

Playful mapping: the potential of a ludic approach

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Abstract. This paper makes the case that *all* mapping is playful exploring the need for a context-driven and performative understanding of how mapping technologies call particular playful encounters with the world into being. Examples of different kinds of conventional production exemplify the open-ended and playful nature of all map-making. However, deploying mapping may also be profitably understood as a taken-for granted, everyday kind of playing with maps. Understanding map *use* may be analogous to a playful encounter with the image, or interface. In certain contexts these encounters may be particularly playful. The continuing growth in the popularity of mobile-based locative gaming apps has significantly increased mass-participation in mapping. People are literally playing *with* the map, instead of playing *on* the map as a game board. The mashed up, overlain, ambiguities of augmented reality and locative gaming are arguably more meaningful to younger people, than almost all of the mapping described elsewhere in this ICC programme. It's time for cartographers to pay more attention to these playful mapping worlds, learn from STS-inflected studies of techno-scientific practices, and recognize the potential of a ludic approach to mapping!

Keywords: Ludiification; Play; Rethinking Mapping

1. Introduction

From tourist and leisure spaces, to public space, cyberspace and the domestic arena, play allows capital accumulation to progress. Technological change in the last decade has exacerbated a fixation with aesthetic form instead of function and Manovich (2006: 1) argues that the diffusion and profusion of consumer electronic technologies (such as mobile phones, me-

dia players and digital cameras) across society and out of the workplace is associated with playful modes of interaction. Raessens (2006) argues this shift reflects what has been termed the ludification of culture, where play increasingly matters in media and culture. Meanwhile the cultural turn in academic life has seen everyday culture, style, and language become a field for play, as well as for literal communication. Writing has retreated from linear narrative, towards irony and intertextual cross-referencing. Meanings deployed in visual imagery are no less ambiguous, and also subject to, and part of play. So play is on the agenda. Why not use play to rethink maps?

In the 1960s and 1970s cartographic research focused primarily upon communication of information. The emphasis was on how map design might be improved scientifically. Research was underpinned by a belief that optimal maps might be produced to meet carefully specified user needs. Universal answers could be discovered: maps and map use existed outside of a social context. In the 1980s and 1990s, technological change increasingly encouraged a profusion of different kinds of mapping. Desktop mapping and GIS gave people tools to make their own maps. Mapping was no longer tied to fixed specifications: users could interact and explore. Morrison (1997) argued that this opening up of mapping technology led to a democratization of cartography.

In the years since Morrison's work the Internet has encouraged an explosion in new forms of map making and use and led to a remarkable sharing of mapping. The medium becomes much more social and task-oriented, more ubiquitous, ephemeral and mobile. Users and producers are no longer separate. OpenSource alternatives like OpenStreetMap are increasingly made by voluntary effort, sourced from crowds (see Perkins forthcoming). During the creation of these citizen-based maps people share information in mash-ups, instead of owning or controlling the image. Pervasive technologies let people put themselves on their own map, destabilizing the taken-for-granted representational neutrality of the image; new kinds of maps are being made; more people are making maps; more things are being mapped; and mapping is taking place in more contexts than ever before.

Novel approaches emerged in the 1980s to interpret these changes: post-structural thought rejected universal explanations and sought more local and contingent insights. A social constructivist challenge emerged, inspired by the work of Harley, Wood and Cosgrove, which emphasized how mapping was deployed to reinforce the position of those with power. Interests such as militarism, capitalism, patriarchy or nationalism formed a focus for researchers, and what came to be termed critical cartography offered new ways of understanding (Crampton & Krygier 2006).

In this paper I want to argue that, despite these critical approaches, an important aspect of the everyday use of mapping has been almost completely underplayed in the literature. My argument is that people have always *played*, and perhaps increasingly *play* with mapping, instead of simply making or using a map for an instrumental task. Of course there has been some consideration the role maps might play in games, (e.g. Ahlqvist 2011; Shepherd & Bleasdale-Shephard 2009) and studies of maps as artefacts that subvert, or engage with emotions (e.g. Nold 2010). I want to build on these, and illustrate how a more ludic approach to mapping might help us to understand how the *process* of mapping operates in different social contexts. I argue that by situating and historicizing mapping and playing, in the context of particular cultural socio-technical assemblages, we can reveal how specific mapping encounters are called into being, how these might relate to notions of play, and in this process chart changing relations between places, mapping and everyday life.

My strategy is to reveal the potential synergies between mapping and playing. I then illustrate how this might be useful for rethinking mapping by reflecting on current deployments of mapping in different kinds of games.

2. Playing

Mapping and playing may be understood as a literal activity, but can also serve as metaphors, and connotations may be charted in everyday uses in natural language.

Play can involve being creative, acting something out, activating a process, taking a risky decision, stalling, joking, or gambling; it can be a subtle effect, involve fooling someone, or being artful. It invariably involves pleasure, is often structured and concerned with sharing meanings in different social contexts. Play is *not* like work; nor is it synonymous with recreation.

These cultural connotations illustrate a complex series of rhetorics associated with playing in society (Sutton-Smith 1997). There is a widespread and popular impression that that play is something somehow wrapped up with childhood. This *progressive* rhetoric associates play with a phase in life: child's play offers an educational activity, not an end in itself. Play also carries connotations of disorder, something random, the play of *fate*. The gambler makes a play, which depends on unpredictable destiny. Play also carries connotations of *power*: almost all sports depend upon competition between players. Play also carries shared and *social* connotations, reflected in celebrations, and community values. A more individual rhetoric is also wrapped up in *imaginative* notions of play, where expression emerges through being playful. Play is clearly associated with escape, and is associ-

ated with the *self*. It is also about having fun, associated with something that is somehow *frivolous*. So play becomes a multi-faceted construct.

Play has an ambivalent relation to the notion of a game. Caillois (2001) has argued that game motivations can be reduced to four basic tropes which he terms *agôn*, *alea*, *mimicry* and *ilinx*. *Agôn* is reflected in the urge to compete; *alea* is the play of chance; *mimicry* is the play of the imagination with its emphasis upon roles and make believe; and *ilinx* the play of physical sensations. These categories vary according to how structured and rule-bound the activity is: at one extreme are rule-bound games, at the other completely free-form play.

Given the complexity of play and its ambiguous relations to games it is small wonder that the activities associated with play have been theorised from many different perspectives. Anthropological understandings of play emphasize the symbolic aspects, highlighting cultural differences. These contrast strongly with more psychological approaches, which often relate to childhood developmental states. Psychoanalytical studies explore the deeper structural associations, emphasizing the practicalities of play as therapy. These contrast strongly with the design-oriented approaches of theorists of game-playing, whose ideas reflect practicalities of industrial production and marketing (Salen & Zimmerman 2004).

These different discourses coalesce in the multi-disciplinary world of play theory. Building on the classic work of Huizinga's (1955) notion of 'homo ludens' an emerging field of study explores playful conceptual depths. Recent calls for understanding play have called embodied approaches, interwoven with place making, the affectual and material (Harker 2005). Technology and the context in which it is deployed fundamentally alter playful experience. Research is shifting towards understanding play as culturally and contextually situated (Rambusch 2008). Play theory appears to be coalescing around this recognition of plurality, and for an appreciation of cultural diversity.

So play seems to be material, an interaction between bodies, environments and artefacts; but it is clearly also increasingly multi-vocal, mobile and mutable and is an open-ended process of investigation in which new worlds are constructed in the imagination, cyberspace and reality: a situated assemblage. How might this notion of play be useful when rethinking mapping?

3. A Playful Rethinking of Maps

How exactly might all mapping be playful and where in particular is the metaphor most useful? Clearly people are making their own maps to a

greater extent than ever before in the history of cartography, and everyday map use is probably more common now than at any time in human history. Almost all of this vernacular mapping activity (Gerlach 2010) is un-researched. Real-world studies are beginning to explore this variety, informed by: ethno-methodology; affect; emergence; hybridity; Actor-Network Theory; non-representational theory; phenomenology and holistic performance. Attention is shifting onto processes, institutions, social groups, power, interactions between different elements in networks, emotions at play in mapping, the nature of mapping tasks and a concern with practice. These new ways of rethinking mapping, often implicitly recognise the possibilities of a playful understanding (see Dodge Kitchin & Perkins 2009). Maps are created and deployed in an ongoing and performative process, and it is striking how notions of play as an assemblage (Taylor 2012), strongly parallel recent theorising relating to mapping. The practices of map design, and map use can usefully be understood as playful.

3.1. Playing with Design

Map design is about beauty and art as well as science and technology (Keates 1984). Ethnographic evidence of designer practice suggests that cartographic technicians deploy technology to 'play' with different outcomes, until they reach a satisfactory solution (Schienke 2003). They take pleasure in designing a good map. Technological change has increased the possibilities for designers to play with different looks and functions. The skills associated with making 'good' designs are similar to those associated with many aspects of play: creativity and individual expression matter. Technology increasingly allows a person making a map to interact with a set of tools, sharing results and negotiating with other stakeholders in an ongoing process, that is never really complete (Brown & Laurier 2004). Mapping emerges gradually like a butterfly from a cocoon, escaping from dead data, and transforming into a thing of beauty that flits occasionally into sight/use. The social nature of map design reflects the social bounding of play. Limiting factors constrain frivolity and the play of the self, just as all games depend upon the context they are being played in. Sometimes time dictates style: the media map must hit a publication deadline. For others more performative qualities of the mapping are the main concern: the artist deploying mapping is often concerned more with process than final product. Sometimes following a house-style constrains the nature of the play, just as rules in sport discipline and regulate unruly bodily behaviour.

3.2. Playful Map Use

Ethnographic studies of how people deploy maps in real world contexts increasingly shows that map use is always situated, and often social. Brown

& Laurier (2005) for example show how different navigational activities involving mapping in a car deploy enrol maps, a driver, a person reading the map, the car, knowledge about where they are, desires about where they are going to, prior knowledge, representations and perceptions of speed, map reading abilities, and so on, together in a process of negotiation. There is an assemblage of actants with agency. The analogies with play are obvious here: a progressive sense of 'map skill acquisition' leads to serious map use; playing with maps serves as a kind of precursor to adult mapping; power and competition is revealed in who is in control of the map; notions of identity are mapped out for example in preconceptions of who 'reads' best; playing and mapping both become embodied practices; the map becomes an active and material participant in the field and mapping like playing calls emotional engagements into being.

Wood (1987) reminds us that there is pleasure in the very idea of mapping. Products evoke sensory responses, which are about more than the mind alone. Paper and digital copies of maps embody and place memories. Designs evoke emotional and bodily responses when they are deployed in task-specific behaviour, and like Harker's (2005) childrens' playground games, have an affect in the world. But if all map design and use might be increasingly playful, there are also some maps that are even more explicitly part of our society's playful practices.

3.3. Playful Contexts for Map Publication

A powerful rationale for mapping has always been the drive to leisure and pleasure. A characteristic of globalization has also been increasing leisure time for the newly middle classes. Specialist maps emerged to support this process and the second half of the twentieth century saw huge increases in the number of maps published to meet these needs, and a diversification in the kinds of maps: tourist maps market a place but also help us to imagine our holiday; walking maps help us to climb a hill; cycling maps focus on possible routes; orienteering maps allow the sport to take place etc.

There is also a long history of maps as board games, as jigsaw puzzles and as part of role playing games. Playing with maps displayed on a computer screen, as part of a video game, is however the focus of the remainder of this paper and is arguably the most frequent contemporary mapping activity.

4. Maps and games

By 2013 computer gaming was the one of the most popular global leisure pursuits, a multi-billion pound industry, turning over 78.5 billion dollars, if

one includes mobile games on smart phones and tablets, with games played by an ever-broadening demographic (ReportLinker 2013). Brand & Knight (2005) classify games according to ludological and narratological characteristics. Ludological factors include: topography; pace, representation and nature of time; player structure; control; mutability; determinism; savability; rules and strategic objectives. Factors relating to the story of the game include formality; the nature of the narrative model; architecture; degree of player influence; temporal setting; story order; range, depth and fluctuation of story information. The nature of a player's interaction with these games depends in part upon genre: action, adventure, educational, driving, location-based, role-playing, simulation, sports and strategy games offer different interfaces and affordances. These genres are played on an ever-changing series of platforms, with different functionalities and user demographics: consoles, PC-based and mobile games call different player experiences into being. Embodied play with a Wii differs from a Facebook-based social game. A strongly competitive market sets the context in which this play takes place, and games are frequently updated as fashions shift, towards casual and ubiquitous play (Juul 2010).

Aarseth (2001: 15-16) argues that a concern with space is what most characterises the computer game as a cultural form, putting forward the Lefebvrian view that: 'computer games are both representations of space (a formal system of relations) and representational spaces (symbolic imagery with primarily aesthetic purpose)'. Space in these games is not static, it also includes different movements through a mapped world (Gazzard 2011), and is depicted and enacted through different kinds of mapping, which are often associated with particular genres.

In some games maps may appear as static and unchangeable boards across which play takes place, a digital equivalent of analogue board games. Or the user might have the power to progressively build the map, to colonise a terrain, and make a world. The *act* of mapping is itself a central part of playing many games. The relations of the map on the screen to the player vary. Its role might be to serve as a minimap, a functional visual index to the location of play in the gameworld. Or the game might involve players controlling and perhaps developing a mapped world. Lammes (2011) suggests they might be best understood as Latourian material sign vehicles, active and influential in gameplay. The game player in character-based role-playing games is simultaneously inside the virtual world, but also inside the map, at once creating a narrative journey through the map (touring), but also viewing the mapped world in the minimap, and sometimes making the map (Lammes 2008). Different perspectives becomes possible: the player might be on the map, but also simultaneously separate from it.

Relations to the 'real world' are also variable. Mapping in computer games might be entirely fantastic, with no literal relations to mapped reality, but in location-based and hybrid games the mapped world on the screen deploys recognisable elements of 'real' maps, so that the map on the screen allows the world itself to become the game board. The player's location on the screen reflects their location and their movement through the world. Ambiguous relations between the real and the imaginary can be played out in these contexts, in which the screen world maps more than can be perceived in the real encounter (Lammes 2011). Richardson (2011) argues this mobile gaming offers a complex layering of material and virtual contexts, which demands new phenomenological, embodied, relational and hybrid understanding, instead of a focus on interfaces, or play contexts.

A detailed analysis of a single genre of games explored by Perkins (2009) illustrates these differing roles in the context of golf games. Almost all computer, phone and console-based golf games depend on a mapping of the course against which the game is played. This study contrasted often stylised console- and PC-based examples, where only limited attempts are made to offer realistic impressions of courses, with much more realistic simulations of real courses as backdrops for game play. Some games encourage players to design and customise their own courses, across which play subsequently takes place. More recent innovation in the genre includes apps that allow players to map out specific elements of courses, and through GPS tracking, enable precise distances to greens to be calculated and displayed against smartphone-served mapped backdrops, which update as the player moves through the real golf landscape.

5. Conclusions

Changing mapping practices and technologies have enabled new ways of thinking about mapping. I have argued there are clear analogies between conceptions of play and new mapping practices. The ways maps are deployed seem to parallel play as a social practice. Some contexts in which mapping is called into being are particularly playful, and an examination of maps in gaming shows how the detail of everyday mapping practice is played out. Relations, interactions and practices, rather than the end products, matter in this process. The performance of mapping in mobile-based games reveals that there is still everything to play for in this kind of rethinking of the mapping, and that mapping and playing are cultural practices enrolling many different actants into a strongly situated but very mutable assemblage.

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