffic interruption and the participants' safety.) But these seemingly insurmountable obstacles to scaling up the number of game pieces and street players stem largely from the first and overriding design decision: to make the game pieces surreally oversized. The desire to create a specifically larger-than-life visual impact is precisely what precludes real-world participation on a massive scale. A different version of the big, urban game might have employed handheld game pawns— cheaper to produce, and easier to navigate through everyday space. Such a design strategy would trade the visual spectacle for a more open situation. Rather than creating

massively-scaled, pervasive game iconography, it would create massively-scaled, pervasive participation. But for the *Big Urban Game*, big urban visuals trump big urban participation. And why not? The project background statement argues that the *B.U.G.* is about disrupting habitual urban *perception*, and the particular qualities of bigness of the game are chosen with that goal in mind.

And so we encounter one of the paradoxes of pervasive gaming. Through spectacle, Debord writes, "the real world is transformed into mere images" (*The Society of the Spectacle* 18). While pervasive games seek to take play out of the virtual realm and put it back into the real world, its reliance on spectacle to achieve the goals of urban critique and investigation may, in fact, temporarily transform that real world into a less actionable environment. Is big urban gaming a genuinely effective tool for generating public engagement, or does it only provide the façade of massively ludic participation as it makes its techno-social critiques? Here, I turn to examine a second primary attribute claimed in the project's title.

How Much Game?

The aesthetic and participatory dimensions of the *Big Urban Game* can be specified, verified and evaluated according to concrete design and gameplay metrics: 26-foot pawns, 108-square-mile playing board, five days of play, 3306 registered players, and so on. But it is a trickier thing to assess the qualitative attributes of the ludic interactions that occurred during the project. What kinds of play did the *B.U.G.* generate, and for whom?

In the case of the *B.U.G.*, such an analysis is complicated by the project's own emphasis on game imagery over game play. Project statements tend to reveal less about the designed play than we might hope. The day before the *B.U.G.* launched, for instance,

University of Minnesota Design Institute director Janet Abrams, who is credited as the Editor/Producer for the *B.U.G.* project, gave an interview with *Metropolis* magazine. Asked specifically about the choices made by the game design team of Fortugno, Lantz, and Salen, Abrams said:

> They know what it takes to make a game, the elements of game design: Establishing a set of rules, units of activity, game pieces, and a space of play. In this case, the game board is the readymade surface of the city. The game pieces are much enlarged to suggest the proportions of a traditional game board to its playing pieces. The pieces look like pawns from a chess game. There are also mats that they sit on that say, 'The B.U.G. stops here,' which represent the squares on a traditional game board" (Cameron [6]).

As we might expect from the director of a project whose primary goal is "to promote visual awareness of the Twin Cities' urban environment", Abrams seems more interested in talking about the visual aspects of the project than the interactive elements. Despite first identifying general essential gameplay elements like "rules" and "units of activity", she speaks specifically of *B.U.G.*'s "surfaces", its "proportions", what its game props "look like", what its game props "say", and what their design "represents"—all features of the visual design. Even as the interviewer seeks to draw her out on the gameplay design, Abrams turns to appearance and expression, and away from action and function.

Despite this lack of critical discussion of the game's proffered modes of interaction, in this section, I will try to explore not what players were invited to *see*, but rather what they

were invited to *do*. For this analysis, I will rely largely on the official rule sets presented

online to the public as a guide to interacting with the pervasive game system.

The *B.U.G.*'s online interface featured a simple splash page with three information

options—"How to Play", "Who Can Play", and "*B.U.G.* Rules"—as well as two

interaction options—"Join Game" and "Make a Move" (Design Institute "B.U.G."). Each

of these five website elements offers significant details about which kinds of gaming

opportunities the *B.U.G.* offered, where, and to whom. What I want to suggest through a

close reading of this original game content is that while the project often employed a

rhetoric of open participation and abundant gameplay, it in fact offered a strategically

limited and carefully proscribed set of gameplay opportunities.

To begin: Who can play the *Big Urban Game*? According to the "Who can play"

section of the splash page, this question can be answered in one word: "Everyone!" But

in fine print at the bottom of the splash page, players are encouraged: "Find out more".

Aspiring players who click on this link discover that there are restrictions on who can

play which portions of the game:

> *PLEASE NOTE: the game pieces themselves will each be carried by a*
>
> *team of designated "MOVERS" established in advance of the game. If you*
>
> *are interested in becoming a "MOVER," contact [us] but please be aware*
>
> *that places are extremely limited and you will be required to meet several*
>
> *conditions established by the Design Institute before the B.U.G. begins, in*
>
> *order to participate in such a role* ("How to Play" [1]).

In other words, everyone can play online, but few can play in the streets. I have proposed

that pervasive games arise from the trend toward urban computing research, which I have

described as a highly mobile, locative and *relocative* practice. But what I am calling attention to here is that there are important limitations on who is afforded urban flow by the *B.U.G.* and who physically executes the relocative acts of gaming *détournement*. This mobility and relocativity is limited to only one percent of the overall registered participants.

Indeed, in addition to being limited by a hard-and-fast cap on the number of runners, the timing of player selection also made it much less likely for a Twin Cities resident not affiliated with the project's sponsor, the Design Institute, or the project's design team, Playground, to be chosen to participate in the pervasive element of the game.[5] If you found out about the game by observing the spectacle on, say, the first day of play, it would be too late to apply to participate as a real-world player. Only those who knew about the game before the media coverage and before high-visibility game pieces started showing up in the streets were able to request a spot on a real-world team. In other words, pervasive players were by necessity already part of the social infrastructure of the production before live gameplay commenced. Online players, on the other hand, could be drawn into and reticulated within the social network throughout the live gameplay.

The language used to describe the online gameplay therefore seems to promises more abundant pervasive play than the game actually affords. Consider, for example, how the splash page of the game interface invites registered online players to "Make a move!" Clicking on this link during the live game allowed players to vote for one of two daily potential routes. But the phrase "make a move" evokes a sense of mobility that only a

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[5] A March 2006 conversation with co-designer Nick Fortugno confirmed that the great majority of street runners were members of the Design Institute or members of the *B.U.G.* project team itself. That is to say, the groups that *made* the game, and their extended social network, were largely the same group that played the pervasive elements.

tiny subset of game players are, in fact, offered. The online players are making a *decision*, not a move.

If the widely circulated images of players running through the streets and the rhetoric of abundant mobility belie the restricted nature of the pervasive gameplay, then it is in the official rules where the core interactive nature of the experience is truly laid bare. Clicking on "Rules of the Game" opens a pop-up window that describes the *B.U.G.* to be, for most players, an online game, not a pervasive game. Note how the five stated rules say nothing of real-world activity:

> RULES OF THE GAME
>
> 1. You can only sign up for one team.
>
> 2. You can only vote once a day.
>
> 3. You get five different chances to vote, once per day for each leg of the race.
>
> 4. You can vote from 12:01 am to 4:00PM CDT on Weds/Thurs/Fri/Sat September 3-6, and from 12:01 am to 11:00 am on Sunday September 7.
>
> 5. You can join in the game at any point in the five days.

While the limits on virtual voting are clearly proscribed, there are no limitations presented in the official rules regarding the physical races. What restrictions does the game place on the movement of the inflatable game pieces? Can the movers run, or must they walk? Are they allowed to wear inline skates to go faster? Can they take a short cut if they know one? Must they carry the playing piece above ground, or can they drag it along the surface? Do all real-world team members need to be touching the piece at all times, or can they take turns? Can they split up and physically interference with the other

teams' pieces? Not a single restriction on the mobility or interaction of the pervasive players is addressed—although surely there must have been some internal decisions and communication to runners about precisely such issues.

So why are the rules for the races not addressed publicly? I want to suggest that this absence of discussion of the pervasive element of play reveals the street races to be more of a public *performance* than public gameplay. In the official communications of the *Big Urban Game*, the game designers do not present rules regarding the physical race because it is not the public's responsibility to play the races. It is instead the public responsibility's to watch them.

To use a videogame metaphor, we might say that the street races serve the same functions as cut-scenes, the non-interactive, pre-filmed narrative updates that interrupts traditional videogames.[6] Cut-scenes are not player-controlled; however, players produce and provoke the playing of the cut-scene by taking actions and making decisions leading up to the filmic moment. Likewise, the street races, for the public players, are not executed as gameplay, even as the players' decisions influence which race will be run. The races are, instead, dramatic enactments rendered by performing artists rather than a live moment of gameplay directly experienced by the public players. This is not to say that for the official Movers, the races were not experienced as a game. (Though the runners' blog posts, as analyzed above, suggest that the runners were highly aware of their role as performers.) But for the vast majority of *B.U.G.* players—3306 online voters, as compared to 36 real-world players—the races were observed, rather than played. They were designed primarily as spectacles, not as situations.

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[6] An excellent discussion of the role of cut-scenes in traditional videogames can be found in Rune Klevjer's 2002 *Computer Games and Digital Cultures* paper "In Defense of the Cut-Scene."

There was, however, one aspect of real-world gaming in which the public was allowed full participation: the nightly post-race dice rolling. By all accounts, the dice rolling was a hugely popular feature of the game. According to the yellow team's Day 2 blog post, "The dice-rolling was a real community event. People parked their bikes and interrupted their evening jogs to come over and support 'Seabiscuit' Yellow, and the rolling went on till 8.00 pm — though we've been getting reports of pets being lured in to up the numbers, aided and abetted by their owners!" ([2]) And participation in the post-race activity increased each day, presumably as more people saw and heard about the *B.U.G.* The red team's blog notes on Day 2 that "dozens of kids joined the dice roll," while the blue team's blog records a significantly larger Day 3 turnout: "By the time we reached Hiawatha Park, a crowd of about 100 had gathered, and the dice rolling began in earnest, with plenty of babies and toddlers on hand to boost the score" ([2], [3]). The yellow team met an even larger crowd on Day 4: "Yellow made a mad, catty-corner dash towards the Minnehaha Falls, where the crowd of over 200 people earned the highest dice roll score of the day!" ([4])

The community dice rolling represents a somewhat counter-intuitive design choice. In game design, adding an element that undercuts the meaningfulness of other elements is typically considered a design flaw. Yet, this is precisely the problem posed by the addition of the dice roll. It works to minimize the overall impact of the other two elements of the game: the public decision making, in which a particular urban path is selected, and the street race, in which the public's choice is executed. To see how this is so, we must first consider what defines 'good gameplay' in the two main elements.

What is required for a team to succeed in the first phase of gameplay, the voting? In an invited lecture on designing games for real-world spaces, *B.U.G.* co-designer Salen explained to an audience at Georgia Tech University: "Each day, two paths were published, and neighbors had to argue which of the two routes was actually faster, given traffic patterns and other natural urban obstacles" ("Every Little Thing She Does Is Magic"). In other words, local knowledge of the urban environment would allow a team to choose the faster of two routes. As co-designer Fortugno explained to me, each pair of paths offered one significantly faster route. However, Fortugno said, it could be difficult to detect which path was the faster route without considering the design of the local landscape. Fortugno recalled: "On day five of the game, the yellow team ran a really slow race because the public voted for the wrong route. On the map, it looked like a shorter distance. But there was a very steep hill at the end of the route that made it really hard for the yellow team to go as fast as the other two teams."

Here, we see how the public's decision-making could meaningfully impact the outcome of the game: Not factoring in the incline of the landscape, the public supporting the yellow team hurt its own chances for a faster time. In other words, the online yellow team played that particular vote poorly. Indeed, the yellow team's daily blog post notes: "Just before take-off a loyal fan could be heard saying, 'People picked the wrong route. Those hills are gonna be trouble.' It was an ominous start…. It seemed uphill the whole way, as the team headed towards the water towers at Highland Park — a telltale sign of a city's highpoint" ([5]). The presence of the water towers on the route, then, was a clue that better gameplay on the part of the voting members of the yellow team might have detected and used to their strategic advantage.

Meanwhile, the movers had their own opportunity to meaningfully impact the outcome of the game. Navigating the urban environment with such an unwieldy prop required considerable stamina, dexterity and group coordination. The yellow team describes the problem of over-exhausting their movers in the middle of the second day's race: "They needed a break after all their sprinting, which took them back across the I-94 freeway, through the Thomas-Dale and Summit-University neighborhoods" ([2]). The blue team describes a coordination challenge they faced during the fourth race: "Proceeding down 46th Street, Blue headed toward the Ford Parkway bridge, constantly in need of lowering to avoid foliage and power lines that festoon 46th Street" ([4]). The red team describes a different strategy for dealing with a similar obstacle: "Red saved time on horizontal maneuvers by simply moving into the opposite lane of traffic in order to avoid overhanging traffic lights" ([4]). Clearly, then, it was possible for the street players to significantly affect their team's overall chances of winning or losing through their own racing strategies.

But the final dice rolling potentially mitigates both of these prior elements of gameplay. The complete "Rules" project page explains how the community dice totals can reverse completely the effects of the map-based decision making and the racing strategies. "Roll a pair of giant dice to give your piece a time advantage. Your dice score will be recorded, all scores are added together, and the team with the highest total receives a 'speed boost.' Highest total rolls = T-10 minute speed credit. Second highest score = T-5 minute speed credit" ([4]). Here, we see that the voting members of a team could pick the worse of the two urban paths, making it more difficult for the movers to get to the checkpoint in the fastest time, and yet have that time difference erased by the

top speed boost. Likewise, a given team of movers could be less clever in navigating urban obstacles or run more slowly than other teams, and yet come out on top simply by virtue of recruiting the highest total of dice rolls.

Typically, this degree of mitigation would be considered poor game design. A final, somewhat randomizing element (which the random roll of the dice represents) takes away the power of either the voting public or the racing teams to determine, through ingenuity and effort, the outcome of the game. In *Rules of Play: Game Design Fundamentals*, Katie Salen and Eric Zimmerman argue that "the goal of successful game design is the creation of meaningful play" (33). They define meaningful play as follows: "Playing a game means making choices and taking actions. All of this activity occurs within a game-system designed to support meaningful kinds of choice-making. Every action taken results in a change affecting the overall system of the game" (33). According to Salen and Zimmerman, the outcome of choices made and actions taken should be well integrated into the overall game context. If at any point a choice or action is rendered irrelevant by a subsequent stage of the game, then the play becomes less meaningful.

As an example of poor design for meaningful play, the authors propose "a multi-event athletic game, such as the Decathlon. At the start of the game, the players run a footrace. What if the rules of the game dictated that winning the footrace had nothing to do with the larger game?" (35) A decathlon in which the foot race has zero ultimate significance is an extreme scenario, but we can see shades of this design dilemma in the way the *B.U.G.* dice rolling potentially renders irrelevant the results of the street race. The daily scores posted on the live gameplay site reveal nightly race times that clocked in at an average of 40 minutes each, and an average time differential each race of 3.1 minutes

between first and second place, and another 3.1 minutes between second and third place. Therefore the 10 minute and 5 minute time bonuses awarded based on dice totals absolutely have the power to undo completely the outcomes of both the decision making and the race strategies. That is to say, a team could come in last place due to poor voting and poor racing, and yet rank first as a result of a 10-minute time boost. In this way, the preceding vote and race *by design* may be rendered meaningless.[7]

Rules of Play's discussion of meaningful play is particularly interesting, of course, because co-author Salen was one of the lead designers for the *Big Urban Game*. Why would she choose not to follow that particular design principle for this specific project? The fact that Salen and the rest of the *B.U.G.* design team were willing to weaken the meaning of the online voting and street racing represents, I believe, a design fracture caused by the larger tension between the main goal of the project, to create a surreal spectacle, and the visual content of that spectacle—semblances of gameplay. Unable to create *both* the large-scale, iconic impression of gaming in the streets *and* massively-scaled game participation in the streets, the *B.U.G.* team decided to implement a more manageable participatory activity using a game prop with easier to replicate affordances. Rolling dice is a situated activity that does not require the problematic mobility that limited participation in the signature race. Note here that the dice, approximately 2' x 2' x 2', are scaled up in size quite a bit less than the playing pieces; similarly scaled dice at 20-feet-tall dice would no doubt pose many of the same participation limitations as the iconic game pieces.

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[7] As it turned out in the September 2003 event, according to Fortugno's assessment of the game results, Blue team edged out the Red team for first place on the basis of the awarded time boosts, while the Yellow team's last place performance was a result of both poor decision making and low dice totals.

Did the public perceive the dice rolling to be a sufficient degree of pervasive gameplay? Or did the public want to play a greater role in the event's signature urban races? While at the 2006 Game Developers Conference, I had the opportunity to speak with co-designer Fortugno about a kind of *emergent* pervasive participation by the public. By emergent, I mean interaction that was not intended or anticipated by game designers, but which is logically if unpredictably prompted by their game design. As Salen and Zimmerman explain, emergence is a special property of game systems.

> What makes a system emergent is that there is a special disconnect between the rules of the system and the way those rules play out. Although the rules might be concise and knowable, the behavior of those rules set into motion in the system creates patterns and results not contained within the rules themselves, results that contain variety, novelty and surprise (160).

In our interview, Fortugno recalled being surprised by the significant number of spectators who chose to join the official players during the races, trailing them along the route, cheering and forming a kind of mini-convoy. The daily team blogs reflect evidence of this emergent participation. The yellow team blog notes on Day 2: "Yellow departed the Scheffer Recreation Center at 6 pm, eagerly trailed Pied-Piper style by many of the kids who'd dice-rolled there the previous evening" ([2]) And the blue team blog notes on Day 3: "Bicyclists, roller bladers, and tots towed in bike-trailers soon formed a convoy" ([3]). While these individuals were not allowed to participate formally in the street portion of the gameplay, they nevertheless inserted themselves into the moment of play and arguably were able aid their team—perhaps by clearing traffic out of the way or

simply through moral support. These spontaneous runners numbered as many as twenty to thirty for each team over the course of the five-day event, Fortugno said.

The convoy effect was, I want to suggest, a direct result of the game's decision not to design formal interactive opportunities for the public during the most spectacular portions of the events. The public was denied the ability to engage the traditional, primary physical affordance of pawn-shaped game pieces—the affordances of moving the pieces to a new position. So the public sought alternative affordances. Instead of focusing on the interactive possibilities of the game *objects*, which they were not allowed to grasp, the spontaneous runners investigated the affordances of the overall spectacle. For indeed, as it turns out, well-designed spectacles have interactive affordances beyond optic engagement. What action is suggested by a small crowd of people (the dozen official movers) moving very quickly and determinedly toward an unknown goal? A group of people running in one direction naturally invites either following or chasing. And a burgeoning crowd, by its very nature, invites participation; it solicits attention and structurally is capable of absorbing more and more people (until, presumably, it saturates the space in which it is forming). And in the case of the *B.U.G.*, the use of game imagery may have significantly aided the public in feeling hailed by the spectacle. The activity was clearly, iconically legible as play, perhaps making those members of the spontaneous convoy feel it was safe and appropriate to engage in behavior that in everyday life would be considered too disruptive.

Ultimately, the *B.U.G.* embraced this unofficial play as an added level of public participation. Two days into the game, the text on the *B.U.G.* website changed to reflect and to explicitly encourage this emergent behavior: "Meet at 6 pm at your team's daily

starting checkpoint for the beginning of each leg of the race, *then follow your piece along its chosen daily route*" (updated text shown in italics [3]).

The public wanted to have a more meaningful role in the events, and so it constructed one, *before* being granted the game designers' formal permission and explicit encouragement. In this sense, the spectacular game iconography of the *B.U.G.* ultimately succeeded in overcoming its own aesthetic, provoking the kind of participation we would more likely associate with the anti-spectacle, the situation. Even in its potentially hypnotic visuals, the *B.U.G.* provoked spectators to become movers. Indeed, we might say that the disruptive aesthetics of the *B.U.G.*—in which it breaks the location-based boundaries of the magic circle—inspired the public to become disruptive of the one aspect of the magic circle the *B.U.G.* tried to protect and to enforce: its participatory boundaries.

Debord writes: "The situation is thus designed to be lived by its constructors. The role played by a passive or merely bit-part playing 'public' must constantly diminish, while that played by those who cannot be called actors, but rather, in a new sense of the term, 'livers,' must steadily increase" ("Report on the Construction of Situations and on the International Situationist Tendency's Conditions of Organization and Action" [59]). Here, Debord suggests that those who construct the situation are those who are empowered to live it. In the *B.U.G.*, the public constructed their own participation in the pervasive element of the game; as such, they designed their own situation in the midst of the spectacle. Inspired by the spectacle of others gaming and the project's rhetoric of abundant pervasive participation, at least some percentage of the spectating public decided to *live* the experience instead of merely observing it. The strategic use of game

imagery and legible game structures, then, ultimately may empower the public to escape the traditionally alienating effects of the experimental genre's expressive medium of choice, the spectacle.

How Urban?

So far, I have discussed the conflict between the Design Institute's desire to create a pespective-shifting spectacle (the project's bigness) and a massively participatory experience (the project's gameness). Now, I will examine the third claimed attribute: the *urban* aspect of its design.

A year after the *Big Urban Game* played across the Twin Cities' urban landscape, Janet Abrams delivered the opening keynote lecture at the 2004 International Conference on Ubiquitous Computing. In her talk, titled "Ubiquity/Urbiquity: the *B.U.G.* and other Ludic(rous) Pursuits", Abrams explored the urban computing work of the *B.U.G.* and other pervasive games through two plays on words: "ubiquity/urbiquity" and "ludic/ludicrous". Taken together, these terms reveal both a *critical underside* and a *critical oversight* of pervasive games. In this section, I will argue that the terms "ludic/ludicrous" intentionally identify the *B.U.G.* as a serious critique of ubiquitous computing, while the terms "ubiquity/urbiquity" inadvertantly reveals the blind spots of a socio-technological critique made through the medium of a big, urban game.

In published notes from the lecture, Abrams situates the *B.U.G.* as part of a larger media design effort characterized by ludic interventions in urban spaces. Identifying the city as a newly emerged "vibrant locus of experiment in social computing", Abrams notes: "Projects by artists, game designers, and new media researchers have attempted to re-imagine urban space—and to illustrate the potential for individual and collective

experience therein—by threading various types of digital communication into the physical environment" (1). By what is the point of this pervasive play? At first, Abrams seems to identify these interventions and re-imaginings as a critique of traditional desktop computing. She asks: "Are these projects reactions to the numbing anomie of desktop, deskbound computing, a rediscovery of 'meat space' by a generation wearying of the smoothnesses of the virtual realm?" (1) In other words: Are projects like the *B.U.G.* an attempt to disconnect the tethers of wired life, to reject virtual reality in favor of actual reality?

If so, the *B.U.G.* could be seen as a direct inheritor of ubicomp founder Mark Weiser's distaste for the virtual reality of desktop computing. As Weiser noted in an early definition of the field: "Ubiquitous computing is roughly the opposite of virtual reality. Where virtual reality puts people inside a computer-generated world, ubiquitous computing forces the computer to live out here in the world with people" ("Ubiquitous Computing" [4]). But is the *B.U.G.* forcing computing to be more social? Or is it simply asking *people* to be more social? The *technological* interactions afforded by *B.U.G.*— viewing potential game routes online, registering and voting from a standard personal computer—are strictly desktop-based. To say (as Abrams does) that *B.U.G.* "threads digital communication into the physical environment", then, is not a supportable claim. Digital communication itself remains deskbound throughout *B.U.G.*; there is no real-time text messaging, cell phone calling, Radio Frequency Identifying or other digital communication taking place among the oversized game pieces, the runners and the online players. In sharp contrast with the projects discussed in Chapter Three, the computing aspects of the *B.U.G.* are, in fact, in no way ubiquitous.

However, the *B.U.G.* project does implore *users*, if not the computing systems, to step away from their desks and into the urban environment. On the "Rules" page, users are directed to show up at the physical locations they have virtually voted for: "Meet at 6 pm at your team's daily starting checkpoint for the beginning of each leg of the race…. Be at your team's ending checkpoint by 7 pm to join the SHAKERS and roll a pair of giant dice" ([4]) And the culmination of the game is a purely social event in real-space: "PARTY WITH THE PLAYERS. Toast the winning team, join the Movers and Shakers from all three teams and bring your friends and family to a party on the Lake Street/Marshall Street Bridge" ([7]). None of these real-world, social activities involve computing of any kind. Digital technology is instrumental only in getting the players away from their desktop computers. In the *B.U.G.*, then, there is no actual transition *from* desktop computing *to* ubiquitous computing. It is simply a movement away from computers.

This respite from computing is encouraged explicitly by one of the original game documents, the promotional map. During the *B.U.G.*, a printed game map featuring all thirty of the potential urban paths was distributed at the checkpoints and other venues throughout the Twin Cities. The flip side of the map presented information about the game, including a statement of the "*B.U.G.* Mission." This document, which I obtained directly from Lantz and which is not preserved on the *B.U.G.* website, asserts a slightly different set of design goals than those articulated by the project online. In addition to the visual-centric aims repeated in various game materials and design statements—"to frame new perspectives", "to take a fresh look", and "to see the familiar sights in a whole new

way"—the map's mission statement makes an explicit critique of contemporary digital gaming culture.

> At a time when 'game' has become synonymous with 'computer' and more and more people gather online to inhabit virtual cities of fantasy role-playing universes, the *B.U.G.* invites players to gather offline to explore the surprisingly interesting terrain of our own streets, parks, and neighborhoods, and to play a massively multiplayer game in the real world.

The map's invitation to play a "massively multiplayer" game in the real world is a bit of hyperbole. After all, the central activity of the real-world play was limited to only one-percent of gamers, or roughly thirty-six total. This is not a number that qualifies as multi-player, but not *massively* multi-player. So why adopt this hyperbolic term? This mission statement serves to align the *B.U.G.* with the gaming genre most clearly associated with desktop PCs: massively multiplayer games. Here, the project does not call itself a "citywide board game", as it does in most other promotional material ("Project" [1]). Instead, it is a citywide MMO, or massively multiplayer online game. While the iconography of the *B.U.G.* belongs primarily to the non-computing genre of *board* games, the gaming metaphor applied here is pure desktop.

This slippage between genres in the promotional materials of the game points to an important aspect of *B.U.G.*'s design: desktop computing served not only as the primary platform for experiencing the game, but also as the primary metaphor for even the pervasive elements of the project. Consider, for example, how the *B.U.G.* website describes the physical props in explicitly desktop terms: "As the three oversized inflatable game pieces are carried (by a team of volunteer MOVERS) through a series of

checkpoints, they will act like giant beacons or 'cursors' pointing out features of the diverse neighborhoods they pass through, and attracting attention" ("Background" [4]). Here, the *B.U.G.* describes its real-world gameplay pieces as physical manifestations of the desktop PC cursor.

In the *Big Urban Game*, then, we have a game that does not employ ubiquitous computing in either its technological implementation or its metaphorical construction. Rather, it employs traditional computing technologies and metaphors to make *users* more ubiquitous. Rather than trying to create an urban ubicomp experience by embedding and deploying technologies in city spaces, the *B.U.G.* allows the technologies to stay at home. It insists only that the technologies' *users* reconnect with their urban environments. In short, the *B.U.G.* has no part in Weiser's critique of the virtuality of computing itself. Computing can stay on the desktop—the *B.U.G.* simply wants the users' social relations to be less virtual.

If the *B.U.G.* is not a critique of desktop computing, then what aspect of computing is it critiquing? Abrams offers a second, and more convincing, basis for the *B.U.G.*'s socio-technological work: It is a critique not of *in the tradition of* Weiser and ubiquitous computing, but rather *of* Weiser's tradition and of ubiquitous computing itself. She asks of the new class of urban gaming projects: "Are they ripostes, in fact, to the cherished fantasy of 'ubiquitous' computing which, in its strivings for technology 'everywhere, all the time', tends instead towards a kind of 'no-where'?" In other words, are big urban games specifically designed to reveal ubiquitous computing's potential to transform all sites into perfect, functional replicas of each other? The *B.U.G.*, it would seem, is not a playful experiment in ubiquitous computing. Rather, it is direct critique of ubiquitous

computing's effects on our ability to experience the specificity of our local environments. To return to Abrams' provocative word plays: If the *B.U.G.* is a *ludic* venture, then perhaps the grand ambitions of ubiquitous computing form a *ludicrous* one.

Indeed, a review of Abrams' UbiComp keynote describes the talk "deliberately controversial", noting: "She challenged the concept of 'ubiquitous computing'… specifically asking why we need more technology, everywhere, why every encounter has to be mediated by a digital device… what adding an extra layer to everyday encounters actually delivers" (Moriwaki). The design of the *B.U.G.*, of course, argues that social encounters *in* and *of* urban environments do not need to be computer-mediated. The digital devices are left at home. However, urban dwellers may require computer-mediation to compel them toward a more pervasive urban experience—that is to say, a more adventurously mobile, social, and interactive approach to experiencing the multitude and diversity of sites within the daily reach of city residents. This attitude is what I take to be the meaning of Abrams' neologism 'urbiquitous'. City residents are asked to take on the properties of ubicomp technologies—becoming more mobile and more social—without actually using the technologies.

Abrams, then, is critiquing not the goals of ubiquitous computing, but rather the idea that they should be manifest first in our far-flung technologies, rather than in our local communities. The *Big Urban Game* proposes moving and connecting users more ubiquitously through urban environments as a positive step toward collectively embodying the social values we have been preoccupied with projecting onto ubiquitous computer systems.

In this way, the *B.U.G.* performs an active *détournement* of urban computing's efforts to understand how human social networks are transformed by new technological infrastructures. The game reroutes urban computing's desire to observe social reconfiguration that occurs through technological development. It resituates this desire in a more critical context, where novel technological concepts are deployed as *metaphors* rather than *mediating platforms* for social engagement. The result is a new urban gaming agenda: to enact social reconfiguration through technological critique.

In her keynote description, Abrams asks what in the big picture this new urbiquity, "what this 'return to the city', represents" (1). In response to her own question, she identifies the pursuit of greater urbiquity as a conscious decision "to celebrate the particularities of place, and the richness of difference - between individual lives, between city blocks and neighborhoods, between urban cultures" (1). Abrams privileges the specificity of an interactive experience designed for a single urban location over the scalability of massively replicable interactivity, across multiple spaces. One element of scale that the *B.U.G.* is not the least bit interested in achieving is scale of iterability. The *B.U.G.* was produced just a single time in a single city. As such, the game has a particularity of experience that Abrams prefers to a more ubiquitous kind of play or performance.

But is the site-specificity of *urbiquitous* design a viable substitute for the replicability of *ubiquitous* design? It is precisely the urban-ness of these "big urban games", I want to suggest, that makes it so difficult to reconcile their design and implementation with the notion of truly ubiquitous play and performance. There are simply too many places that are not cities. Earlier, I cited the UN statistic that currently just slightly less than half of

the world's residents will live in cities. What about the other half? Why is it only urban spaces that deserve to have, as Abrams suggests, "the potential for individual and collective experience" re-imagined? According to Abrams, the ultimate goal of the *B.U.G.* and similar urbiquitous projects is "to enable more realistic engagement with the world we actually live in." Why is this a goal of which only urban dwellers are worthy? Should not a pervasive network of play pervade non-urban environments, as well?

These concerns over big, urban games' potential critical oversight are only valid, of course, if we believe that urbiquitous projects do not map equally well onto non-urban environments. Do they? Here, it helps to consider another pervasive game project which claims ubiquity in its name but practices Abrams' model of urbiquity in its deployment.

4.3 'What the ****?': *The Mp3 Experiment 2.0*

In October 2005, the a group of urban pranksters known as Improv Everywhere invited the public to participate in *The Mp3 Experiment 2.0.*, an experimental performance structured in the form of a game. Participation was open to any member of the public who found out about the experiment through the group's website, email newsletter, or word-of-mouth. The instructions for the game, distributed weeks in advance of the Sunday, October 16 event, were as follows:

> *Instructions:*
>
> *1. Download the Mp3 using the link below.*
>
> *2. Load it onto your Mp3 player (iPod, etc)*
>
> *3. Do not listen to the track.*
>
> *4. Bring it with you to the event.*
>
> *5. When you arrive at the event, SIT on the grass, anywhere in the*

meadow.

6. A man in the center of the meadow will make a siren noise with his

megaphone. When this happens turn your player on and prepare to press

play.

On the day of the game, roughly 200 people, according to Improv Everywhere's report on the mission, arrived at Central Park's Sheep Meadow with their Mp3 players and headphones, ready for further instructions. [8] At the sound of a megaphone, they simultaneously pressed play on their devices. With the Mp3 track playing privately for each player, the participants spent nearly half an hour carrying out performance and gameplay commands to a pop soundtrack. In follow-the-leader format, they were instructed to "walk from the meadow to the Rock like zombies" as Michael Jackson's "Thriller" played in their ears, and then to "circle arms forward", "circle arms backward", and "do leg circles" in a calisthenics routine to Young MC's "Bust a Move". A cartoon bumble bee voice encouraged them to fly and buzz around nearby trees, while a grouchy sea captain ordered them to row, row, row their boat across the meadow. The event concluded with a massively multiplayer *Rock, Paper, Scissors* tournament, silently played out as players took their cues on when to throw from the Mp3 track (see image 4.4). The entire project takes the form of an audio-guided gaming *dérive* through Central Park.

Like the *B.U.G.*, *The Mp3 Experiment 2.0* aspires to big, urban, gameness and shares many of the *B.U.G.*'s central design attributes. First and foremost, it is designed to be

---

[8] My description of the game activities are take from agent reports, video footage and the original Mp3 soundtrack, all of which are posted on the project web page at http://improveverywhere.com/mission_view.php?mission_id=52.

4.4 Playing *The Mp3 Experiment 2.0.* Agents engage in massively-multiplayer Rock, Paper, Scissors. Note that headphones and earbuds wires can be seen on all of the players. (Improv Everywhere, 2005)

visually disruptive and thereby to propose new social configurations. On a page of frequently asked questions, Improv Everywhere founder Charlie Todd describes the work of the group: "We bring excitement to otherwise unexciting locales" ("FAQ" [1]). Like the *B.U.G.*, *The Mp3 Experiment 2.0* is interested in intervening in specific sites. However, rather than revealing new aspects of the environment (the work of the *dérive*), Improv Everywhere intervenes by changing the social content of the site (the work of the *détournement*). Todd notes: "Oftentimes people misread our URL as 'Improve Everywhere.' We think that's probably a better name for what we try to do" ([4]).

What is the nature of these claimed improvements? The motto of the Improv Everywhere group is "We cause scenes" ("Improv Everywhere Home Page"). This slogan can be read as a description of the performance-based nature of its projects (*scenes*

as in dramatic episodes) as well as a boast of its ability to disturb the ordinary operations of public spaces by generating this drama (*cause scenes* as in actively creates a disruption).

4.5 Saluting *The Mp3 Experiment 2.0*. Players salute in response to a command given by the game. The participants, called "agents", each wear a set of earbuds or headphones to hear the instructions. Here, wires snake down the agents' chests to Mp3 players carried in pockets or hands. (Improv Everywhere, 2005)

In a summary of the event, Todd reports on the success of *The Mp3 Experiment 2.0* disruption of an ordinary Sunday afternoon in the park. The choreographed game apparently stunned bystanders: "Families and Frisbee enthusiasts in the park stood in shock" ("The Mp3 Experiment 2.0 [14]). Todd describes the impact of the event as "leaving everyone else in the park scratching their head at the 25 minutes of insanity they had just witnessed" ([25]). The spectacular force of their collective performance was not lost on the participants. In the days following the experiment, players left comments on

the project webpage reporting on the commotion they created. One player wrote: "Seeing the looks on people's faces was awesome, as they thought to themselves, 'what the ****?'" (Agent Sanchez 10/17/05) Another observed one of the more memorable moments of social disruption: "I did feel sorry for the wedding party occupying the fountain area that we congregated by after the event" (Agent Racingsloth 10/16/05). Combining Todd's "shock" with Agent Sanchez's "awesome", we might describe this high-impact aesthetic as a *shock and awe* style of pervasive gameplay. It is visually arresting, hypnotic and confounding at the same time. And "shock and awe", with its infamous origins as a military strategy, is a phrase that seems particularly apt to describe the experiment given its militaristic undertones: the event is described as a "mission", the players its "agents", and its core mechanic is to carry out the order of a superior commander. In image 4.5, for example, agents enact this power relationship by carrying out an order to salute their invisible commander.

Like the *B.U.G.*, the game's spectacular *visibility* was central to its aesthetic. The participants' comments on the project webpage reveal a striking awareness of the specifically visual impression they created through their play. Early player reports expressed an immediate desire to see what they had already experienced directly: "so excited to see the pictures and footage of the thing!" (Agent Laurie 10/16/05) "Amazing amazing amazing. I can't wait to see a video" (Agent C 10/16/05). "I'm interested to see the pictures/video. seemed there were a lot of folks manning some serious photographic machinery." (Agent Racingsloth 10/16/05) Indeed, many players expressed frustration that in participating, they were unable to be share the spectator's experience. "this would've been fantastic to see if I had no clue what was going on" (Agent Blitz 10/16/05)

"i almost wanted to be on the other side of it, too, because the looks we got from Those Without Headphones were absolutely priceless" (Agent Ediss 10/16/05). "it was awesome! I only wish I could be in the minds of those seeing 200-ish zombies walking towards them" (Agent Yellen 10/16/05). "I almost wish I could have both participated *and* watched everyone around us who didn't know what the heck was going on stare in bemusement simultaneously" (Agent Kit 10/16/05). Here, as in the *B.U.G.*, those directly living the experience seem to derive the most pleasure from being a part of the image-generating machine. They express a desire to *witness* the event that seems to exceed their desire to *participate* in it.

What made the experimental game so spectacular to behold? While the synchronized, unusual actions of the large crowd was no doubt a visually arresting image, the extreme impact of *The Mp3 Experiment 2.0* was created in large part, I would argue, through the project's strategic use of ubicomp technology. In a personal interview, Charlie Todd described to me the design motivation for using Mp3 players as the delivery medium for the game's instructions. "It's a more intimate experience. I thought people would feel more comfortable performing the actions with their earphones on. It feels more private, like you're in your own little world." In other words, Todd predicted that the Mp3 format would lower the threshold for participation, allowing more introverted or socially cautious players to follow the highly extroverted commands in such a public setting.

The use of the private audio tracks aimed to increase the likelihood that those *already in the know* would carry out the game performance as directed. But an equally important, if unintended, consequence of this particular design strategy was the creation of a truly *dark spectacle* for those not already in the know—dark in the sense of Schechner's theory

of dark play. By secreting the interactive content of the experience away on Mp3 players, the event was essentially a silent one. There simply was no audio context for the spectacle. This dramatically heightened the visual effect of the unexpected sight. The movement of the players was exuberant and yet clearly organized, but no originating source of direction or legible cause of the group's delight could be detected.

The flipside of making a more stunning visual impression, as in the *B.U.G.*, is the foreclosure of full public participation. The audio players kept the structure and game mechanics of the experience secret from bystanders, who might otherwise have chosen to join the situation. According to Todd, there were at least as many bystanders in the playing area *not* in the know as there were performers. This means that while the space was occupied by the performance, at least as many people were rendered spectators as were afforded full participation.

As *The Mp3 Experiment 2.0* was designed, the private instructions accomplished a complete separation of the *semblance* of play from the functional opportunity to play. Instructions or context are required for interactive legibility; without them, there is nothing to prompt play among onlookers. Here then, as in the *B.U.G.*, the pervasive players take on the role of performer, embedding the silent *imagery* of play in an everyday environment for a much larger audience. Like the *B.U.G.*, the central interactive properties of the experience are reserved for the performers and denied to the spectators. Todd's design choice in favor of headphones, made to promote participation among those in the know, prevented participation among those not in the know.

The Mp3 Experiment 2.0 no doubt created a sense of collective experience for those participating, a kind of instant community built through risky play. However, the

participants were not the only subjects in this social experiment. The other strangers-turned-spectators, I would suggest, were organized and reconfigured as dramatically as the players. Debord writes: "The spectacle is not a collection of images; rather it is a social relation between people that is mediated by images" (*Society of the Spectacle* 4). Those estranged from the game were connected to each other in their estrangement. Debord explains: "Spectators are linked solely by their one-way relationship to the very center that keeps them isolated from each other. The spectacle thus reunites the separated, but it reunites them only *in their separateness*" (29). The social configuration described here precludes spontaneous peer connections across the spectators. While they are made similar to one another by being put equally in the dark, this relationship is one of likeness, rather than interactivity. The spectators form a *category*, rather than a *network*.

As such, *The Mp3 Experiment 2.0* split the Central Park goers into two social classes in the moment of dark pervasive play: those in the network and those excluded from it. Participants seemed cognizant of their role in creating this effect. Note how on the forums a player names the entire class of the bystanders as "Those Without Headphones", grouping them according to their inability to participate (Agent Ediss 10/16/05). And on an Improv Everywhere forum, a small debate arose around the question of whether the pleasure of the game was focused on play or performance. One prospective participant asked: "Is the point to completely baffle everyone around, or is it just to have fun with the people participating?" (Xitanto 1/29/06) Another responded, reflecting the consensus of the boards: "I reckon the main point is to baffle everyone around us" (Flatty 1/29/06). In other words, the players understood it was their job to enact and to enforce the new social structure in which certain strangers were connected through play, and certain other

strangers were categorized through alienation from that play. Here, it seems significant that the name of the group is Improv Everywhere, and not Improv *Everyone*. Just as the *B.U.G.* tightly controlled those who could participate in its disruption, the pleasure of *The Mp3 Experiment 2.0* clearly relies on recreating the *social* boundaries of the magic circle of play to exclude a significant subset of city residents, even as the game breaks its *contextual* boundaries.

The first iteration of *The Mp3 Experiment*, a lesser-known performance that preceded the more widely publicized version 2.0, broke neither of these boundaries. The *2.0* performance was a follow up to a December 2004 event, in which a similar performance was organized inside a theater—that is to say, in a traditional magic circle of play. At the original experiment, there was no public audience or spectators—only participants, the theatergoers who paid eight dollars each to attend, and thereby to create, the theatrical event. Participants in the first experiment likewise wore headphones and carried out commands given over Mp3 players. Only in the final moments of the experience were the spatial boundaries of the magic circle blurred, as players removed their headphones and were ushered out into the streets for a parade down Eighth Avenue. The primary difference between the first event and version 2.0, then, is that the latter moves the work toward a more pervasive and disruptive aesthetic. In the official mission report, Todd explains his decision to redesign *The Mp3 Experiment* as a big, urban game:

> For version 2.0, Agent Walker and I wanted to considerably heighten the insanity. We knew that we wanted 2.0 to take place completely outdoors. The final moments of the first show, where the crowd walked together out of the theatre and on to 26th street, were really exciting. By holding the

experiment outside of a theatre, we would have the added benefit of mixing with unaware members of the public ([2]).

Version 2.0, then, takes as its inspiration the adrenaline rush of probing the real-world with invasive acts of play. I want to call attention here to how essential the "unaware members of the public" are to the players' pleasurable experience. While Improv Everywhere may seek to intervene in unexciting locations by staging performances for those already and ordinarily occupying the space, it seems to me from Todd's description of the design strategy that those prior occupants are in fact more directly exciting the participants, rather than the other way around. While carrying out commands in a theater is fun, doing it inexplicably in front of in-the-dark strangers is thrilling. The necessity of this unaware and non-participating class makes clear one of the major differences between pervasive and ubiquitous game design. Pervasive gameplay can never truly be ubiquitously available; if it were, there would be no bystanders to shock and to awe, and thus the central fun of the experience is denied.

In contrasting the original *Mp3 Experiment* with version *2.0*, I also want to ask: is Central Park's Sheep Meadow necessarily less of a magic circle than a theater? Does situating a game in public and outdoors necessarily mean a rupture of traditional boundaries for play? It is not unusual, I would suggest, to see play erupt on a playing field on a Sunday afternoon, nor is it such an unlikely scenario to embed recreation in a site managed by the city's Department of Parks and Recreation. As an urban location, then, Sheep Meadow does not seem in fact an all-together pervasive choice in the sense of pushing the limits of *where* and *when* it is appropriate to play. I would argue instead that what is actually pervasive and disruptive about the project is not its public location,

but rather its designed attitude toward *how* the players treat the public space and its other occupants.

By embedding a cryptic spectacle in a space already marked for recreation, *The Mp3 Experiment 2.0* is disruptive by creating a private event in a public venue, a spectacle that seeks attention but thwarts full understanding. Indeed, in urban culture at large, the prevalence of Mp3 players among pedestrians and public transportation riders has been widely critiqued as making public spaces more private and less social. A recent trend piece by *CNET News* called **"iPod Means Tuning Out of the World around You"** perfectly captures this common critique:

> When Josh Adams sees other students at Manhattan's School of Visual Arts each plugged into an iPod, he figures they're being antisocial. "I feel like they're trying to shut people out, maybe even unintentionally," says the 18-year-old Manhattan resident. For New York University student Dante Lima, it's entirely intentional. With his ear buds in place, he's never bothered by sidewalk hucksters. "If you want to get away from them, just start listening to your iPod," says Lima, 20. "They don't approach people with headphones on." Wearing headphones has become the modern equivalent of wearing a Do Not Disturb sign around one's neck (Leichman [1]).

So are the Mp3 players in Todd's experimental game tools for tuning out? At one level, the answer clearly is no. The performance is designed to intervene into the habit of using this specific technology to create what is commonly referred to as a *personal technobubble*. The game structure transforms an ordinarily private technology into a

platform for massively-social play. Clearly, those wearing the devices are having a more social experience of the technology than they would normally. This is the urban computing work of the project. However, at the same time, the Mp3-fueled game spectacle also seems to make the public space of Central Park a more private space. The technology allows players to shut out those who are not participating. In this way, the personal technobubble is simply made larger—or more pervasive. Ubiquity, by design, does not have an *outside*, whereas pervasive is expansive, but not all-inclusive. Is the technobubble the new magic circle?

The organization of the Improv Everywhere community online further suggests the desire to reconstruct the magic circle by creating a social outside. In the wake of the tremendous amount of publicity that Improv Everywhere received for successfully pulling off *The Mp3 Experiment 2.0* and other pranks, Todd established a message forum to allow an online community to assemble. The forum was created, Todd told me, in the spirit of making Improv Everywhere more actually ubiquitous. He named the forum "Global Agents HQ," and described it as "a place for Improv Everywhere fans outside of NYC to meet and organize." It would appear, at first glance, to be a major success. In the six months since its launch, the forum has received declarations of intent from would-be organizers in 148 different regions, including expected cities such as Boston, San Francisco, and Los Angeles, as well as more unexpected sites: "Western Michigan", "North Dakota", "Northern Alabama", "Southeastern Pennsylvania", "D.C. suburbs". In this tremendous volume of response, we see the desire of the public at large to join the situation, rather than to remain online, secondhand spectators of the experience. And this

desire is clearly not limited to urban centers. Improv Everywhere, it would seem, has the potential to be more ubiquitous—as its name seems to aspire to—than urbiquitous.

Or does it? In my own research, I have been unable to locate any forum accounts, news reports or other evidence of actual performances of *The Mp3 Experiment 2.0* in the past six months since the forum was founded. So in a personal interview, I asked Todd if he had received mission reports from agents conducting *The Mp3 Experiment 2.0* in other locations, or if he was otherwise aware of any successful performances of the piece. Todd responded, "No, I don't think there have been any." I asked if he thought there would be any, and he responded, "No, I don't think so, probably not. There aren't that many people who can organize this kind of thing and take on all of the details and responsibility of doing something of this scale in public." Indeed, the dramaturgical and production skills necessary to pull of a public gaming spectacle of *The Mp3 Experiment 2.0*'s scope and depth of creative detail do seem to preclude widespread iterability.

To what extent, then, does the message board serve as an actual forum for constructing situations, versus just another venue for watching others play? Consider the ratio of replies to page views for each region's individual topic. The topic for discussing New Haven experiments to date has received 2 replies and 421 page views; Sacramento 1 reply and 287 page views; London 4 replies and 574 page views; "Southeastern PA" 7 posts and 1148 page views; and so on. The forum has become its own spectacle, I want to suggest, with far more people watching than constructing. And I believe, in fact, this is a kind of point of pride for the New York City based designers. There seems to be significant satisfaction in controlling the spread of *The Mp3 Experiment 2.0* and other similarly pervasive performances, to limit the field of participation.

Consider a recent event on the Global Agents HQ forum. In an official announcement topic called "Please don't use 'Improv Everywhere' in your name", Todd requested that other would-be organizers not use his group's name. "Several people have asked me if they can use the name 'Improv Everywhere' in their local group name. The short answer is no." (Agent Todd 5/16/06). Todd refuses to allow others' disruptive games and performances to be formally connected, through naming, to his own NYC-based group. "Using names like 'Improv Everywhere Chicago' or 'Improv Everywhere Los Angeles' implies that you are an official chapter. As I've stated before, these forums are not about starting official chapters." Here, we see a rejection of any formal network for supporting and expanding these pervasive experiments. There can be no other official nodes. Todd states: "My reasoning behind this is that I don't personally know the people on this board who are starting local groups. I can't trust the name sake I've built up for five years with strangers. If someone went out and murdered someone and called it a prank by 'Improv Everywhere Salt Lake City' that would be bad news" (Agent Todd 5/17/06). While this last hypothetical situation is no doubt mostly facetious, the truth about which it jokes is that even a disruptive group like Improv Everywhere seeks to control and centralize the flow of disruptive activity.

I want to close my discussion of *The Mp3 Experiment 2.0* by asking, then: to what extent is this kind of pervasive gaming making play and performance *more* ubiquitous than it might otherwise have been? "Improv Everywhere" is a name that certainly suggests an aspiration to ubiquitous play and performance. Moreover, *The Mp3 Experiment 2.0* relies on ubiquitous computing as its primary technological platform. But what is its connection to ubicomp philosophy? Ubiquitous computing aspires to create

massively-scaled networks, but here we see Improv Everywhere refusing to allow such an infrastructure to be built. And ubiquitous computing, as described by Rich Gold, should be capable of surprising us and delighting us as unlikely objects come to life in the most unexpected places. But how actually surprising is it to see a crowd of New Yorkers assemble together in a public park? As one participant commented on *The Mp3 Experiment 2.0* forum: "This is the reason I live in New York!" (Lippy 10/16/05). This is not to say that New York City (or in the case of the *B.U.G.*, Minneapolis or St. Paul) is not a worthwhile platform for real-world gaming. Rather, it is to ask why such high-performance play should start and stop in cities that, arguably, represent the more likely suspects for such interactive-enhancements. Why big *urban* gaming instead of simply big *public* gaming?

Ultimately, "big urban gaming" suffers from a failure of imagination in its selection of specific sites. This is both a failure to see that such projects could thrive or have value outside of specific urban environments, and a failure to recognize that by conducting projects which "celebrate the particularities of place," as Abrams puts it, it may be limiting their ultimate deployment to places that share these urban particularities. The pervasive gaming genre has at present excluded a huge range of sites simply by nature of their not being urban. I would argue that this oversight reveals a tacit belief that massively-scaled ludic interaction is either not possible or not desirable (or perhaps both) truly everywhere. This disinterest in *actually* ubiquitous play and performance significantly dampens the otherwise provocative effects of the genre.

More importantly, we can see from the Improv Everywhere message boards how the *urbiquitous* nature of the larger pervasive game network reconfigures the macro-relations

between city residents and everyone living elsewhere in precisely the same way that individual game projects divide the local population into a performing and a spectating class. City residents have a direct experience of the ludic interventions, while others can only watch via mediated images and reports of the urban gameplay. While the *particularities* of urban spaces are celebrated, all other locations are construed as *similar* in their inability to afford the same quality of public interaction. This is a massively-scaled social reconfiguration through spectacular play. It draws our attention to how society at large may be reconfigured into multiple tiers of disparate socio-technological engagement if the ubiquitous computing infrastructure penetrates urban environments more deeply than others. And it forces us to consider the possibility that ubicomp culture may ultimately become a technological spectacle itself.

Will we cultivate, through a closed magic circle of participation, a class of spectators who are denied direct engagement with a urbiquitous, rather than a ubiquitous, computing network?

<p align="center">*</p>

The two pervasive games discussed so far have created massive public spectacles without affording the public full participation. To the extent that they created open situations, these situations were either a minor part of the overall experience (the dice rolling in the *B.U.G.*) or were limited to the performing class of those in the know (the participants who downloaded the *Mp3* track in advance). The next pervasive game project I want to discuss, *PacManhattan,* takes this pairing of limited play and mass spectacle to its extreme. As I will argue through a close reading of its original game texts and public reception, *PacManhattan* prioritizes game imagery over game participation to

such an extent that it creates a new paradigm of experimental pervasive game practice: the public game that cannot be publicly played.

4.4 'Can I Play Too?': *PacManhattan*

In the spring of 2004, a group of graduate students at New York University's Interactive Telecommunications Program developed a live-action version of the classic videogame *Pac-Man* for the real-world environment of lower Manhattan. The goal of the project, according to the project website: "to explore what happens when games are removed from their 'little world' of tabletops, televisions and computers and placed in the larger 'real world' of street corners, and cities" ("About [1]). To move the game from the screen to the streets, the students discovered and articulated structural similarities between the gridlike structure of a 6 x 4 block area of Greenwich Village and the opening level maze of the original *PacMan* (see image 4.6). They dubbed their project *PacManhattan* to connote its striking site-specific juxtaposition of classic game iconography within an über-urban setting (see image 4.7). Indeed, the *PacManhattan* project is perhaps best known for its success in circulating visual evidence of the game. Photographs and video of the project's costumed players racing through lower Manhattan appeared in *The New York Times*, on CNN national news, and on over a remarkable 30,000 blogs—among many other press and online citations, archived on the project press page.

Over the course of three two-hour playtests, the design team ran a total of six *PacManhattan* games. The gameplay unfolded as follows:
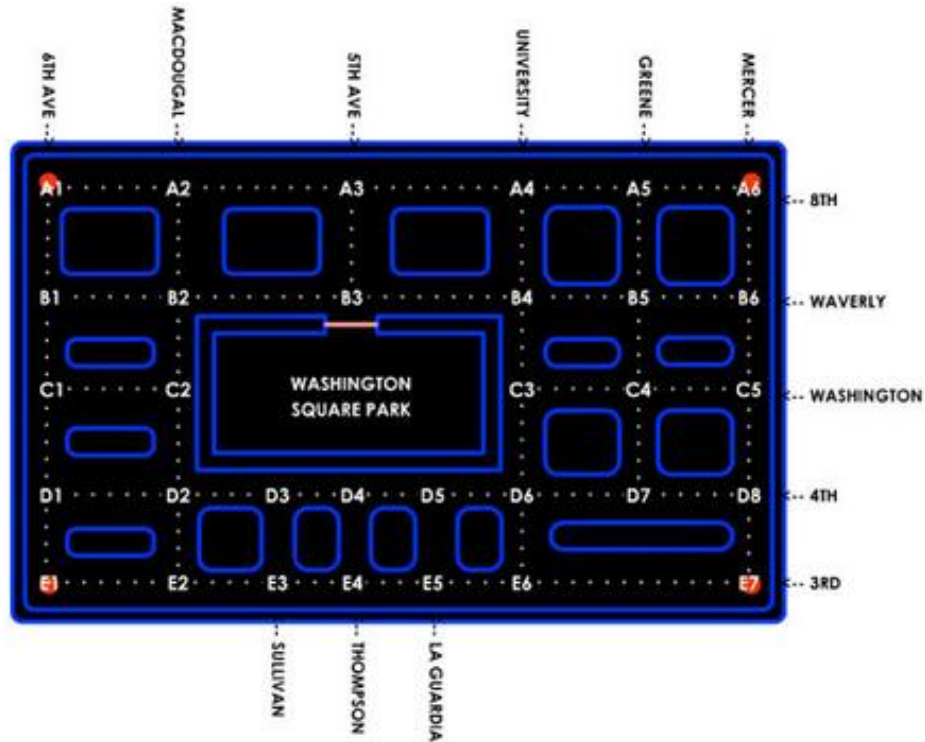
4.6 The *PacManhattan* Map. The iconic game grid has been modified to reflect the urban grid of the Greenwich Village in lower Manhattan. (Interactive Telecommunications Program, 2004)

4.7 Video Game Iconography in Urban Environments. Here, four real-world players are depicted against the lower Manhattan and mid-Manhattan skyline. (Interactive Telecommunications Program, 2004)

A player dressed as Pac-Man will run around the Washington Square Park area of Manhattan while attempting to collect all of the virtual "dots" that run the length of the streets. Four players dressed as the ghosts Inky, Blinky, Pinky and Clyde will attempt to catch Pac-Man before all of the dots are collected. Using cell-phone contact, Wi-Fi internet connections, and custom software designed by the *PacManhattan* team, Pac-Man and the ghosts will be tracked from a central location ("About" [2-3]).

As the project's list of Frequently Asked Questions explains, the game does not embed visible, physical pellets, or "dots", in the street for the Pac-Man character to collect. Instead, as the Pac-Man player runs through the streets, he uses a cell phone to call a "controller" whenever he arrives at an intersection on the grid (see image 4.8). The controller, who is seated at a desktop computer, moves Pac-Man icon across a virtual map of the Washington Square Park game board to update Pac-Man's position. The digital game software automatically removes all existing pellets between the original and the updated position (see image 4.10).
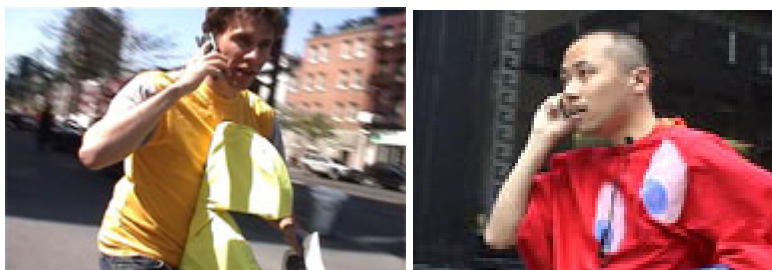
4.8 and 4.9 *PacManhattan* Street Players, Pac-Man and the Ghost. Shown here, Pac-Man (left) and the red ghost (right) phone in their real-world location to controllers, who enter the locations manually into the digital game system. Iconic costumes signify video gameplay to onlookers. (Interactive Telecommunications Program, 2004)

Each ghost player has a controller, as well, and the ghosts report their locations in a similar manner (see image 4.9). However, while Pac-Man may ask his controller for the most recent known position of each ghost, the ghosts may *not* ask their controllers for

Pac-Man's most recent reported location. Instead, the ghosts wander the 6 x 4 block grid hoping to stumble onto Pac-Man. If they are lucky enough to locate Pac-Man, they must then stay within close enough physical proximity to maintain visual contact. As in the classic videogame, the ghosts "eat", or kill, Pac-Man by tagging him; likewise, when Pac-Man eats a Power Pellet he can tag an eat and temporarily disable the ghosts. The game ends when Pac-Man clears the board and wins, or is tagged and loses.
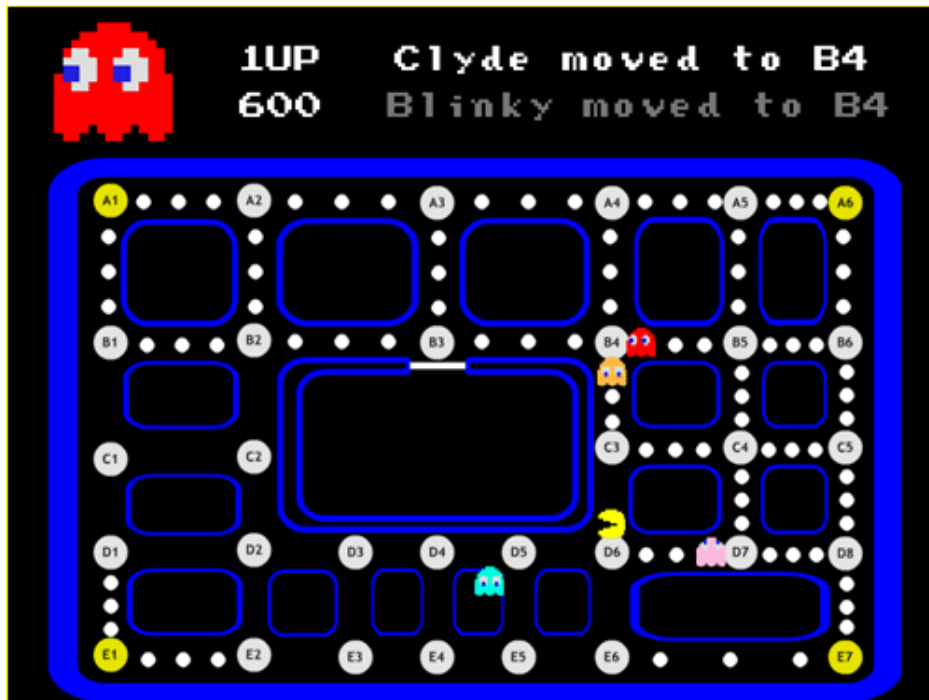
4.10 Screenshot of the *PacManhattan* Custom Game Application. As the real-world players phone in their new intersection location, the digital players drag-and-drop their icons on the game board map to reflect the change in position. As Pac Man's position is updated, any existing dots between the two locations disappear. (Interactive Telecommunications Program, 2004)

The students who created *PacManhattan* did so as a final project for the ITP design seminar "Big Games", taught by former *B.U.G.* designer Frank Lantz. So it is not surprising that numerous elements of the *B.U.G.*'s design appear in both the technological implementation and interactive patterns of the *PacManhattan* game. To begin, there is a separation of players into real-world and online classes. In *PacManhattan,* each costumed character is paired and connected via cell phone with an

online player, who remains at a stationary, desktop computer. Pac-Man and his or her controller represent one team; all four ghosts and their controllers represent the opposing team. As in *B.U.G.*, these separated classes are not competing against each other. Rather, some real-world players are teamed with certain online players; as a group, these pairs work against the other paired players.

In both projects, this connection between classes is typically discussed as evidence of the increasing enmeshment of the digital world and the physical environment as ubicomp technologies advance. To have the two classes compete with one another would be to imagine a future in which a user must choose between mobility and networkability. To bridge the classes is to imagine a future in which such a choice is not necessary. In the 2005 paper for the Digital Games Research Association "Tangible Interfaces for Pervasive Gaming", a team of researchers from the International School of New Media at the University of Lübeck perform a typical reading of *PacManhatta*n's mixed reality design:

> With pervasive gaming, a new era of games has been recently evolving. By integrating computer functionality into real-world objects (smart objects), new forms of games can be developed that are weaved into the real world through the use of physical objects as human-computer interfaces, thus freeing the players from the restrictions of stationary computer monitors. A well-known recent example is *PacManhattan* [Schrader, et al 10].

In this reading of *PacManhattan*, however, the authors fail to consider the fact that by design only *half* of the players are freed from the restrictions of stationary computer

monitors. To facilitate the newfound mobility of the street runners, equally as many people must agree to stay desktop-bound. However, because this desktop play is not visually remarkable—no photographs have been circulated of the gameplay that took place in the command center, as opposed to the thousands of websites and newspapers that featured images of the street play—it has remained essentially invisible to those writing about the game. As a result, much of the public and critical perception of *PacManhattan* ignores the traditional computing required to create the pervasive experience.

Indeed, in its actual technological infrastructure, like the *B.U.G.*, *PacManhattan* does not rely on pervasive or ubiquitous computing to any significant degree. Lantz acknowledges: "The game is actually pretty low-tech" ("Big Games" [5]). The designers apparently anticipate some curiosity and feedback on this low-tech approach. On their FAQ page, they address the project's lack of actually ubiquitous computing:

> Q: Why didn't you use GPS?
>
> A: We tried track the players using GPS, but ran into two problems: (1) GPS does not work well in "urban canyons", where the signal is reflected off large buildings and (2) we could not find an easy (read: cheap) way to send the geo-coordinate data from the GPS receiver back to the network.
>
> Q: Why didn't you use WiFi?
>
> A: We are using WiFi in the control room, but not on the streets where the players are interacting. We were going to try to use WiFi networks as an uplink for the GPS data, but we could not find an area of the city with consistent WiFi coverage over a large area ("About" [12-13]).

Here, we are reminded of the difficulties of staging actually ubiquitous computer gaming in present, real-world environments. Rather than emulating the future of play (the ubicomp game design strategy discussed in Chapter Three) the *PacManhattan* team designs around the problems in existing urban ubicomp infrastructure by abandoning the platform. Note that in defending this decision, the team identifies Manhattan as a fundamentally unfriendly environment for high-tech ubicomp gaming. If the GPS is so unstable and the WiFi coverage so spotty, why not search for a more suitable terrain elsewhere? But, of course, the point of pervasive gaming is not to demonstrate or to promote ubiquitous and pervasive computing. The point is to create playful provocations in specifically urban environments. If ubicomp technology impedes this goal, then it can and will be sacrificed by the designers. But as the decision of the *PacManhattan* team reflects, they will *not* trade the everyday urban environment for a lower-profile or less spectacularly disrupt-able site.

Use of ubicomp technology is not the only thing *PacManhattan*'s designers were willing to sacrifice in order to create a spectacularly big, urban game. Participation by the public was also denied in order to create and to control a highly visible, highly mobile instance of pervasive play.

In a 2005 SIGGRAPH lecture titled "An Ubiquitous Approach to Mobile Applications", *PacManhattan* co-designer Dennis Crowley discusses *PacManhattan* as a successful experiment in taking a low-tech approach to creating novel ubiquitous experiences. He argues: "The world gets more interesting as the devices around us get smarter. The problem is, sometimes it's no fun sitting around waiting for devices to evolve. Mobile location-based services, games, and social software are more fun when

everyone can play" (1). But can everyone play in a game like *PacManhattan*? In fact, *PacManhattan* places strict limitations on who can play, where. Most tellingly, the FAQ page published before game day addresses the issue of public participation in the game as follows. "Q: Can I play too? A: The players for Saturday's game have already been pre-selected. Spectators will not be allowed to play" ("Archived About" [9]). According to a personal interview with Frank Lantz, the pre-selected players consisted of the members of the graduate seminar at NYU. Much like the *B.U.G.*'s use of Design Institute and Playground members as the real-world players, the situated gameplay of *PacManhattan* was designed to be directly lived by its constructors.

Instead of direct participation in the gameplay, the public is encouraged to enjoy the spectacle. The next frequently asked question attempts to more properly channel aspiring participants' interest in the project: "Q: Where should I watch? A: Position yourself anywhere around the game board and you should have a good view, but please don't get in the way of the players! You're welcome to take photos as long as you do so in a way that does not interfere with game play. For your reference, you can print out a copy of the game board" ([10]) (see image 4.6). Here, the public is explicitly instructed to stay physically outside the magic circle of the game. They are warned against interacting with the players. The game board does not function as a guide for where to play; instead, it serves as a map for where to stand to get a best vantage point on someone else's participation.

While the public was not invited to play *PacManhattan*, they were invited to become a part of the image-replicating machinery. The FAQ section offers a commerce-based solution to the desire to participate: "Q: Where can I get my PacManhattan t-shirts? A:

We knew you'd ask!" ("Archived About" [11]) The answer includes a link to an online store where men's and women's shirts as well as a ladies' thong are available for purchase (seem image 4.11). In this way, fans of the project are encouraged to replicate the iconography of *PacManhattan* even as they are not empowered to play the game.

4.11 Screenshot from *PacManhattan*'s Online Store. *PacManhattan* products were available for sale to would-be players. (http://www.cafepress.com/pacmanhattan, 2004)

After the playtests were complete, the *PacManhattan* homepage was updated with the following message: "Thanks to everyone who came out on Saturday to watch us play!" ("Archived PacManhattan" [1]). This message profoundly preserves the spectacular nature of the designed experience: the public was invited to watch a game, not to play it. Indeed, this message was directed not only at real-world players. Shortly before the final

playtest, the design team announced on its website to various blogs: "Our team worked all afternoon to put together a way for you to experience *PacManhattan* from the comfort of your home. Tomorrow (Saturday May 8) from 12-2pm, tune into http://pacmanhattan.com to watch a live video feed from Mission Control, spy on the Control Panel our players are using or chat with other PacManhattan fans as the game plays on" (Techboy 5/7/2004). In the *Big Urban Game*, users were asked to become more ubiquitous; here *PacManhattan* encourages them to stay in the comfort of their own homes. This virtualization of a pervasive game reverses the direction the project claims to be exploring—the movement of a game from the little world of the screen to the big world of the streets. As such, it undercuts the momentum of the project's real-world urban probes. However, if *PacManhattan* aspires to massively circulate gameplay *imagery*, rather than to make gameplay itself or the gamers more ubiquitous, then having the real-world play visible to an online audience effectively achieves this goal.

Some members of the press and certain researchers have recognized the staged gameplay as a spectacle designed to generate a massively-scaled audience, rather than to generate massively-scaled play. A news article in *This is London* describes the project: "Instead of playing on a machine, gamers are acting it out on the streets of New York" (Taher [5]). Here, the activity is described as a performance—the gamers are described as *acting*, not playing. Likewise, mobile and pervasive computing researcher Patrick Lichty observes in an essay for the *TCM Locative Reader*: "One of my current favorite projects which uses locative technology is that of Pac-Manhattan, in which artist-performers physically manifest the iconic 80's video game by dressing up as the various characters and running around downtown New York in an almost Dadaistic techno-retro free-for-

all" ([2]). Here, Lichty describes the street runners as artists-performers, rather than players, and places the project in an art historical context of everyday performance. Still, it is far more common to see the spring 2004 project implementation discussed in both mainstream media and the critical literature as the development of a playable game, such as the *Village Voice*'s award for the project: "Best real-life video game - *PACMANHATTAN*" (Yarm [1]).

*

For most who encountered *PacManhattan*, it was pure gameplay imagery and little gameplay affordance. However, as in the *Big Urban Game*, not all members of the public were satisfied with taking a passive role in the spectacle. They sought out interactive affordances even as the game's design denied them interactive access. Videos on the *PacManhattan* site document multiple instances of bystanders spontaneously attempting to insert themselves into the live game. In a video titled "Chase", for instance, three street merchants sit on folding chairs stationed on the sidewalk. Upon noticing *PacManhattan* in action, one of the men takes it upon himself to narrate the scene for other bystanders in the area. In a highly entertaining play-by-play, he yells for all nearby: "Where you going Pac-Man? Oh shit! He's chasing Pac-Man! He's chasing Pac-Man! Awwww Pac-man. He's going to catch Pac-Man and fuck Pac-Man up." Other bystanders sought a more direct role in the action. In a video titled "Crazy", a man strolling through Washington Square Park approaches one of the ghost players. "Have you seen Pac-Man?" the man asks the ghost, before volunteering, "I'll go get him!" He then sprints off in the direction Pac-Man was last seen running. In addition to this video documentation, Lantz recalls players reporting numerous other incidents of public intervention. In a personal interview,

he relayed to me anecdotes of bystanders trying to protect Pac-Man by blocking the ghosts, shouting helpful instructions to the ghosts ("He went that way!"), and running halfway down the block after Pac-Man themselves. Like the *Big Urban Game*, then, the strategic use of classic gaming iconography instantly communicated to observers the kinds of interaction that might be available. Although the project was primarily designed and deployed as spectacle, some spectators managed to transform the primarily perceptual encounter into a situation of their own making.

In the case of this particular pervasive game, then, massively replicating iconic game imagery not only resulted in widespread visual appreciation of the game's critique of virtual play, but also inspired direct engagement even as the formal design sought to limit public participation. But in closing this chapter, I want to examine a game-based intervention that in taking the same pervasive approach failed to afford spontaneous situation making, and therefore met with considerable controversy.

4.5 'This is Not a Sinister Game': *The Super Mario Blocks*

Replicating classic game iconography in everyday environments without concern for affordances not only runs the risk of frustrating would-be players, but also of engendering considerable anxiety in the local community. An April 2006 incident in Ravenna, Ohio vividly demonstrates the risks of a pervasive approach to game imagery. As reported in local news coverage, the problem in Ravenna began when five high school girls, ages 16 and 17, decided to decorate their town's public landscape with imagery from the classic Nintendo videogame *Super Mario Brothers*. Their visual intervention was inspired by Canadian street artist Ryan North who had posted instructions online for "How to Make Your Own Totally Sweet Mario Question Blocks and Put Them Up Around Town." The

instructions, designed by another street artist called Poster Child, explained how to create

and install life-size versions of the highly iconic gold blocks from the Nintendo game

(see image 4.12).

4.12 A *Super Mario Blocks* Installation in Hoogeloon, the Netherlands. The videogame iconography is a stunning visual disruption to the ordinary suburban scene. (Qwantz.com, 2006)

These instructions became a popular Internet meme in 2005; widespread blogging about the project resulted in game fans installing Mario question blocks throughout the United States—for example, in Casper, New York; Cambridge, Massachusetts; Berkeley, California; and Portland, Maine; across Canada—for instance, in Winnipeg and Toronto; and even around the world—for instance, in England, the Netherlands, and South Korea.[9] (The remarkable scalability of this non-performance project, in contrast with the single city iterations of the performance-based *B.U.G.*, *The Mp3 Experiment 2.0* and *PacManhattan*, reminds us that in our still ubiquitous imaging culture, it is simply easier to massively replicate visuals than functionality.)

4.13 A *Super Mario Blocks* Installation in Ravenna, Ohio. The block hangs from the corner of the local high school marquee. They mysterious nature of the box resulted in the bomb squad being called to the scene. (Quantz.com, 2006)

The Ravenna girls created seventeen of their own Mario question blocks and installed them in a series of public locations: a church, the county courthouse, a bakery, a busy intersection, a public library, the local high school, and a private residence on the town's

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[9] Photographs and further documentation of the installations in these particular cities can be found on the Mario Question Blocks project page at http://www.qwantz.com/posterchild.

Main Street (see image 4.13). No information was left at the scene about the nature of the project, and the girls did not remain at any of the locations to observe local residents' reactions.

In the absence of contextualizing information, the embedded game imagery was misinterpreted by those "in the dark" about its original semantic reference. Members of the community without classic videogame knowledge did not recognize the citation; local newspapers reported multiple calls from concerned residents. As the *Akron Beacon Journal* reports: "The Portage County Hazardous Materials Unit and Bomb Detection Unit were called in to downtown Ravenna on Friday morning after seventeen suspicious packages—boxes wrapped in gold wrapping paper with question marks spray painted on them—had alarmed residents" (*Beacon Journal* Staff Report [2]). The boxes were checked for radiation and chemical warfare agents, during which time the teenage artists heard what was transpiring and went to the local police station to take responsibility and to explain their intentions. The local police subsequently issued a statement to the press that they were considering pressing criminal charges against the girls for the disruption they caused.

Why did the installation backfire? Here, I want to suggest that the specific game icon chosen for replication carried with it real-world affordances that the girls did not adequately consider. As opposed to traditional graffiti, which in its two-dimensional renderings has no real affordance other than to be viewed, this kind of 3-D graffiti invites multiple potential modes of engagement. Consider the three primary interactive properties of a large, actual box: things can be put inside the box, the box can be opened, and the box can be picked up and moved. (Other potential interactions might include

kicking the box, throwing the box, or defacing the box, but these are what we might call secondary affordances, those not as conventionally applied in everyday life.) Presumably, those who encountered the girls' Mario question blocks approached the boxes with these specific modes of engagement in mind. *What might someone have already put in the box? What might happen to me if I open or attempt to move the box?* Here, the suggestive marking on the blocks—a question mark—worked to heighten uncertainty about the outcome of actions any bystander might take on the boxes. Furthermore, there was no other possible response suggested by the installation—for instance, no phone number or web site marked on the boxes to allow for a non-hands-on investigation. In this way, the objects were completely disconnected from the network that spawned them. By not designing an interactive opportunity for the boxes—intending them only to be viewed, rather than engaged—the girls left the installation open to interpretation. And in this case, the Ravenna residents interpreted the boxes as potential threats specifically due to their most obvious material affordances. As the *Ravenna Record Courier* quotes Police Chief Randall McCoy: "The potential is always present when dealing with a suspicious package that it could be deadly. In today's day and age, you just cannot do this kind of stuff" (Piltz [11]).

In contrast with the Ravenna incident, *PacManhattan*'s embedded game imagery avoids the problem of alarming affordances for two reasons. First, *Pac Man* is a recognizable cultural icon to virtually any American, as opposed to the icons of *Super Mario Brothers*, which speaks to a more limited audience. But the increased legibility of its signs is not the major reason, I would argue, that *PacManhattan* escaped the backlash faced by the Mario Question blocks. We could easily imagine a scenario, for instance, in

which 3-D *Pac Man* pellet packages are left in public spaces, or in which sheets decorated to resemble the ghosts are hung over public fixtures. In such scenarios, the primary affordances of packages (to be opened or moved) or hung sheets (to be pulled down or peeked behind) could certainly incite alarm, even if the cultural citation were recognized. But by affixing the imagery to live performers, *PacManhattan* avoided this problem. The interactive affordances of a person running through the streets or down the sidewalk are rather clear: You can chase the person running, or you can attempt to engage the person in dialogue, or you can try to physically block the runner's path. As we saw in the videos of live gameplay, these indeed were the modes of spontaneous interaction inspired by the *PacManhattan* project. Otherwise, it so successfully diminished the opportunity for direct engagement—preferring instead to operate as a spectacle—that there was little cause for bystanders to fear the outcome of intervention. Such intervention was designed out of the experience.

The *Super Mario Blocks* incident is also compelling in how it reveals a potential consequence of pervasive, dark play, in which the game is *visible* to bystanders, but not *legible*. (Think here also of *The Mp3 Experiment 2.0*.) Although *Super Mario Blocks* was strictly a visual intervention, early news coverage misreported the events by treating the installation as an actual game, rather than artistic representation of game iconography. Headlines like "Girls attempt real-life version of video game" and "Ravenna teens' game ends with bomb squad" described the visual intervention as dark play, rather than stealth art (Beacon Journal Staff Report, Piltz). The articles described the project as a "real" pervasive game in the model of *PacManhattan*: "Five teenage girls from Portage County face potential criminal charges after attempting to play a real-life version of *Super Mario*

Brothers" (Akron Beacon Journal Staff Report [1]). "The girls found an Internet site called Mario Question Blocks which told you step by step how the game is played, along with instructions on wrapping the packages, just to see what kind of response you get," [Ravenna Chief of Police] McCoy said. 'This game is evidently being played all over the country.'" (Ravenna Record Courier [9]). The initial public response as documented in these news stories reveals that gaming is not always perceived to be a benevolent activity. Showy displays of gaming may be interpreted, instead, as hostile and anti-social behavior—especially if onlookers feel that they are not "in" on the secret.

North, the Canadian artist who originally posted instructions for how to create and install the Mario question blocks, updated his website within hours of the news report to protest this particular aspect of the coverage. "To clarify some of the points in the article: this is not a sinister 'game'," North wrote. "It is supposed to be a comment on public spaces… to bring a smile to people's faces, to get them to connect with their neighbours, to bring colour into an otherwise grey urban landscape" (North [3]). This disavowal of the project's gameness is not disingenuous—the original instructions do indeed identify the work as an "art project" and never suggest that the installations could be played by either artists or onlookers ([6]). It is a clear case of replicated game imagery in the total absence of play affordances. However, the actual pervasive games discussed in this chapter often *appear* to offer no play affordances, even as play may be designed for and enjoyed by selected individuals. The public's inability to read *Super Mario Blocks* correctly, not only as art but also as *not* a game, suggests a future of significant social friction in this emerging genre of pervasive play.

In response to North's clarification that the project was not a game, the Ravenna authorities and local press changed their stance. Under the headline "Girls won't be prosecuted after bomb squad called on art project", the Beacon updates the story by identifying the girls' intervention as art rather than as gameplay. "'The girls were imitating an art project which they found on the Internet,' the prosecutor said…. 'I do not believe that they had any bad or malicious intentions,' he said" (Beacon Journal Staff Report [3-5]). Here, we see that imitating an art project is perceived as an innocuous public act, whereas playing a secret game was considered a sign of possible malicious intent. The spectacular visibility of pervasive gaming combined with its often inscrutability, illegibility, or protected participatory boundaries, is indeed a provocative public intervention that may ultimately engender fear or resentment in those left out of the game.

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Poster Child, the artist who first conceived the *Super Mario Blocks* project, posted a design statement addressing the motivations for the piece.

> Authority over the visual landscapes of our cities has been placed out of reach to the very people who live in them. In my gentle way, I am simply connecting to my surroundings, and in this manner I also reclaim that which has been denied to me…. I create public installations (or "Street Art" pieces) that are both playful and political. I create my art to engage with my environment and those who share it with me. I do not seek to anger or upset my companions in the city, rather, I am searching for a

benevolent, sustainable way to involve myself in our shared public spaces without being arrested or unnoticeable" ([1]).

I want to close this chapter with Poster Child's comment because it speaks so clearly to the central motivations and design challenges of pervasive gaming, even as Poster Child identifies his work as art rather than as a game. Pervasive gaming, at its heart, poses a power struggle. Who defines the norms for public places? Who creates the content for shared environments? Who are the constructors of the social situation?

Pervasive games suggest that drawing a magic circle of play is in itself a kind of power grab, a tool for renegotiating social customs and participatory access. And so ultimately, pervasive gaming most closely approaches truly ubiquitous play and performance in its ability to teach and to inspire others to draw their own magic circles. As urban probes, pervasive games are not only capable of resituating game iconography and creating new vectors of mobile interaction. They are also capable of inspiring a designed audience to become a network of collaborators. In this way, the public may eventually transform a ludic spectacle into a ludic situation, a better game, an invitation to play.

The arresting visual images created by the spectacles of big, urban games, like the playtest citations of ubicomp games, circulate extensively in popular media and online culture. The play may be site-specific, but the media impressions are global. Therefore, although given pervasive games may not aspire to generating massively participatory play in their particular local deployments, they may nevertheless inspire playful disruptions and social interventions on a massive scale. Indeed, if their Situationist aesthetic can move away from the *urbiquitous* toward the truly *ubiquitous*, they may even

escape the city itself, such as in the form of mysterious ludic boxes installed around the public spaces of a small Ohio town.