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Ludic Mobilities: the Corporealities of Mobile Gaming

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Abstract:

Traditional critiques of computer and video games argue that the 'magic circle' defines the parameters of game-play, marking off a temporary world wherein particular game rules apply. In this view to play a game means, materially or conceptually, 'entering' the magic circle of the game. Yet increasingly, online multiplayer games, mobile location-based (LBG) and hybrid reality games (HRG), erode the notion of a magic circle or dedicated game-space. In this paper I examine the hybrid ontologies and realities that typify networked and mobile location-based and hybrid reality games, exploring some of the phenomenological, embodied or somatic aspects of the practices and perceptions of 'mixed reality' gamers. A number of alternative corporeal and ontological metaphors for game worlds are proposed as substitutes for the magic circle, including the porous and organic cell membrane, the permeable window or frame, and the network. The composite, interconnected and dynamic ontology of the network trope, it is suggested, provides a more authentic figuration of the game environments specific to LBGs and HRGs, and also helps us to interpret the 'playful turn' in contemporary new media culture and the infiltration of a ludic sensibility into the mobilities and practices of everyday life.

Introduction

Traditional critiques of computer and video games argue that the 'magic circle' defines the parameters of game-play, marking off a temporary world wherein particular game rules apply. In this view to play a game means, materially or conceptually, 'entering' the magic circle of the game. Yet increasingly, 'synthetic worlds' (Castronova, 2005) such as those created through massively multi-player online role-playing games (MMORPGs) problematise the notion of a magic circle or dedicated game-space, or at the very least point to the porosity between everyday life and game worlds. Further erosions of this boundary between the actual and 'as-if' structures of experience are effected by mobile, location-based and alternative or mixed reality games, where the physical, local environment, and one's pedestrian or vehicular mobility through it, become co-opted or absorbed both as dynamic game-space and game-play. Thus, the ludic experience leaks into the spatial, temporal, social and corporeal affordances of everyday life.

In this paper I consider the permeability of the 'magic circle' surrounding alternate reality, pervasive, location-based and augmented reality mobile games, and the increasing prevalence of hybrid realities in the everyday lifeworld. Firstly, I provide a brief description of the phenomenological approach as theorised by Maurice Merleau-Ponty, and the later post-phenomenology of Don Ihde with its emphasis on the human-technology relation as our primary ontological condition. This relational condition, I suggest, always-already bespeaks a *hybrid* ontology. Secondly, I consider the notion of hybridity and hybrid reality in the context of mobile media and mobile games, and the way this challenges the integrity of the magic circle, with a particular focus on what Adriana de Souza e Silva and Larissa Hjorth (2009) define as location-based mobile games (LBMG) and hybrid reality games (HRG). This section also explores the phenomenological, embodied or somatic aspects of emerging hybrid or mixed realities in mobile gaming. Thirdly, I offer a phenomenological analysis of the ontological properties of the magic circle, and suggest that corporeal and metaphorical tropes of

boundary, porosity and containment are intrinsic to our experience and understanding of game worlds. The mobile game – in particular location-based and hybrid reality games that both demand movement through the built environment and combine elements of that environment with virtual or screen-based realities – can be said to contest such metaphors, suggesting that we need a more flexible interpretation of the ontological (un)containability of game worlds. Indeed, we could argue that the magic circle is further eroded by the emergence of Web 2.0 cultures and the proliferation of user-generated content, effecting what Raessens refers to as ‘the ludification of culture’, wherein the ‘user’ becomes more aptly described as a ‘player’.

Phenomenology and the human-technology relation

In its phenomenological focus, drawing from the work of Maurice Merleau-Ponty (1962, 1964, 1968) and post-phenomenologist Don Ihde (1990, 1993, 2002), my approach is framed within the broad premise that every human-technology relation is also a body-tool relation, and as such every merger with technology invokes certain kinds of being-in-the-world, and particular ways of knowing and making that world. Such a perspective considers the screen interface as quite literally an aspect of our corporeal schematics; that is, through routine use screens have become part of the dynamic arrangement of our embodied experience. A corollary to this approach is the notion that our engagement with screens and interfaces is medium specific, such that each screen modality – whether televisual, computer or mobile – effects a different mode of embodiment, a different way of ‘moving’ and ‘having’ a body. This specificity also applies to different modalities of gameplay; as Parikka and Suominen note, any analysis of mobile gaming practices must recognise “the vast differences in various kinds of mobile media applications and devices. Single player games, multiplayer games and alternate reality games [each] activate different kinds of vectors of movement and rest, sociability and individuality” (2006).

In Merleau-Ponty’s perceptual and what I would call *artifactual* epistemology, the corporeal schema, or our lived experience of perceptual reach and bodily boundaries, is always-already ‘extendible’ through artifacts and technologies. Tools are not conceived as merely perceptual attachments or extensions, but rather our corporeal schemata dilate to make room for instrumentality. This coupling of tools and bodies is effectively articulated by the term *intercorporeality*, a word that describes the irreducible relation between technics, embodiment, knowledge and perception. As Merleau-Ponty famously claimed, the body “applies itself to space like a hand to an instrument” (1964: 5), an “application” that depends as much on the specificities of perception and bodily movement as it does on the materiality of the tool-in-use. It is our somatic *openness* to the ‘stuff’ of our environment that allows us to incorporate technologies and equipment into our own corporeal organisation.

Employing the insights of Merleau-Ponty (and other ‘existential-phenomenological philosophers’ such as Heidegger), Don Ihde also describes the body-technology relation as our fundamental ontological condition, yet emphasises in particular the non-neutrality of each body-technology relation, recognising the cultural, historical and material specificities of our techno-perceptual experience. Throughout his work Ihde provides a useful inventory of body-technology relations, describing in some detail how “I take the technologies *into* my experiencing in a particular way by way of perceiving *through* such technologies and through the reflexive transformation of my perceptual and body sense” (1990: 72). In his analysis of our prolific visualising technologies – from domestic, personal and public screens to highly sophisticated scientific apparatuses – Ihde documents how the body and instrument form a temporary collusive entity that apprehends or handles the world in specific ways. In this way, we can see how the human condition is one of relationality and hybridity; thus, in a fundamental sense, the experience of hybridity is one to which we are corporeally well-attuned. Ihde’s human-technology relation is also consonant with the concept of affordance

(i.e. that the material environment affords us with certain possibilities for action), and the notion that in our use of tools we form a “body-thing couple” that allows us to merge the “movement possibilities” of our body and the thing-in-use, thus extending our “potential for interaction” (Larrsen et al, 2006: 330).

Media theorist Marshall McLuhan (1964) claimed that all media are extensions of the body: they alter our sensory access to the world, determining and organising our experience, our forms of knowledge, indeed the very structure of perception. In McLuhan’s understanding of medium specificity, each communication medium works to ‘fix’ particular sensory ratios, stipulating forms of knowledge and orchestrating the structure of perception by ‘attuning’ our sensory equipment to absorb reality in medium-specific ways (Carey, 1969: 284). While acknowledging McLuhan’s insights, rather than use the idea of ‘sensory ratio’ I would describe the screen-body coupling in more relational terms as *technosomatic involvement*, a concept which can recognise the medium-specific ordering of sense-perception and bodily orientation, but goes beyond the confines of ‘sensory ratios’ applied to specific media, to include the way in which the body-media relation is also moored by sedimented cultural habits, body-metaphors and tropes surrounding our engagement with screens, and the impact of the situated or built environment upon that engagement.

Thus, for example, we often refer to the difference between our engagement with conventional broadcast television screens and interactive computer screens in terms of how we choose to position the body when attending to the screen; that is, when watching television we ‘lean back’ in contrast to the ‘lean forward’ body posture demanded of interactive screen media, where there is an imperative to face the screen more proximally and directly. This describes the variable embodied orientation we have towards different kinds of media interfaces, and the immersive investment of the eyes, ears and hands required of interactive screens. That is, the location of screens and bodies in the built environment partially determines degrees of attention, practices of viewing, and the spatial arrangement of the ‘watching-place’ and one’s mode of technosomatic involvement, movement and facial posturing within it. Similarly, there are many examples of the ways that mobile media screens challenge conventional screen-body and screen-face relations, including image-sharing practices, location-based and casual gaming, the practice of posting text or image content to urban screens, or simply the more mundane activities of talking and texting. In each case, the prioritisation of modes of use (casual or network gaming, listening to music, watching TV, film-making and editing, photography, web browsing, gaming, video-phoning, texting and media-messaging) reflect different relationships between users, bodies, content, handsets, and the physical environment or spatial context. As I will suggest, the enactment of ‘play’ in contemporary culture also demands specific corporeal attitudes and is deeply embedded in metaphors of boundary and containment – in Erving Goffman’s (1986) terms requiring ‘frame-work’. In the context of mobile gaming, which combines the material built or urban environment, the mobility of the body, and the virtual or online gamespace, alternative metaphors of porosity and networking are becoming more prevalent, aiming to capture how the corporeality of the everyday becomes quite literally merged with the embodiment of play.

The corporealities of hybrid reality and location-based gaming

In their comprehensive history and categorisation of mobile games, Adriana de Souza e Silva and Larissa Hjorth (2009, 614) define location-based mobile games (LBMGs) as those that are played on location-aware web-capable mobile phones, and utilise the urban environment as a playspace. *Botfighters* is often cited as a typical location-based game, where players create an avatar on the *Botfighters*’ website, download it onto their mobile phone, and then proceed to search, locate and ‘shoot’ other players via text messages. As de Souza e Silva and Hjorth suggest, while games such as *Botfighters* combine online, mobile phone and urban spaces, play is enacted primarily via the mobile screen interface. It is worth noting that here there is a

hybridty of experience in the bringing together of gameplay and everyday communicative practices, evidenced by the way a sedimented sociotechnical 'habit' such as text messaging, afforded by the mobile phone, is repurposed for gameplay.

In contrast, although hybrid reality games also incorporate location awareness and web capability on the mobile phone and transform the city into a game canvas, the online component is central rather than peripheral, typically represented as a 3D virtual world. Such games thus "take place simultaneously in physical and digital spaces" with the hybrid reality created by "the shared game experience among multiple users" (de Souza e Silva and Hjorth, 2009: 618). Hybrid reality gaming ventures such as *Mogi* (<http://mogimogi.com/>) in Japan have had at least partial success among a tech-savvy population living in the densely populated urban setting of Tokyo. In *Mogi*, the city was represented both as a map on players' mobile phones and on the web, the latter of which provided online players with an expanded view of the gamespace overlaying Tokyo along with the geographic and gameworld location of all players (621). *Mogi* worked primarily as a collecting and trading game; both mobile and desktop players accessed live maps (of different sizes, depending on the screen interface) and collaborated with each other to accrue points by collecting virtual items. The desktop players effectively acted as navigators for the mobile players, guiding them as they walked the streets to find virtual objects and creatures which were then 'picked up' by capturing the item in the camera view of the phone. For de Souza e Silva and Hjorth, it is this collaborative work, a complex combination of physical and virtual movement and player agency, that "constructs" the hybrid space (621).

In a phenomenological sense, hybrid reality games such as *Mogi* create a pedestrian gamer who integrates both their motor and peripatetic movements with their everyday trajectories through the city as they hunt and trade virtual objects, and message one of a thousand other active users; such gaming enacts a fascinating palimpsest of what might be termed micro- and macro- perceptions and mobilities (Richardson, 2009; O'Hara et al, 2006; Chan, 2008). The first micro/macro couplet refers to the sensory minutiae—haptic, auditory, visual and spatial—that we individually and collectively experience through our use of mobile devices, and to the ways in which mobile gaming impacts upon our broader spatial and environmental perceptions. The second couplet refers respectively to the small and 'handy' motor movements such as those required to orient the mobile screen or use the number pad, and to the 'larger' full-bodied or pedestrian actions such as walking while talking, texting or gaming. The players of *Mogi* quite often altered their passage through the city, dynamically reworking the spatial order and macro-perceptual experience of familiar and unfamiliar urban space. A frequent player of the game describes how his trips to the city became physically "randomised" or diverted as an effect of the game, such that he "got a chance to discover part of the city that I ignored, [motivated] to check out that parallel street I never took" (Hall, 2004). Social designer of networked environments Amy Jo Kim suggests that *Mogi* ideally suited the casual gamer: "It nestles in your everyday life, rather than requiring you to change your behaviour... It amplifies your ordinary behaviour — it changes going on an errand into a piece of a game" (Hall, 2004). Such 'mixed-reality' games, rather than creating an escape from 'real life' through the sticky screen immersion typical of console gaming, work to integrate play and game interaction into the patterns, trajectories, mobilities and habitudes of everyday life and work.

Although the purview of this paper is primarily location-based and hybrid reality mobile gaming, it is worth briefly considering the corporealities of casual mobile gaming (i.e. stand-alone games of short duration such as *Tetris*) as a way to extend our understanding of both the hybrid experience of habitual mobile phone use in the everyday lifeworld, and the human-technology relation or technosomatic coupling as it applies to mobile media practices more generally. As Hjorth and Richardson (2009) have suggested, the activity of casual gaming while waiting for a friend or at a bus stop becomes a way of managing the corporeal agitation of impatience, aloneness and boredom in public spaces, while at the same time maintaining an

'environmental knowing', or crucial peripheral awareness of one's spatial surroundings in readiness for the busy-ness of life to resume. The transient and non-dedicated attentiveness required by the small screen and casual game allows the user to both remain alert to the 'arrival' which marks the end of waiting, yet able to avert their gaze from others and so cooperate in the tacit social agreement of non-interaction among strangers. From a phenomenological perspective, as David Bissell (2007) notes, the body-in-waiting discloses a particular kind of being-in-the-world that demands a certain kind of corporeal 'labour' – in the case of casual games, the mobile device becomes co-opted into this labour, filling and suturing the 'dead' or 'fractured' times and spaces that are "folded into everyday corporeal existence" (2007: 281). Such work – categorised by what Bissell refers to as the various "species" of waiting (282) – can be understood in terms of the "micro-bodily actions" and "corporeal attentiveness" (278, 285) of specific modalities of waiting (for a friend, while on public transport, filling in time or 'switching off' before commencing another activity, alleviating boredom). Clearly, when these modalities are combined with mobile media use, where the ready availability or 'handiness' of the device is easily deployed in the fissures of everyday life, complex choreographies, micro-mobilities and mobile-body relations ensue. In other work (Richardson, 2007) I have noted the perpetual 'handiness' and habitual 'handling' of the mobile phone even when not in use as a communicative device, where the intimate familiarity of hand-eye-screen couplings in casual game play or 'noodling' with one's phone allows us to "fill gaps or empty moments with a precise rituality" (Fortunati, 2005: 157).

As de Souza e Silva argues, mobile phones have fomented "new types of sociability" and "new perceptions of physical spaces", precisely because they are digital interfaces that bring physical and virtual spaces together – i.e. we are both 'located' and mobile yet also telepresent via voice calls, text messaging and web connectivity – making us "inhabit" hybrid realities (2006: 19-20). Indeed, it might be said that even prior to the emergence of location-based and hybrid reality gaming, mobile and portable devices instantiated hybrid experiences and ontologies in various forms. As Hayles (2002, personal communication cited in de Souza e Silva, 2006: 28-29) notes, the mobile phone works to "enfold" contexts, such that urban spaces are now filled with mobile phone users who create communicative "pockets" of co-existing modalities of co-presence, telepresence, absent presence, distributed presence and ambient presence, all of which demand different modes of embodied being-in-the-world. The resulting ambiguity of presence means that we need to find a more adaptive notion of presence that is not dependent on a dichotomous rendition of presence and absence (of being 'here' or 'there'), but rather relies on a flexible interpretation of "space and message exchange" and thus in Leopoldina Fortunati's (2002: 519) terms a "restructuring of the sense of belonging to a place"; for de Souza e Silva, this reconfigured sense of place is best described as hybrid (de Souza e Silva, 2006: 30). She states: "while fixed telephones and the Internet connect people in a virtual space, cell phones bring this virtual conversation space into physical space, creating a hybrid environment. In a mobile network, the users are the moving network nodes" (de Souza e Silva, 2006: 33). Similar to our shifting notions of presence, our understanding of mobility must also adapt to emerging practices of mobile phone use and mobile gaming more specifically. In games such as Mogi, for example, both actual and 'as-if' mobility is fundamental to our experience of hybrid space – the term 'mobility' must account for the physical macro-movement of the pedestrian body which can be traced geospatially on the gamer's desktop computer, the micro-movements and motor coordination required of the mobile player, and the virtual movement and exchange of objects and creatures 'into' the gamers' mobile devices and their passage through the hybrid game-space.

The mobile phone itself can also be interpreted as an 'intrusive', boundary-crossing or hybrid device; it is experientially discontinuous, puncturing time and space via the sporadic and unpredictable contingency of unexpected calls and text messages. The mobile phone user colonises urban space, intermittently carving out a space of communication and telepresent intimacy, temporarily interrupting their immediate soundscape with personal ringtones, bleeps

and one-sided conversations. This colonisation often requires a complex negotiation of public and private physical and auditory space; our pedestrian trajectories can be quite radically revised and re-possibilised by the interruption of a mobile phone call or text message, by the beep of one's PDA warning of an impending meeting or deadline, or by those telepresent on the other end of the phone becoming 'virtually' integrated into or effecting a change to one's route ("can you pick up some milk on your way?"). Nigel Helyer (2007) makes the interesting distinction between "intrusive" and "implosive" audio, the former describing (for example) the invasive sound of a beat-box, and the latter describing the "micro-acoustic-ecologies" of the mp3 player and the mobile phone. Yet it is perhaps more accurate to consider the mobile phone as both intrusive (ringtones, conversations) and implosive (when using a headset), and also more than this (text messaging while on 'silent' is neither aurally intrusive or implosive). At the very least, in the context of location-based and hybrid reality gaming, the use of the mobile phone as a strategic game tool renders the magic circle perpetually at risk of interruption by the pedestrian movement of gamers and non-gamers, and the quotidian communicative practices of voice calling and text messaging.

On a macro-perceptual scale, as I have suggested, location-based and hybrid reality games generate hybrid spaces by integrating play and game interaction into the patterns of everyday life and peripatetic movement. Recently launched in Australia, *Cipher Cities* (<http://ciphercities.com/>) is a Brisbane-based project that enables global users to build, share and play both non-located and location-based games. 'Citizens' can join one of a dozen or so user-generated location-based games with designated "play areas" of varying sizes (some are by invitation only and currently all are located in the city of Brisbane), or are encouraged to build a do-it-yourself mobile adventure in their own neighborhood or familiar streetscape using a web-based authoring tool. The games of *Cipher Cities* are thus of a lesser geo-spatial scale than *Mogi*, sometimes exclusive and restricted to a select group of people, and depend largely on the individual and collaborative creativity and local knowledge of its user-participants. Both games, however, create a network or connective sensibility in which the mobile phone, web, community of participants and built environment coalesce. The 'framed' perception of console and computer gamers, where the body's immobility is compensated for by the moving images on the screen (Friedberg, 2006), is radically transformed into a new technosomatic arrangement which brings together the peripatetic mobility of the user, with a sensibility that is itinerant, haptic and in-the-world while at the same time informed by image, text and data on the small mobile screen. Location-based and next-generation mobile phone games thus potentially work to seamlessly combine the corporeal schematics of actual and virtual worlds as they are actively negotiated on-the-move, effectively creating a hybrid mode of being where the boundary between game and real life collapses. As Follet (2008) points out, location-based and hybrid reality games are part of the a more general trend toward the convergence between real and virtual into a "new hybrid experience" that has been enabled by the mobile geospatial web.

In location-based mobile phone gaming the mobility of the physical body becomes key to game-play, and the mobile phone and body act together as feedback mechanism and avatar within the combined actual-virtual space (Lahti, 2003). The body is not represented in the game (as for example in the point-of-view or over-the-shoulder style of console and computer games), it is *in* the game, and the game *in* the world, enacting a seamless continuity between the virtual and the physical, and conflating the vicarious link between body and avatar. Moreover, as theorists and developers such as Terry Rueb (2004) and Justin Hall (2004) suggest, location-based mobile games have the potential to engage the pedestrian and motile body and habituate a new range of gestures and movements that bypass the current room- or seat-based restrictions of digital gaming. The elements which would combine to create such next-generation environments are not simply imaginary and fictional with micro-worldly integrity, then, but mutually contingent negotiations between actual and virtual domains — that is, not only can virtual objects be implanted into actual environments, but one can more

radically envisage that widespread use of such platforms may eventually effect changes to architectural design and the planning of urban spaces. As such, we might see emergent spatial ontologies of a kind never before experienced in such a collective and interactive fashion. In the next section, I will examine the way in which the magic circle of gameplay is compromised by such emergent spatial ontologies of mobile gaming, and how conventional metaphors of containment, frame and boundary can be replaced by tropes of porosity, leakiness and network as more apt ontological models for the hybrid experience of mobile gaming.

Leaving the magic circle – metaphors of containment, porosity and networking

Put simply, the magic circle is a term used to describe how a game is contained figuratively, conceptually and in praxis. That is, both players and creators of games are said to engage in 'strategies of containment' and 'boundary work' around what constitutes gameplay and in order to determine where a game begins and ends. A metaphor initially developed by Huizinga, the magic circle distinguished play from everyday life both spatially and temporally. Huizinga described play as "an intermezzo, an *interlude* in our daily lives", though he acknowledged that it is also a regular event, an accompaniment or complement and "an integral part of life in general" (Huizinga 1955, 9, cited in Copier, 2009: 166-167). Yet in the context of digital games, the magic circle has frequently been adopted as way to explicitly demarcate game from non-game elements, and play from 'real life', literally containing the movement of the 'playful' body and distinguishing it from the more mundane movement of the 'everyday' body. As Benford et al note, for example, Bateson's concept of the *performance frame* – that which defines the physical arrangements, embodied rituals and human technology relations that enable performers and spectators to understand what is happening and to know how they should behave – has been used as a way to describe the magic circle, thereby suggesting that it too is explicitly determined by a "set of conventions, structures and rituals that delimit what is part of the game and what is not" (Benford et al, 2006: 433-434). Over the past few years, however, game theorists have questioned this overly discrete, deterministic and artificial notion of the magic circle from a number of different angles, arguing that we need a broader more flexible description of game parameters and practices, and, more recently, of the ways in which mobile gaming in particular de-habituates and re-mobilises the gamer's body, and manipulates, ambiguates or blurs the "performance frame". As Copier argues: "Conceptually, the magic circle refers to a pre-existing artificiality of the game space, which creates a dichotomy between the real and the imaginary that hides the fact that digital play is a material practice which is deeply anchored in everyday life" (Copier, 2009: 166).

Thus, for example, prominent game design theorists Katie Salen and Eric Zimmerman (2004) have suggested that games be reconsidered as "cultural environments", and emphasise the pleasure gamers take in deliberately crossing the magic circle and calling attention to its borders, as is the case with pervasive games that explore the boundaries between game space and 'real life', or multiplayer online games that extend beyond the game into social networking forums and organised conferences and events. Castronova (2005) uses the term "porous membrane" to illustrate this enmeshing of game and non-game practices, while T. L. Taylor (2006) describes online gaming as "play between worlds". Others such as Pargman and Jakobsson appropriate Goffman's notion of 'frames' and suggest that while the everyday lifeworld takes place in a "primary framework", there exist frames-within-frames and subframes that function as weak boundaries that 'hold' the gameplay (cited in Copier, 2009: 166).

Retaining even a weak concept of the magic circle – even if its boundaries have become permeable and porous – is for some theorists still problematic, particularly in the context of location-based, hybrid reality and pervasive gaming, but also because the emergence of Web 2.0, user-generated or 'small media' content creation, and the proliferation of game

environments as 'third places' for social networking and interaction, has brought about a 'playful attitude' or the 'ludification of culture' *en masse*. Such transformations in both game cultures and the technical enablements of mobile gaming clearly obviates the need for theorising about the existence of a 'magic circle' which distinguishes – whether implicitly or explicitly – between gameplay and the everyday lifeworld. As T.L. Taylor (2007) claims, "we should perhaps reconsider our notions of center and periphery" when thinking about 'open' and 'closed' gameplay (123). In what follows I suggest that a productive way of adapting our interpretive frameworks for games and gameplay that can more accurately represent the hybridity of mobile gaming, is by understanding and rethinking the 'deep' corporeal and ontological metaphors we apply to them.

Our dependence on such of metaphors in our perception and experience of the world is investigated in some detail by George Lakoff and Mark Johnson in their two collaborative works *Metaphors We Live By* (1980) and *Philosophy in the Flesh* (1999). Lakoff and Johnson claim that a range of embodiment and ontological metaphors are embedded in all our experiences – or more specifically entity, substance and container metaphors. In identifying the crucial work of metaphor upon the body in *The Production of Space*, Lefebvre (1974) suggests that metaphors are not simply figures of speech, but rather they decipher the world into that which is "sayable" or "susceptible to figuration"; in so doing, acts of metaphorisation take as their point of departure a "body metamorphosed" (Lefebvre, 1974: 139-140). Thus all bodies are caught within a complex web of analogies and conceptual metaphors. Metaphors, then, are the extension of our corporeality into the world: only that which can be *metaphorised qua embodiment* – interpreted in terms of our complex body-model – is realised or *made real*. The way in which Lakoff and Johnson consider the figural and material projection of our bodies in-the-world is also conceptually akin to the Merleau-Pontian phenomenology of being which posits a plastic and changeable relationship between body-subject and the equipmental environment.

In the traditions of Western philosophy, metaphors of space are often formulated as particular kinds of containment, such that our being-in-the-world is always also a mode of 'holding' and 'having' (Hefferon, 2002). More recently, the representation of computers portable media devices, game consoles and games themselves as spaces of containment or microworld reservoirs, implicitly relies on the already recognisable container-like properties of media apparatuses such as the television and radio. As Sofia observes, within the average home:

Books, photograph albums, telephone directories, the television, the stereo, cassettes and CDs: all these media technologies... [have] their container-like aspects. [E]lectronic and print media are storage technologies for other spaces and experiences: a CD or tape can open up a whole concert, or an aural landscape of feelings; a book can disclose another world (Sofia, 2000, pp. 189-190).

Indeed, televisual, computational, and game spaces are dominated by this metaphor of containment, and our ability to enter or *be* in these spaces — and to hold and carry them around on our bodies — is predicated on a perceptual and corporeal assimilation of this metaphor.

At a phenomenological level we could argue, as Lakoff and Johnson (1999) do, that our experience of material things and our own bodies – the fact that we 'bump up' against objects in the world through vision, haptics, acoustic and olfactory sensory involvement – means that we learn to treat objects, substances, bodies and more recently digital environments as contained and discrete entities. Space, too, is treated in this way, primarily as a 'something' which collides with our sensorium and accommodates somatic movement. In the context of gaming, as Gregersen and Grodal (2009: 69) point out, physical input devices such as keyboard, mice, controllers and touchscreens simulate physical affordances such as lifting, grasping and

bodily movement within game environments – designed “to yield a sense of augmented embodiment” – that when combined with mapping functionality enable us to experience game spaces as contained and navigable worlds.

But we can look at this tendency to ‘contain’ in another way. Rather than presuming that we are uniformly attempting to turn the world into a set of discrete objects because that is what we ourselves – as bodies – are, it seems equally viable to suggest that our ability to apprehend ‘things’ at all is due to the fact that we can somewhat paradoxically – yet unproblematically – ascribe ‘containment’ or ‘entity’ characteristics to things that often *don’t* have (and can never have) distinct or locatable boundaries. This is the case in the ‘physical’ realm, for example when attempting to mark out one’s ‘personal’ space, and also in a non-material or non-physical sense, when we say we are ‘entering’ game-spaces, telepresent environments or immersive virtual worlds, or attributing microworldly properties to actual devices and hardware. Here, we can know that the boundaries are approximate, arbitrary, temporary, virtual or perpetually unrealisable, yet despite (or because of) this we can suspend disbelief and reconcile our experience of a virtual or imaginary space ‘as if’ it is a container of some kind.

It is thus the plastic flexibility of our conceptualisation of things and boundaries – and the phenomenological experience of our corporeal schemas as extendible and mutable *qua* tools and objects – that has enabled and sustained the container trope. This knowing ignorance accounts for our experience of both the mobile media device as a data-container and the game as a microworld— we know that neither ‘contain’ things in any macro-physical sense, and that they are not a temporally or spatially coherent ‘place’, but this does not prevent us from loosely apprehending them as such. Our flexible and paradoxical experience of the game as microworld, I would argue, is made possible by a corporeal schema that is not simply experienced as container, but also concomitantly as both contained *and* extendible or uncontainable, and by an ability to hold these seemingly antagonistic experiences within the same corporeality. Indeed, this ability to embrace ambiguous spatial perceptions and modes of embodiment within one’s corporeal schema, and to oscillate between, conflate and adapt to ostensibly disparate modes of being and perceiving, is precisely why telepresence and virtual space are both somatically and ontologically tolerable.

By understanding the inherent flexibility of our corporeal schemas, the deeper corporeal and ontological foundations of the container metaphor in its discrete and enclosed sense, and its deterministic translation onto gamespace in the form of a ‘hard’ notion of the magic circle, we can begin to consider a more porous and compromised notion of quasi-containment, along with a number of alternative metaphors that describe the ‘uncontainable’, thus accounting for the boundary-crossing nature of emerging game mobilities and departing from the magic circle altogether.

In her insightful work ‘The Pervasive Interface: Tracing the Magic Circle’, Eva Nieuwdorp (2005) offers several metaphors that challenge more conventional notions of the magic circle. The first is that of an “organic entity”, a material and corporeal trope similar to Castronova’s “membrane”(Nieuwdorp, 2005: 6). Such an appropriation of an organic metaphor enables us to move away from the geometric and two-dimensional circumscription of the magic circle and consider the location-based, hybrid reality and pervasive game as a three-dimensional, mutable, evolving and reactive medium of exchange; that is, as “a permeable membrane through which conventional meaning, psychical artefacts and environments, and players alike can slide in and out of the game” (2005: 6). From the metaphor of cell membrane Nieuwdorp then shifts to the trope of the porous screen, via Erving Goffman’s (1961) conceptualisation of the game-life boundary in his essay “Fun in Games”; he argues that “the barrier to externally realized properties from the outside wall [e.g. the lifeworld domain of everyday reality] [is] more like a screen than like a solid wall, and we [come] to see that the screen not only selects

but also transforms and modifies what passes through it” (Goffman cited in Nieuwdorp, 2005: 6). There is a double trope at work here – the notion of the permeable screen is itself dependent on another common metaphor, that of the frame or ‘window-on-the-world’, which in material and ontological terms is ‘open’ to the two-way passage of things, meaning and interaction. Indeed, the ontological and cultural significance of the window and the frame as a metaphor for the screen cannot be understated; as Anne Friedberg comments, the frame is perceived as “the decisive structure of what is at stake” (2006: 14), while for Vivian Sobchack it is both a “lived logic” and itself “an organ of perception” (1992: 134, cited in Friedberg, 2006: 16). As Friedberg notes, like the window, the screen and its frame “holds a view in place”; it becomes, like the window, a transformative aperture in architectural space, altering the materiality of our built environment and opening surfaces up to a new kind of conceptual and metaphoric “ventilation” (Friedberg, 2006: 1). Yet as I have suggested elsewhere (Richardson, 2010), the screen-as-window metaphor is troubled by the transient and non-dedicated attentiveness required by small screen interaction, and is quite different to the frontal ontology demanded of larger screens.

In a phenomenological sense, our corporeal attachment to the portable and mobile screen is not that of larger televisual screens of console and desktop games; it is intimate, up close, peripatetic, and in-the-world, while the activity of location-based and hybrid reality gaming involves the negotiation and manipulation of a networked gamespace across players through both the mobile screen-window and the online computer screen, setting up complex interlacing of co-presence (with other non-players in the urban space) and distributed presence (with other gamers in the network). The hybrid reality game *Mogi*, for example, effectively creates a hybridised mode of communication that cuts across mediated and co-present or face-to-face contexts. Indeed, in the case of mobile gaming the ‘windows’ do not frame a singular game-world, but are multiple and cross-platform, coalescing online and mobile screens, and effecting increasingly hybridized, networked, distributed and mediated modalities of interaction. As Licoppe and Inada (2006) suggest, location-based gaming transform the space of the mobile screen into a “public space” open to mediated onscreen encounters; such encounters “may rely on similar features and technologies (screens, avatars, text messaging, etc.) but they engage the players’ bodies in a way which is quite foreign to most web-based encounters” (49-52). That is, in location-aware and hybrid reality augmented environments, ‘ordinary’, face-to-face, and ‘mediated’ mobile and computer screen perceptions must be reconciled, such that the virtual space of the game screen merges with the in-the-world corporeality and movement of the gamer’s body. Licoppe and Inada write:

Tele-presence, augmented reality or virtual reality extend this problem to the juxtaposition of the lived experience of the body ‘here and now’ with a disembodied experience ‘over there’. Living harmoniously in an augmented world means being able to smoothly integrate the embodied lived experience of the body and the mediated perception of oneself and of the environment... With *Mogi* and similar relatively panoptic location-aware systems, the phenomenological questions raised by perception must be brought to bear on an augmented embodied agent of perception (2006: 52).

Thus it would seem that, like the ontology of the circle, the metaphors of screen as fixed window or frame are also ill-suited as descriptors for the complex layering of material and virtual contexts specific to mobile location-based and hybrid reality gaming. As Nieuwdorp (2005) argues, the conventional notion of the screen as the interface or “translucent membrane” that translates player’s actions and movements into virtual space is challenged by mobile networked and pervasive gaming practices. Thus, we need to expand our understanding of the interface to include the digital, social and spatial environments, the material and the virtual, embodied mobility and augmented agency, and the affordances of both technology and urban cityscape. In answer to this need, Copier (2009) proposes a different metaphor – that of the network. She states:

...the concept of the magic circle refers to a pre-existing artificiality of the game space that, combined with the strong metaphor, creates a dichotomy between the real and the imaginary which hides the ambiguity, variability, and complexity of actual games and play. I propose to withdraw from the magic circle and suggest we shift our focus from a study of games *in* culture to study of game-play as one of the play elements and produces *of* culture. A network perspective allows us to understand how every game and game experience is negotiated spatially, temporally and socially (Copier, 2009: 169).

For Copier, the network trope allows us to think about pathways of communicative action, social networking, nodes of collective practices, and the ambiguities and negotiations of gameplay and gamespaces. The network metaphor could be described as a type of 'open' and mutable container, but is perhaps more aptly characterised, in Lakoff and Johnson's terms (1986), as a "conduit metaphor", emphasising movement, transference, exchange, connection, relationality, coalescence and divergence, and most significantly, capturing how gaming practices are becoming increasingly intertwined with social interactivity, cultural contexts and subjectivities in everyday life. As a number of theorists have commented (Taylor, 2006; Mayra, 2006; Pearce, 2009; Licoppe and Inada, 2006) the digital and material network ecologies of gameplay – from multiplayer online gaming to mobile location-based and pervasive gaming – are inextricable from the patterns and mobilities of daily activity; that is, for many players, it is impossible to say where their online identity or avatar ends and their RL persona begins, where social interaction stops and gameplay starts, or how game space can be 'marked off' from urban or city space. As Licoppe and Inada state: "As the *Mogi* example shows, it is possible to enhance a mobile user's environment almost infinitely, and to create rich and complex ecologies that could be called 'augmented' towns" (2006: 43). In speaking of his own vision for the potential of such games, LBG creator John Paul Bichard imagines a future scenario where the physical urban environment itself becomes a "vast game engine", and objects, places and people "part of an intertwining series of episodes" (cited in Frauenfelder, 2005).

Finally, the network perspective – where gameplay is not confined to a 'magic circle' but invades the everyday lifeworld – enables a critical and dynamic understanding of the 'play element' of culture, or what Raessen's (2006) refers to as the ludification of culture, and allows us to reconsider not games *in* culture, but as producers *of* culture (Copier, 2009: 162, 167). As Pearce states:

If we telescope out to the larger picture, we find that networked play is not simply confined to the game worlds... In fact, network play has insinuated itself into many other aspects of life. It could be argued that YouTube is a networked playground of sorts, even more so when we take note of the numerous machinima films created in games by players.... These trends move far beyond traditional gamer fan culture. They point to a growing 'play turn' in which, far from being a marginalized fringe activity, play is beginning to pervade every aspect of our lives. We see games and play increasingly embedded in social networks, in mobile phones, on web sites, and in domains as diverse as education, military and corporate training, activism, even politics (Pearce, 2009: 278).

In this context, it is argued that the proliferation of Web 2.0 applications and services – characterised by dynamic interactivity, social software and the exponential growth of user-generated content – is generating a type of media practice that is inherently playful, collaborative, shared, and often comprises the re-use and remixing of existing media content. The playful or ludic attitude is at the core of a 'remix culture' characterised by 'small media' production and intervention; that is, the "range of newly empowered synthetic cultural and technological practices – hacking, cracking, poaching, sampling, mixing, appropriating, misusing, reverse engineering, and others" (Nideffer, 2007: 213) effectively blurs the

boundaries between production and consumption and demands that we rethink new media practices not in terms of the old 'closed' dichotomy of user and producer, player and designer, but in terms of a flexible, mutable – and often irreverent and playful – open and ambiguous dynamic. In this light, the network metaphor seems an apposite fit as a way to describe the emergent practices and human-technology relations particular to mobile location-based and hybrid reality gaming, and indeed new media engagement more broadly.

Conclusion

It is difficult to overstate the transformative potential of mobile media practices, and even perhaps of mobile gameplay more specifically, in contemporary new media cultures. As Licoppe and Inada suggest, mobile devices “participate in a real engineering of encounters between people and things, in both material and immaterial forms. They are set to play a key part in determining the way in which information and communication technologies reshape our structures of participation” (Licoppe and Inada, 2006: 39). Similarly, Mizuko Ito identifies a broad shift “toward intimate and portable technologies that enable lightweight imaginative sharing between people going about their everyday business” (Ito, 2007: 93). In this paper I have examined the hybrid ontologies and realities that typify networked, mobile location-based and hybrid reality games, exploring some of the phenomenological, embodied or somatic aspects particular to the practices and perceptions of ‘mixed reality’ gamers. I have suggested that such games compromise both the topology and what we might call the conceptual tropology of the magic circle, which has been used as a way to explicitly or implicitly demarcate gaming from non-gaming practices. A number of alternative corporeal and ontological metaphors for game worlds were proposed as substitutes for the magic circle, including the porous and organic cell membrane, the permeable window or frame, and the network. It was suggested that the composite and dynamic ontology of the network trope – a conduit metaphor that prioritises movement, connection and exchange – provides a more authentic figuration of game environments specific to LBGs and HRGs, and also helps us to interpret the ‘playful turn’ in contemporary new media culture and the infiltration of a ludic sensibility into the everyday lifeworld.

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