

Rapid Street Game Design: Prototyping Laboratory for Urban Change



Viktor Bedö

Abstract Street games are predominantly physical games played in the streets, incorporating the built urban environment, spatial layout, social and political characteristics of urban sites into the gameplay. This paper outlines how rapid street game design and playing street games are means of knowledge generation for urban change. To develop the argument, it looks first at implicit aspects of design knowledge in an iterative design process. It then explores the role of explicit and implicit rules in game design as well as the concept of the magic circle that incorporates both the game design and the context of the actual urban site. Game design examples underpin the exploratory and prototyping aspects of street game design.

Keywords Street game · Implicit knowledge · Prototyping magic circle
Rapid game design

1 Introduction

Street games are predominantly physical games played in the streets, incorporating the built urban environment, spatial layout, social and political characteristics of urban sites into the gameplay. Since 2006, a small but constantly growing community of urban and street game designers emerged along with events and festivals for games and playful activities in the urban environment. These include Come out and Play, Weekender and Playpublik among many others (for an overview see Wood 2016). As the games featured by these festivals show designing street games can be a form of artistic expression, a cultural form for negotiating what is possible and what could be possible in the architectural, infrastructural, social and political context of urban spaces. This chapter will outline how rapid street game design can contribute to

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urban change as a prototyping tool or as an in situ laboratory-like tool for exploring city-related matters.

The use of prototyping goes beyond the areas of product or service design and is now widely adopted in the testing and exploring of proposals for social change on a smaller scale (Murray et al. 2010) or in the context of city-making (Mulder and Kun, Chap. 12 in this volume). Koskinen conceptualises models, scenarios, prototypes and sketches as *design things* that turn weak hunches into stronger claims (Koskinen et al. 2011, 125–140). Arguments from design theory and philosophy suggest that conceptualising thinking can include thinking in material artefacts just as much thinking in words or language. Ehn’s term *thinging* highlights how artefacts enable experts to gather, negotiate and think together in co-creation settings (see Koskinen et al. 2011, 125). Malafouris’s framing of *creative thinging* outlines an even more fundamental aspect of thinking in material artefacts, according to which shaping artefacts and our environment allows for constant exploration and re-exploration of the affordances of both mental and physical spaces (Malafouris 2014). Kristóf Nyíri highlights that a technology like the word processor allows for a faster and more flexible manipulation of language. He points out that the difference between the materiality of the thought that is spoken and the thought that is written down is only a gradual difference (Nyíri 1993). These arguments suggest that faster and more flexible means of manipulating prototypes decrease the gap between thinking with words and *thinging* with objects.

This chapter will outline how rapid street game design creates knowledge for urban change from the earliest moments of the design process. To develop the argument, the chapter first elaborates on the aspect of design knowledge that is employed in sketching and prototyping. Then, the paper discusses the closed or open nature of the game design concept ‘magic circle’ in the case of street games. The argument then will be contextualised with game design examples before concluding on the kind of prototyping rapid street game design is.

2 Enacting Design Knowledge

Iterative processes are characterised by frequent loops of prototyping, an increasing level of detail and context of the prototype, but also the possibility of failure and returning to earlier stages of the process. The earlier an idea is prototyped, the earlier it is possible to get feedback in context. Yet quick iterations are not just a mere trial-and-error strategy but build on and generate implicit knowledge. This knowledge is embodied in our patterns of interaction with our environment and in our feel for stuff which we are dealing with (Schön 1983, 49). Using an example borrowed from Schön’s *The Reflected Practitioner* (1983) as a point of departure, I would like to elaborate on the kind of implicit knowledge involved in iterative design processes. Schön describes the situation when an experienced architect looks at a sketch and changes it in order to create something better:

When looking at the drawing “[the architect] zeroes in immediately on fundamental schemes and decisions which quickly acquire the status of commitments. He compresses and perhaps masks the process by which designers learn from iterations of moves which lead them to reappraise, reinvent, and redraw. (Schön 1983, 104)

The architect recognises similarities with designs from his repertoire he acquired in the past, and in the same moment, he has the implicit readiness to change something in the sketch. Then the sketch is changed and observed again. Schön calls these cycles reflection-in-action. Schön elaborates on how reflection-in-action is comparable to a scientific experiment (like exploratory testing, move testing or hypotheses testing) (Schön 1983, 147), and this resonates with approaches that emphasise the laboratory-like character of iterative design (Koskinen et al. 2011, 55–65).

In an empiricist approach, knowing something—or having a concept of something—means that past experiences are saved in some form and these experiences can be meaningfully recalled or reactivated (cf. Price 1953). Reactivating experiences means the ability to produce mental or physical manifestations that are similar to the objects and events that were experienced in the past. As a consequence, reactivating experiences also means that objects and events can be the content of thinking when they are not actually present to perception. According to Price, although we predominantly think in words and images:

We also think sometimes by means of physical replicas, such as diagrams, models and dumb show; sometimes by non-imitative gestures, as in using the deaf and dumb alphabet; and sometimes by means of the muscular sensations which accompany incipient actions, gestures or others, when then actions are not overtly performed. (Price 1953, 300)

Based on our fundamental ability to recognise similarity, we potentially can think in everything what we can produce and what bears some similarity to past experiences (Price 1953, 300). What is meant by the “muscular sensations which accompany incipient actions that are not overtly performed” though? The example of dancers’ practice of *marking* (Kirsch 2010) sheds light on how a slight muscular sensation displays similarity with—and thus can stand for—a fully carried out movement. Dancers don’t fully carry out a series of movement when rehearsing but enact movements with smaller—in some respect more abstract—movements. According to Kirsch, this enables dancers to go through a whole choreography not only in order to memorise it, but also to reflect on aspects like speed and rhythm or communicate with other dancers without having to fully carry all the whole phrase. Sometimes, the twitch of a muscle or even just the mental activation is sufficient.

Price calls the kind of readiness to activate or produce instances of what we know *dispositions*. However fully these instances are produced, they are always activated as parts of a network:

[T]he ‘activating’ of any mental disposition is a matter of degree. Between the two extremes – complete latency and complete actualization – there are many intermediate degrees of *sub-activation*. When the word ‘cat’ occurs, or a cat-like image, a whole series of concepts linked in one way or another with the concept Cat may be in some degree brought to mind. It is true of me at all times that I am capable of recognizing mice, bowls of milk, fur, tigers, mammals, hearth-rugs, at any rate so long as I retain a moderate standard of health and sanity. At all times I have memories of what all these diverse entities are like (in the dispositional

sense of the word ‘memory’). But if the word ‘cat’ occurs to my mind – or a cat-image or a physical cat-replica – then something comes to be true of me which is not true at all times. All these diverse memory-dispositions are in some degree excited or sub-activated. I am put into a state of *readiness* to recognize mice, bowls of milk, tigers, etc., if I should happen to perceive them; and also, in a state of readiness to talk of such entities or produce images of them. I am ready to do these things, even though I do not actually do any of them. (Price 1953, 317–318)

To come back to the example of the architect working with the sketch, it is clear that they not only recognise similarities and differences between the sketch and past sketches but also the similarities and differences of the sketch with past experiences of built architecture. They understand the built architecture that they see on the sketch. Noë’s theory of enactive perception, according to which spatial experience is transmodal, provides an explanation of how a sketch can display similarities to architecture (Noë 2004). Transmodality, in this context, means that visual experiences and tactile experiences—on an abstract level—are producing the same sensorimotor patterns. I argue elsewhere that transmodal re-enactment is also possible when touch and vision are on different scales: for example, when recognising visual patterns for the first time on digital maps visualising traces of street-level activities we have experienced before (Bedö 2011).

Based on past experiences in different modalities and scales, we have an understanding of what usually occurs together, and our respective concepts activate each other in case one is activated. Based on this implicit understanding of what is usually activated together, we may implicitly understand a disparity between the concept and what we see, even if not in the whole, at least in certain details. For example, if we draw a cat:

Sometimes I feel dissatisfied with my image; something is wrong with the ears, or the whiskers are missing. My (dispositional) knowledge or memory of what cats are like – in other words, my concept of Cat – is again occurrently manifested by this feeling of inadequacy; and sometimes by the production of a better image which has fewer defects than the first. (Price 1953, 338)

Also, in the case of Schön’s architect, this feeling of inadequacy is a symptom of the disposition to produce another detail that he implicitly knows should be produced along with the ones on the sketch.

With the above arguments, I wanted to outline how implicit embodied knowledge acquired through interaction with artefacts generally or more specifically with the urban environment is the driver of iterative prototyping processes. I will return to these arguments after exploring the way urban and street games set the frame for interacting with the urban environment.

3 The Rules of the Game

Street games are experiences embedded in urban space, constituted by the urban environment and the rules to which players commit for the duration of the game (see

also Salen and Zimmerman 2004, p. 96). The rules on which players explicitly agreed before the ‘Go!’ constitute only a part of the game experience. Salen and Zimmerman differentiate between three kinds of rules constituting a game: operational rules, constitutive rules and implicit rules (2004, 130). Operational rules are the only ones explicitly stated in the rule set.

Let me illustrate the difference based on the street game MySpace (also see in section MySpace game below). The game MySpace is played by six players: three Claimers and three Don’ts. The game is played on sidewalks with pedestrian traffic. For the initial set-up, the Claimers stand in a triangle two steps apart. Neither the Claimers nor the Don’ts are allowed to talk or use any conspicuous gestures. The Claimers just stand. The Don’ts walk around trying to block the paths of pedestrians in such a way that they are guided into the Claimers’ triangle. Every time a pedestrian crosses the triangle, the Claimers have to take two steps back—opening up the triangle. Claimers are allowed to adjust their positions by rotating the triangle around the initial centre point. The Claimers win when less than four pedestrians cross the triangle in two minutes (times adjustable to concrete circumstances like the time of the day or crowdedness of the street). Otherwise, the Don’t team wins.

Now, this description of MySpace mostly includes the explicit rules of the game: the number of players, the number of steps Claimers has to go back when their triangle has been crossed and so on. Constitutive rules, on the other hand, are not explicitly stated in the rule set but constituted by the game materials used and the features of the playing field, which provide the framework for the possible interactions. For example, MySpace works best on sidewalks that are broad enough to open up the Claimers’ triangle. A narrow sidewalk would be a peculiar playing field of choice for this game as it would force players to step onto the street. Having to avoid cars would change the nature of the game completely. The width of the street is just one of several potential constitutive rules. Other examples for constitutive aspects in street games in general could be the density of street furniture shielding vision; corners allowing for hiding; even the density of pedestrians.

Implicit rules of the game are more related to social behaviour and patterns of everyday space use. These include everyday rules of living in a city: for example, that Don’t players should not physically push uninvolved pedestrians; that Claimers’ know how to stand around on the street inconspicuously and how far they can reasonably expect non-playing pedestrians to detour in order to walk around the Claimers’ triangle. I want to highlight that the border between constitutive and implicit rules is a rather fluid one. Norms, habits, rituals and the like—embodied in everyday choreographies—can determine what people can do or will decide to do at a site just as much as light, smell, Wi-fi coverage or the availability of benches. The explicit rules, the choice of playing field and playing time as well as the playing materials are elements that the street game designer introduces to the game. The affordance of the space, mindset of players and uninvolved pedestrians, for example, are factors the game designer makes a series of assumptions about. The explicit and implicit factors above constitute the players’ experience within the temporary boundaries of the game.

Huizinga emphasises that play creates an experience outside of the everyday and the ordinary when the more or less explicitly delineated sites of play are entered, such as the stage, the card table, the tennis court or the magic circle (of sumo fights) (Huizinga 1949, 10). Salen and Zimmerman borrow the term *magic circle* from Huizinga to describe the space that constitutes a frame outside real life, where the magic lies in exploring the game's own reality repeatedly and safely (Salen and Zimmerman 2004, 94–95). Salen and Zimmerman highlight the ways in which the magic circle has porous boundaries. What's more, they point out that games as systems can have different levels of openness and closedness. A closed game forms a self-contained world, and an open game allows interchange between the game and its real-life environment. Tic-Tac-Toe is an example of a closed game. The game MySpace is an example of an open one.

The genre of pervasive games challenges a narrower concept of the magic circle as such games are played for a longer time period and with no explicit boundaries of the playing field. The game often referred to as *Killer*,¹ for example, turns players into assassins who—besides living their everyday life—also invest days and weeks in hunting down a target assigned to them by the game masters and eliminating the person using, for example, a water pistol. Assassins are themselves targets for their players, meaning that they have to watch their back during the game at all times. The magic circle is expanded here as

[t]he game no longer takes place in certain times or certain places, and the participants are no longer certain. Pervasive games pervade, bend, and blur the traditional boundaries of game, bleeding from the domain of the game to the domain of the ordinary. (Montola et al. 2009, 12)

The praxis usually referred to as *gamification* is introducing an even thinner game layer (like the possibility to earn points or collectable tokens) onto ordinary life. People taking part in gamified activities mainly remain immersed in their everyday lives, not really entering something like a magic circle.

The strength of street games as discussed in this chapter, on the other hand, is exactly that players exit the realm of their everyday lives and commit to the rules and the narrative of the game for its duration. The collectively understood boundaries of the magic circle foster players' flow and serious engagement and create an experience in which the urban environment is as real as the game. At the same time, the magic circle is not entirely closed: although players of street games are invited to *enter* into the world of the game, the playing experience never entirely blinds out architectural, social or political settings of the urban environment. Drawing a parallel between locative games—a genre mostly driven by the rise of the positioning capacities of mobile technologies—and Situationist artistic practises, Flanagan points out that due to the embeddedness into the local, games played in the streets “cannot help but refer to, rework, or, conversely, avoid history, social relationships, and customs of a play site” (Flanagan 2009, p. 207). When blending the games and the city, the game designer decides on the extent to which the players' experiences are shaped by the

¹[https://en.wikipedia.org/wiki/Assassin_\(game\)](https://en.wikipedia.org/wiki/Assassin_(game)).

everyday features of the site or by the game. For the duration of the game, both the rules of everyday urban existence and the rules and narrative of the game are equally ‘real’ in the experience of the players.

In addition to their relative closedness, simplicity is another aspect of Huizinga’s magic circle that is relevant for street games. Huizinga’s depicts games an almost sacred physical or ideal space with a certain completeness temporarily carved out of the complex everyday world: “[Play] creates order, *is* order. Into an imperfect world and into the confusion of life it brings a temporary, a limited perfection” (Huizinga 1949, 10). Indeed, a game must be simple enough so that its rules are easy to comprehend and remember and players can immerse themselves in the flow of the game. Although the level of complexity may vary between game formats—simulation games dealing with complexity, for example—street games mostly only have a few rules that fit on a rule card. The game is a framework where the explicit rules have a limited complexity. This makes it easier for the players to achieve the state of flow: state challenging enough not to be boring and simple enough not to be frustrating. For the game designer, it means that particular focus can be given to one aspect. Even though the rules of the game are simple, it is played within a complex urban environment, which gives often unexpected responses to the gameplay.

The three game projects discussed below were chosen to illustrate some aspects of activating implicit dispositions of players who are interacting with urban space in the framework of a street game. The ‘MySpace’ game shows the permeability of the magic circle. Embedded in the pedestrian flow, the gameplay reveals how the implicit rules of being a pedestrian change depending on the broader urban context. The ‘Shelf’ project demonstrates rapid prototyping and iteration for exploration and hypothesis testing: the playing expert team changes the rules of the game in each round to match the playing experience with their implicit understanding of the question to be explored. The ‘Blackout’ game functions as a testing tool for a prototype solution which is employed in a hypothetical situation. In the playing experience, a hypothetical blackout is activated in the actual urban space through the game’s fiction, and the proposed solution is ready to be used in the game—although most of its functionality is simulated for the duration of the game.

4 ‘MySpace’ Game

The street game MySpace² is one of the results of a five-day workshop with students exploring and prototyping alternative uses of urban resources. The assignment was to scout urban resources that could be hacked in order to be used in a different way or redistributed and to create street games that prototype those alternative uses. The

²Created by master students of the Faculty of Arts in Design at the Zurich University of the Arts in the framework of the Resourcing Design workshop program. Student team: Marina Llopis, Diego Martinez, Simon Peter Pfaff, Philippe Stauffacher. Supervision: Nadine Kuhla von Bergmann and Viktor Bedö.

team who created MySpace returned from the research phase with material about urban citizens claiming some private retreat space in midst of the urban tumult. For example, an informal smokers corner with a chair at the back entrance of a shopping mall or three girls sitting in a circle on a park lawn reading. MySpace uses the mechanics of opening up a triangle on the sidewalk (see game rules above) to prototype temporarily claimed private spaces and test their resilience and fragility. Some pedestrians would not recognise the triangle; others would recognise it and walk around it; still others would recognise it and deliberately cross through it. Using gameplay, the team could test out pedestrians' awareness about certain choreographies of bodies forming a unity and implicit norms of allowing or denying spatial claims of this unity. Furthermore, the gameplay iteratively revealed the most successful spatial constellation of the triangle in terms of claiming private space on the sidewalk. The game functions like a probe in the context of a given site at a given time of day.

5 'Shelf' Game Session

The 'Shelf' session was a cooperation between the Berlin-based architects Studio Schwitalla and Tacit Dimension in order to explore the types of contributions that street games can play in the studio's design process. The studio was in the process of designing an urban shelf-like structure the size of a small neighbourhood, several levels high with inner yards. According to the architectural concept, the Shelf provides a basic urban infrastructure while allowing for a self-organising spread of residential, communal and commercial units within it.³ The structure existed on paper and in an architectural model. After preliminary discussions, we identified the following challenge for a game-based research and prototyping session: how to test the architects' assumption that an open view of the inner yard from all levels of the shelf would foster ad hoc gatherings in the inner yard. Obviously, the paper plans and the architectural model did not allow for testing such affordances of the space.

I designed and play-tested a game to explore meeting and gathering dynamics in the shelf and set up a game session. In order to keep the explicit rules of the game simple and to delegate as much as possible to the constitutive factors of the urban environment, I was looking for a site that was a close enough analogy to the model of the Shelf regarding spatial layout. The playing field of choice was the Berlin Hauptbahnhof train station building. It has five levels made up of platforms and shopping areas and features agora-like sections and good visibility between the levels. The players were six members of the architecture studio. The plan was to play several rounds of the game and iterate the rules during the rounds in order to take away the best learning. According to the fiction of the Shelf game, players were inhabitants of the Shelf who are out to look for a fictional party crowd. The game had the following rules:

³<http://studioschwitalla.org/work/hashtag-urban-shelf>.

- As an initial set-up, all players are dispersed in the building. They find a ‘home’ that is a corner in a dead end where no other players are in sight.
- The goal was to meet with every other player at the ‘party’.
- The ‘party’ (for the first round) was defined as any gathering of at least five non-players with no more than two sittings.
- Players were allowed to make a single phone call not longer than one minute to one other player of their choice.
- Being a cooperative game, players win if all of them succeed in meeting at the party within 10 min.

During the first session, players adopted a combination of emergent strategies: random walking, tactical positioning to create a partial chain of eye contact between players, random calls to other players. The players succeeded in meeting at the ‘party’. In the second round, we decided to change the ‘party’ into a moving target: someone on the move, walking a dog. This decision reflected the architect players’ understanding of how real-life gatherings emerge in an area of the size of a small neighbourhood. We also limited the maximum calling time to half a minute so that the role of the visual chain was emphasised in the gameplay. In the second round, playing tactics did not change a lot, but with more elaborated tactics the interplay with visibility and architecture become more prominent.

Three months later, we reflected with the studio on how the experiences and learnings of the studio members contributed to the ongoing design process. According to the lead architect, the areas more or less explicitly impacted by the gameplay were the measures to allow or cover free view between the levels of the shelf (e.g. the distance of the railing from the edge changing the axis of vision). The session also triggered ideas about mirrored ceilings on some floors to increase visibility of the level from lower levels.

The methodological learning was that the street game format is an effective tool to explore relatively focused aspects in planning processes, like the effect of visibility conditions on finding other people in the case of the Shelf session. Street games are very effective tools for activating and generating in situ embodied knowledge that explicitly or implicitly can be built on in a design process. They can therefore be used to test a prototype in cases where the prototype’s critical function affects the scale of human interaction. Street games have limitations, however, in embracing the full complexity of urban planning, a scale for which moderated board games and playful co-design formats labelled as urban games or city games city games are more useful.⁴

6 ‘Blackout’ Game Session

Blackout is an example of a mini-street game in the context of prototype testing. It was created in the framework of the Energyhack 2015 hack day organised by

⁴For a collection of examples see <http://gamesforcities.com/database/>.

Open Knowledge Foundation Germany and the electricity utility provider Stromnetz Berlin.⁵ The hack day's topic was 'blackout', meaning spatially and temporally extended power outages with potentially catastrophic consequences. Teams attending the hack day were provided with energy consumption and energy network-related open data in order to work on solutions for a blackout. I cooperated with the SMS Gateway 3000 team⁶ by providing rapid street game design as a testing method for the team's prototype. The team was working on an automated SMS-based system that would set up meetings between those in need those who could help them, in a blackout scenario (e.g. connecting people who need blankets with people who have blankets they can offer). The concept was that both groups could send an SMS to an emergency number with what they need or what they can offer. A server with an intelligent matching system would connect the requests with the respective offers and send out a meeting place in the city for the matched users. The solution addressed the time window when the Internet was down while the GSM network was still functional: an uncertain time span of a maximum of 30 min, according to experts.

The street game-based testing took place in the afternoon. At that point, the SMS Gateway 3000 team had already implemented an SMS server that could receive and send out SMS messages. Due to the obvious constraints of the hack day, the intelligent matching functionality had yet to be implemented in the prototype. At this stage, we set up a mini-street game to test the proposal of the SMS Gateway 3000 team. The playing field was the neighbourhood around the site of the hack day. There were two players, a 'giver' and a 'receiver'. The two players start from two different positions in the neighbourhood with some distance from each other. The goal of the game was to succeed in meeting and to shake hands as a symbol of handing over the goods within 20 min. The—not yet implemented—matching algorithm was simulated by a non-playing character who read incoming messages through the SMS server terminal, matched messages manually and manually sent messages to players' phones. According to the fiction of the game, the blackout has just started with Internet already down, GSM network still functional for an uncertain duration. Everything else in the gameplay was carried by the fiction of a blackout (on which players had been educated by expert presentations in the morning of the hack day) and the actual urban environment.

When the game started, both players sent their messages to the emergency number. After some time, they both received an answer from the system (sent by the non-playing character using the terminal interface of the SMS server) giving them a meeting point defined by the intersection of two streets in the neighbourhood. To jump ahead, the players did not succeed in meeting in twenty minutes. What happened? Even though the streets that were used to specify the meeting points were not hidden, they were not very obvious either and the players did not know them by heart. Neither of the players checked a map application on the phone, as this would have been cheating after committing to the scenario that Internet is down. Asking not involved pedestrians did not prove useful either as it turned out that people hardly know the

⁵<http://energyhack.de/>.

⁶Team members: Mark Rentschler and Jakob Penka.

name of the streets they don't walk regularly. Players ran out of time while searching for the respective intersection.

One of the insights from this round was that more obvious and unmissable landmarks should be used as meeting points, even if getting there potentially involves a detour; intersections offering more choice of meeting points closer to the parties involved. Another unexpected design requirement for the emergency SMS system derived from the players' experience of waiting for the system to answer SMS. Due to some technical difficulties with the SMS server, the non-playing character was only able to answer several minutes later. Players knew that in a real-world blackout the GSM system could go down every minute, so while waiting for the SMS during gameplay they started to suspect that the non-playing character is simulating a breakdown of the GSM system. Even though that was not the case, the experience of the terrifying uncertainty about what the silence of the system means taught the SMS Gateway 3000 team that the next iteration the system should ping users from time to time as a vital sign. This experience also triggered the idea that the first thing the system should do in case of a blackout is to send out a message to every user giving them instructions for the time after the GSM is down.

The Blackout mini-street game was a very lightweight game, hardly more game-like than a conventional in situ prototype testing known from iterative design processes. Yet even this thin fictional layer and the defined space in which players had to act tactically arguably pointed to aspects of the blackout experience that plain prototype testing might not have revealed.

7 Street Games as Prototypes

Street games as prototypes enable us to test our assumptions about what works at concrete urban sites. The challenge of setting up a street game for this goal is to translate the problem we would like to explore or assumption we would like to validate into game mechanics. A very basic scheme for setting up the game is to define actions (e.g. stand in a formation, block pedestrians path, search for the 'party'), constraints (e.g. phone calls no longer than 30 s, navigate without a map), a goal (meet within 10 min) and a story or narrative for the game. In MySpace, the problem of claiming private space in the city was translated into the mechanics of forming and gradually opening a triangle on the sidewalk. In the Shelf session, the assumption that open visual fields between levels of a building would enhance the occurrence of ad hoc gatherings was translated into the mechanic of keeping visual contact and the goal of meeting at an unknown moving target. The game designer defines the operational rules, chooses the constitutional rules and makes assumptions about the implicit rules.

Once the rules are set up and the game is running, both the explicit and the implicit rules of the game as well as the explicit and implicit characteristics of the urban site are equally *real*. What players know about the city (knowledge acquired through their involvement in everyday urban life) and what they know about the game (the

fiction and rules they have committed to) trigger interactions and activate tactics in a completely equal manner. The magic circle of the street game incorporates the game design and the actual urban context into the gameplay experience. Players of the Blackout game are prone to fear the eventual breakdown of the GSM network just as much as they are ready to ask pedestrians about street names (both of which can be seen as *dispositions*, in accordance with Price).

For the duration of the game, things that are not present at an urban site outside the game become present in the fiction of the game and thus in players' experience. The game temporarily modifies the affordance of the respective urban site, and players can explore this modified urban experience through gameplay. The temporarily modified urban experience, the circle, is provided and set up by the game designer, but when the game starts players step in and explore the world of the game autonomously. This is the sometimes tiny yet significant difference between conventional, more or less moderated prototype testing in an iterative design process and using street games to test ideas and explore questions about street life. It is this that creates the laboratory-like condition of a balance between a controlled set-up and the potential for emergent tactics and interaction with the urban environment.

Street games that are set up to test proposals in context will also reveal if the proposal (translated into game mechanics) does not resonate with the urban site. This might manifest itself in players' slight feeling of the inadequacy of certain interactions analogously to Price's above example of changing the drawing of a cat. For example, players of the Shelf session decided to change the meeting point (the 'party') into a moving target (a dog walking person) as this resonated more with their understanding of the dynamics they were envisioning in the structure they were planning. Insights, new tactics or new questions emerging from gameplay can, in turn, be iteratively translated into new rules. In subsequent iterations, the rules or the game set-up can be easily modified or the game rules can be complicated if necessary.

It needs to be noted that changes to the rules might be applied by players within a game session too: known as cheating. Even if players do not cheat, the feeling of inadequacy might manifest itself in an exploitation of the rules, bending them to the limit of what is allowed, not explicitly violating the explicit rules but violating the implicit rules dictated by common sense. From the perspective of generating knowledge through prototyping, both practices can be insightful.

Experience shows that the number and complexity of rules of street games should be constrained to a set of rules that a player can remember at once. For unmoderated games, this allows players to be in a state of flow, not overwhelmed by the effort to remember the rules. Also, in order to create a coherent game experience, obedience to game design principles sometimes results in a slight distortion of the matters to be tested as they are translated into game mechanics: a circumstance designers have to be aware of. Due to the constrained complexity of rapid street game designs (as described above), the game designer has to decide on the specific aspect or function that the street game ought to explore. Before choosing the core game mechanics, the core of the idea to be explored or the critical function of the proposal tested has to be clarified. This makes street games as a format a good probe that can be implemented

in the complexity of an urban site. Through the permeability of the magic circle, the responses of the complex environment become part of the experience.

8 Conclusion

Street games can be quick sketches, rough prototypes or full-blown balanced set-ups. If built with the purpose of exploring or prototyping, they function as in situ laboratories. Considering the duration and invested resources, rapid street game design as a prototyping tool can be positioned sketching at the drawing table and instant architecture⁷ that is installed at urban sites using lightweight materials. Analogously to the toolset of tactical urbanism,⁸ street games hack into the experience of everyday urban life to set a precedent, test the ground and seed new urban forms. Elsewhere in this volume, Mulder and Kun (2018) emphasise the effect of cross-pollination at ‘pressure cooker events’ (like hackatons) and are pointing at the strategic impact of knowledge developed in such frameworks when prototypes spark more sustained and dedicated actions if stakeholders taking part in such an event turn into change agents. Considering the ‘fuzzy front end’ of city-making, as described by Mulder and Kun in this volume, rapid street game design can be positioned at the proposal and prototype phase in the life cycle from small-scale experimentation to societal change.

As the magic circle of the game by design introduces a conceivably simple order into the complexity of urban life, it invites a deep immersive involvement which allows for the creation of make-believe strategies. It also renders some aspects of urban interaction controllable while leaving space for emergent phenomena or interactions. Therefore, street games have leverage as a laboratory on a street and neighbourhood scale, exploring embodied aspects of interacting with the given and possible urban environments. At the same time, it is challenging for street games to embrace higher levels of complexity of the kind more easily addressed in moderated board games and playful co-design formats labelled as urban games or city games. A further design challenge would be laying down how to plug street games into moderated board game like urban games that embrace the higher complexity of multistakeholder urban planning and city-making processes.

With some experience, street games can be set up easily and are a relatively accessible tool for a wider circle than professional or trained game designers. The speed and flexibility with which a game can be changed and adopted with every session or even round indicates how much closer rapid street game design gets to the concept of *thinging* about what is possible at urban sites than just seeing this in the dichotomy of acting and reflecting. As new technologies and techniques have the potential to change how we think (like in the case of the word processor), rapid

⁷For an example of instant architecture, see the project series 72 h Interactions, <http://72hourinteractions.com/> or Construct Lab <http://www.constructlab.net/>.

⁸For an overview of the approach and projects, see <http://tacticalurbanismguide.com/>.

street game design has the potential to become a more widespread tool of thinking about the city.

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