Mirror, Mirror: Claiming Digital Places of the Mundane Mapping Culture

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ABSTRACT
This paper offers a discussion on the "mundane" or quotidian aspects of that software which might at first glance seem to be a fine example of the extraordinary. It looks at game worlds in terms of an ancient human desire to articulate place in the world and pursues a design concept which resonates with this practice in order to enable a more mundane exploitation of such spatial representations: the claiming of place.

Categories and Subject Descriptors
J.5 [**Arts and Humanities**], I.3.7 Three-Dimensional Graphics and Realism, I.6.8 Types of Simulation, K.4.2 Social Issues

General Terms
Design, Human Factors, Theory.

Keywords
Computer Games, Representation, Spatial Practices, Maps

1. THE LOOKING GLASS HOUSE
I'll tell you all my ideas about Looking-glass House. First, there's the room you can see through the glass -- that's just the same as our drawing room, only the things go the other way. I can see all of it when I get upon a chair -- all but the bit behind the fireplace – Lewis Carroll

This is a designers' story. A story that emerges from our delight in rich 3-dimensional representations enabled by high-end visualisation technologies and our inspiration from those who exist outside of the power structures that map real and virtual worlds. Our tale is tuned by a dictionary definition of mundane, describing that which belongs to this earth: "*not a fairy palace; yet a mundane wonder of unimagined kind*". It was sparked by our interest in digital topographies that simulate aspects of being *somewhere* (Suchman 2003) quite specific, some-*place*. We sought to uncover the experience of places connected to our domesticating interactions with the world (Bidwell & Browning, 2006; Browning et al., 2006). Rather than examining the hero quest we wanted to engage with ordinary, lived familiarity. We considered how digital topog-

raphies support wandering amidst foliated woods (cf. *Oblivion*), swimming in crystal waters (cf. *Crysis*) or splashing through puddles in the rain (cf. *Hellboy*) (e.g. truna et. al. 2007). This led us to looking into the 3-d representations of gameworlds as a cultural 'mirror' (Bolter & Gromala, 2003) enabling 'reflection' of ourselves. And, in our endeavour we encountered a critical concern with the power and power relations of spatial representation. Cultural conceptions of place are so embodied we no longer perceive basic spatial construction as an exterior technology.

Here, we propose that game worlds exhibit a heritage of endeavours to construct representations which assert power over places. This cues us to design equally 'earthly' tools that enable people, non-designers, a voice in claiming representations to present their own stories, experiences and moments of mundane wonder. Sharing a sense of place and belonging, by claiming place, has always been difficult for the politically disenfranchised. Thus, we seek to empower those whose cultural experience is being re-presented, in the process of construction so that *they* can "*transform the structure*" (Freire 1972). In this endeavour we both rise to Huizinga's call to represent the experience as if lived (1938) and recognise Foucault's 'stark impossibility': "*the exotic charm of another system of thought, is the limitation of our own, the stark impossibility of thinking **that**" (1973).

We proceed by drawing from a common technology of spatial representation, map-like texts. We refer to maps as acculturated material objects and archives invested with powers as selective depictions tied to the sites of their production. This frames our discussion of digital gameworlds as *topographic representations* that interpolate between lived experience and the representers' conceived understandings of space. We suggest that interactions with these representations appear mundane but interactants do not have power over their tangible inscription. Then we indicate that modding can make claims on maps and allude to the act of graffiti in domesticating physical landscape. This leads us to summarising the design of a tool to which enables interactants to easily make their own scratchings in with 3-d topographies.

2. MUNDANE WONDERS
Game engines or software development kit (SDK) are powerful tools to create landscapes to frame a player's task. The commercial impetus for richer, more 'real' landscapes has drawn the gameworld designer closer to Tolstoy's directive of enabling the re-experience of the event (1896). This 'power of design' has in turn led to projects which exploit the SDK for overt cultural purpose; such as to transmit a historical experience (Champion, 2005), tell Intangible cultural stories (truna et. al., 2007), or even to re-experience sites of traumatic events for catharsis (Losh, 2006). That is they re-present cultural experience in a particular

way and provide 'transparent' interfaces to shape actions and interactions with it. This differs little from spatial representations constructed across the ages, since the act of constructing a spatial representation is so powerful and so deeply embodied it can evade inspection as an exterior technology.

2.1 Map-like Representations

Map-like texts are a common technology of representation; "*helping make sense of the universe*" (Harley 1988). They are ancient and widespread, preceding written language. We use 'map-like' carefully because it reflects as much the perspective of the interpreter of the signified as it does the intention of the represener. Many of the earliest painted marks on cave walls or 'scratchings' on the rocks in and around the ruins of antiquarian civilisation have been analysed as having 'cartographic purpose' without the context of their inscription (Smith 1987) such analysis is but conjecture for understanding the system of the 'other'. This desire for cartographic purpose is interesting in and of itself: like the characters in the recent television series Smallville [1], we see a map where the object is actually a picture of a particular view.
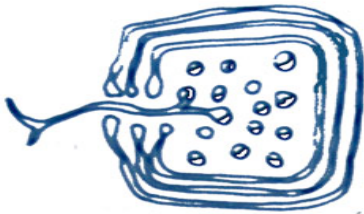

Fig. 1 Antiquarian cup and ring symbol from Northumberland, UK. These 'map like' symbols have no evident referent

For mapping cultures, maps serve "*as memory banks for spatial data and as mnemonics for societies without printing*". They can function to represent Lefebvre's perceived space (1974): the representation of the visible, the practical – this river runs here. They are also powerful archives. Even modern maps will often refer to remains of preceding forts, Roman roads, pagan tumuli and ancient graves. Maps are a summary of lived experience and spatial practice fused with the imagined, the conceived. Their abstraction of the world reflects the emphasis of the re-presenter and the use intended; consider the stick charts from the Marshall Islands (Harvey, 1980). With shells tied to a fan-like construction of sticks their primary directive is to depict the direction of currents affecting an outrigger canoe and the data they represent depicts experience gained in passages between islands.

They are mnemonic devices as opposed to navigational aids. They are also extremely personal by all accounts, each navigator constructing their own. The history of the western modern map concept has its roots in the portolan charts of the early European sailors and the cadastral maps of the Roman conquerors of Europe. The sailors noted names of their way stages along a line roughly corresponding to the shape of the coast they sailed along, and the Romans noted boundaries and land ownership. The legacy embeds a history of power (Black, 1997) and definitive views from somewhere representative of authority.

A designer's choice on which aspect of the world this presence represents is predicated by the emphasis of their society. Our tendency to append the term 'accurate' to maps reflects the implicit emphasis of our understanding of the spatial world, a very specific view from the culture of transparency and measurement. Similarly, the symbols we use carry meaning for sites and features. For example we interpret tiny icons of trees as a forest but demand no correlation between each icon and an individual tree.
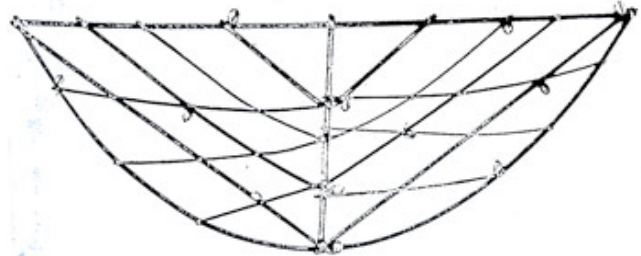

Fig 2 Marshall Islands stick chart showing islands and swell

The designer or *represener* chooses which aspect of the world to represent within the frame of representation and the medium of its topographical surface. No representation of the lived spatial world is isomorphic to the original, true isomorphism is unfeasible. Consider a map with a scale of "*a mile to a mile*", in Sylvie and Bruno, which one of Lewis Carroll's fictional characters observes is so impractical that: "*we now use the country itself, as its own map, and I assure you it does nearly as well.*" Any physical world landscape is larger than the sum of its parts (Casey, 2002) and objectifying the world dismantles its encompassing nature. All maps are untruths of sorts bar the map-making process itself: the "*visually impossible feat*" of veridical representation from every point (Harvey, 1980). A multi-dimensional, encompassing world is forced into a limited set of planes as if with an omnipotent perspective. Beyond impracticality, the action of framing is a specific act that creates an object. A representation must always *stand for* (Casey, 2002). Such semiological entities subsequently include their own materiality, their own physical presence in the world. We 'read' street labels, icons indicating churches and hospitals with the familiarity of a 'Heads Up Display' (HUD), we turn our heads (or the page) to the direction prioritised by the nomenclature of magnetic north enscribed into a nautical compass. Maps are mundane representations, they are material objects that are culturally rich; they are also objects of interaction.

2.2 Virtual topographies

Three-dimensional digital gameworlds are maps that exhibit features in common with the practice of constructing spatial representations, beyond a simple resonant terminology. They are distinguished by their spatiality (Aarseth, 1998; Stockburger, 2006) and by interacting with illusory navigable space (Manovich, 2003) framed by the screen. However, making and moving across *the map* (de Certeau, 1984) are acts reflecting existing culture. The materiality of the medium, the illusion of navigable space and the interactional devices enabling navigation site digital worlds as *topographic representations*.

Three-dimensional digital gameworlds are specific forms of representation: spatial visualisations that seek to interpolate between experience of the real world and conceived understandings of space. The language of spatial representation found in maps is exploited in gameworlds' HUDs. Here an interactant interprets icons as objects of interest, perhaps to collect, situated in a purpose of locating in the world of play. The represented world may include maps and directional indicators, such as inserts showing the wider area of a particular detail, further reiterating the process of spatial representation within a navigable space. Synchronous with the observed mundane desire to articulate the lived self in the world that maps present, the spatiality of these worlds encourages

spatial exploration and, as Bartle (1997) observes, construction and production: *"Players try to find out as much as they can about the virtual world. Although initially this means mapping its topology [], later it advances to experimentation with its physics []"*

3. CLAIMING PLACE

The gameworld reiterates the modern map of navigable space, with its omnipotent perspective. Access to the foundational representation that SDKs allow is a sophisticated endeavour, typically involving large teams of programmers, level designers, animators and ancillary tasks. This results in a view located in the sites of production (Suchman, 2003), a view specific to design legacies embedded in the SDK itself (truna, et al., 2007) and the 'Hollywoodisation' of the medium. For those who are not part of the structure, not located in the sites of production, such as our typical young players, modding a map provides a relationship with, and a sense of being, in the world.

3.1 Making worlds

Maps are 'modded' to depict worlds of both the mundane and the unimagined kind. Players recreate places in gameworlds based on their own lived experience. Since the release of *Doom*, in 1996, players have modded and shared tellingly termed 'maps' using tools included in the game to make new levels. Some of the places players create are based on films, some are fantasy, but many represent those familiar to the player; their schools and local areas. Re-creating known places may be easier given in there is a visual reference; but it is also an act of claiming.

We encourage young people to feel a sense of belonging, of their own place in the community. But when they construct their own unique places, the site of their own experience there is often outrage. Consider the example of a high school student who made, and shared with fellow players, a new map for the game *Counter Strike* featuring his school. When some parents recognised the backdrop, the student was reported, arrested and transferred to another school within weeks of graduation [2]. For many, claiming place in this world is clearly a dangerous occupation. Sharing a sense of place and belonging has always been difficult for those outside official structures that shape the very places they inhabit.

The outrage at a modder domesticating the map echoes the consternation shown to those who create graffiti. Making mods is really like making graffiti, as the team from *Escape from Woomera* say: *"The videogame is the most rapidly evolving, exciting, subversive and feared cultural medium in the world today. It's akin to graffiti on the cultural landscape."*

3.2 Earthly tools

The *Escape from Woomera* team's rallying call refers to a current conceptualisation of graffiti where the reference is the art of the urban (Ehrlich and Ehrlich 2007). However, the act of scratching a name or sign on the world (an act that various guides to graffiti art insist is not to be taken lightly) while controversial, is also a quotidian act. Graffiti has long provided an alternative site for voicing an individual's right to place in public and private worlds. Graffiti, like map-making, dates back to ancient times and, like map-making represents spatial practices in the physical world. Its locations reflect infrastructures shaping our world. Indeed, it is often thought that many of the earliest surviving graffiti marks (e.g. prehistoric petroglyphs in Northern Italy), in essence *scratchings* on the rocks, might represent spatial understandings. But, as many have observed place is a more fundamental dimen-

sion than space, it is about memories, familiarity, attachment and belonging (e.g. Tuan, 1977). The distinction is a matter of those mundane wonders of the earthly world.

Fig. 3 Names scrawled in the concrete tell stories of place

From tags to intricate murals, graffiti claims place in public worlds. Fresh graffiti is typically viewed as a problem, unless in a sanctioned site, but the longer it lasts the more valued it becomes. Some graffiti is even recognised as part of a legitimate history or art, from the antiquity of the Viking graffiti left on the walls of burial mounds in the Orkney Islands to the now carefully preserved walls of a renovated power station in Brisbane to 'Banksy', originally a freehand graffiti artist with Bristol's DryBreadZ Crew, in London Galleries. Graffiti tells stories about places by those who may otherwise remain unheard. And, it may defy any invitation into the structures of powers; consider a celebrity's comment on Bansky: "*He does all this and he stays anonymous...*" [3]

Annotating a public place is an act of domesticating it for individuals, intimates and groups. Consider our walk around our own neighbourhood which has been changed and personalised by virtue of a subversive son's graffiti scrawled on most of the local pavements. At the time of its inscription it was vandalism, now years later it is an affirmation of place where the walk to the shop tells our mundane family stories. Similarly, amongst the most popular applications on Facebook the 'Graffiti Wall' and the 'Super Graffiti Wall' allow friends to tag a user's 'profile' with personalized messages on a 600-pixel wide canvas. Evidence of people's apparent desire to claim virtual places is supported by the emergence of such applications. The creators did little more to promote of their graffiti walls other than placing them on their respective profiles, "*When we launched, we were just excited to share.*" [4] The seduction to leave some kind of mark is seen throughout the real, witness the graffiti carved on trees in countless forest parks.

4. CLAIMING REPRESENTATIONS

We understand the design of virtual topographies to enact ancient map-like practices of abstracting place. Like map-like texts many have become mundane, consider the hours spent grinding in the social play-ground of massive multiplayer worlds. While to many these representations are perhaps "Third Places", that does not mean that interactants yet hold the balance of power over their tangible inscription. Virtual topographies tend to render interactants passive in physically "depositing" indicators of meaning in the terrain, besides deforming environments with explosions. For instance, interactant's footprints, if any, fade quickly and the patter of multiple "feet" across terrains do not abrade paths. But, like places they offer opportunities to be claimed in the same way the footpaths are claimed near our house. Claiming a topological representation, shaped by, such as a gameworld, resonates with Freire's call to allow the marginalised to "*transform the structure*". Indeed, claiming the representation directly has borne a movement in the theories of Guy Debord and the Situationists. The Situationists created their own "psychographic" maps of urban areas to conflate the geographic and the subjective and were

also renowned for using graffiti as a tool for social change. Such intent resonates in our current design response.
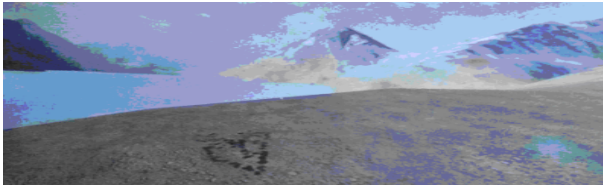

Fig. 4 Marks left in the sand using the prototype engine

We are in the process of play-testing the first prototype of our provisionally named "Graffiti Engine" which enables interactants with 3-d topographies to easily make their own scratchings and connect these with their own items or stories in a way that emphasises the materiality of the real within the representation and encourages the claiming of the map. For example, interactants can use representations of mundane tools: sharp stones to carve and organic dyes to paint trees and boulders and sticks to scratch sketches in the sand. Thus, our design offers a direct "earthly" tool that when the interactor is proximal to a "drawable" object leaves a persistent trail of markings. We desire to lend pseudo-substance to the represented objects within the world so that any current available pointer device might be exploited but that the result of the marking will maintain the coherence of the representation. The story-teller is able to draw on the world, now map.

5. REFLECTIONS

No technology is innocent. We have considered the way our most apparently sophisticated technologies is founded on acculturated spatial representations and reiterates its autocracies. We identify views of the mundane at three levels. Firstly, there is the mundane that is the selective depiction of lived experience in a topographic representation. Secondly, there is mundane interpolation between experience of the real world and the representers' conceived understandings of space. And, finally there is the way we make ourselves at home in the world by our inscription on it.

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9. NOTES

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[3]   Banksy, http://www.banksy.co.uk/ - Brad Pitt, quoted in The Independent

[4]   Joachim De Lombaert and Alex Onsager, See http://daily.stanford.edu/article/2007/9/18/raceForFacebookApp