Hybrid clubs?:

CHAPTER 4: HYBRID CLUBS?: PLAYING WITH GOLF MAPPING

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Introduction

Golf as a sport is replete with contradiction and enacted in changing contexts that invite playful approaches to the game. I contend that mapping and its relations to golf reveal the potential of a hybrid interpretation of this field. Building upon earlier research into the mapping of golf and golfing practices,[1] I argue that golf courses can be seen as once contrived non-places,[2] but also as carefully constructed and unique landscapes that are designed to afford play. This chapter explores a hitherto largely under-analyzed aspect of the sport, charting and contrasting practices revealed in two recent cases where digital mapping has been central, and where courses are being remade in virtual contexts. It explores how the mapping of golf at once contributes to the making of places associated with the game, but is also central with its playing. My arguments center on two things: the ambiguities of deploying digital mapping in this context, and the potential of different notions of play for understanding encounters in these digital contexts. For the former I adopt a processual view of mapping,[3] whilst for the latter I bring together Sutton-Smith's critique of play rhetoric,[4] with Sicart's notion of play[5] that strongly informs arguments in chapter 1 of this volume. I introduce aspects of golf on and off the course, and spell out appropriate ways of understanding mapping and the deployment of digital spatial technologies in the game. I then chart aspects of play theory that might be useful in interpreting this emerging motif, sketch out a brief genealogy for virtual relations between digital mapping technologies and the game, and explore how the case of golf mapping might speak to wider issues of playful cartographies charted elsewhere in this book, through a consideration of playing with digital mapping on the real course, and in virtual golf games. So this chapter offers something of a synthesis by embracing, but also critiquing, the hybridized nature of a game long-designed, newly digitized, and occupying a space between the digital and material and manifested in maps and mapping technologies.

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1 Chris Perkins, 'Mapping golf: A contextual study', *Cartographic Journal* 43, no. 3 (2006): 208-223; Chris Perkins, 'The Performance of Golf: Landscape, Place, and Practice in North West England', *Journal of Sport & Social Issues* 34, no.3 (2010): 312–338.

2 Marc Augé, *Non-Places: An Introduction to Supermodernity*, London and New York: Verso, 2008.

3 See Rob Kitchin and Martin Dodge, 'Rethinking Maps', *Progress in Human Geography,* 31, no.3 (2007): 331-344.

4 Brian Sutton-Smith, *The Ambiguity of Play*, Cambridge, Massachusetts: Harvard University Press, 2001.

5 Miguel Sicart, *Play Matters,* Cambridge, Massachusetts: The Massachusetts Institute of Technology Press, 2014.

Playing with Golf

Golf is also a sport played out on courses that frequently seek to evoke naturalness, but which in practice are strongly crafted and artificial playgrounds. So tensions exist between those who celebrate the unique history of a course that has been frequently changed to accommodate changing values and meanings of the game, but which evokes natural qualities of the 'linksland'[6] landscape, as against an artificial and modernist affirmation of control evidenced in sometimes placeless 'tracks' popularized in American target golf.[7] These playgrounds are no longer restricted to real environments – the virtual golf course is also designed with a capacity to evoke naturalness: game mechanics and aesthetics come together to simulate an imagined real,[8] in which impossibly green or pristine contexts frame gameplay. These 'gamescapes'[9] are experienced on many different platforms, from mobile devices, to GPS receivers, from PCs on desktops, to game consoles, from laptops to tablets. Web sites review real course designs, remediating an experience for wannabe course designers.[10] On the course mobile-based software tracks progress against digital map backdrops, and serves to relate statistical data of real world performance, to the ideal possibilities of perfection charted on a digital interface, telling the player that a 7 iron is needed, revealing the unseen bunker in front of the green, calling up mapped memories, but also evoking a futurity by increasing control over the inevitable risks implicit in the game.[11] And the places in which these new forms of play are enacted have diversified. The landscape architect's studio, the land use planner's office or council chamber, the living room, out on the golf course itself, in the car: different affordances emerge in playful mapping of the game. The round on a course is merely one of many different co-constructions, an embodied 'taskscape'[12] enrolling golfing bodies and nature. These taskscapes themselves change, and frequently in response to technological shifts. And in the virtual golf environment a convergence is taking place, where different technological forms are increasingly enrolled in assemblages that are no longer separate but operate 'within the same appliances... within the same franchise...within the same company...within the brain of the consumer... and within the same fandom'.[13] The designer of a real course may well be using the same software being deployed elsewhere to make a fantasy game-board across which online

6 Linksland comprises undulating, sandy, coastal terrain on which the first games of golf were played.

7 Jamie Black, Enhancing The Experience Of Golf Through Landscape Design And Environmental Psychology, http://www.golfclubatlas.com/opinionblack.html, 2000.

8 Jesper Juul, *Half-Real*, Cambridge, Massachusetts: The Massachusetts Institute of Technology Press, 2005.

9 Gamescapes comprise physical landscapes transformed into playgrounds across which game play can take place, see also chapter 7 this volume and Geoff King and Tanya Krzywinska, *Tomb Raiders and Space Invaders: Videogame Forms and Contexts*, London and New York: I.B. Tauris, 2006.

10 See for example golfcourseatlas.com.

11 See Valérie November, Eduardo Camacho-Hübner and Bruno Latour, 'Entering a Risky Territory: Space in the Age of Digital Navigation', *Environment and Planning D: Society and Space* 28 (2010): 581-599.

12 Tim Ingold, *The Perception of the Environment: Essays on Livelihood, Dwelling and Skil*l. London; New York: Routledge, 2000.

13 Henry Jenkins, 'The Cultural Logic Of Media Convergence', *International Journal Of Cultural Studies,* 7, no.1 (2004): 34.

players compete. The crowd might map courses from Google maps that they will never play on. The course manager may well use mapping from a company that also markets digital on course assistance to players. The analogue technology and game of golf itself continues, to be deployed, but in association with digital technologies which are in tension with, and remediated by its virtual offspring. The convergence highlighted as a cultural trend by Jenkins is certainly evident in the golfing world.

The sport is explicitly concerned with spatiality. Mapping the terrains and practices of golf is called into play to achieve many different tasks: designing and constructing a course; marketing and managing facilities, and to help in various aspects of playing the game, such as informing players about hole layout and yardage, or as an object in the recollection of memories about particular golfing places and experiences.[14] The affordances that are facilitated by mapping vary from course to course, and according to the tasks in which mapping is enrolled. Courses are designed with different configurations of holes, threaded through varying terrain, and the process of mapping is central to the expert knowledge deployed by course designers.[15] Arguably every environment across the globe now includes a course, from rainforests to heathland, from flat deserts to mountains, from cliff-tops to archetypal undulating sandy links-land, from marshlands to islands, from windy plateaus to parkland. Every golf course has a unique spatiality, in terms of the combinations and sequences of holes, which are together designed and mapped out with varying lengths, topographies, hazards and layouts. The aesthetic qualities of these designs are also important, in the sense that designs relate to broader landscape contexts. Experiencing this spatiality depends in part upon the political economy of courses: a resort course catering for rich vacationeers evokes different kinds of experience to those enjoyed on a private member's club, or to the mass participation of an urban or municipal course layout.[16] Ownership and power impacts on wider perceptions of the game as exclusive, and on the image of the game as run for rich white and old men, where business deals take precedence over widening participation. The political economy also impact on day-to-day play. Experiencing a round at the Trump-owned Turnberry resort on the Scottish coast is likely to be different from a low investment and community owned layout on a remote Scottish island. It has however also been suggested that this spatiality might best be approached by considering golfing practices, with the temporalities of individual rounds reflecting rhythms evoked by hole configuration, topography, vistas and sociality.[17] So instead of golf displaying any inevitable essence, every course holds an emergent potential, calling into play new emotions, experiences, rhythms and memories. The spatiality of every round is hence always mediated by a varying temporality, and by the spatial stories[18] enacted and

14 Chris Perkins, 'Mapping Golf: A Contextual Study'.

15 Robert Muir Graves and Geoffrey S. Cornish. *Classic Golf Hole Design: Using The Greatest Holes As Inspiration For Modern Courses*, London: John Wiley & Sons, 2002.

16 Bradley S. Klein, 'Cultural Links: An International Political Economy Of Golf Course Landscapes'. In Randy Martin and Toby Miller (eds), *Sportculture*, Minneapolis: University of Minnesota Press, 1999: 211-226.

17 Chris Perkins, 'The Performance of Golf'.

18 Michel de Certeau, *The Practice of Everyday Life.* Berkeley, California: The University of California

recalled by players, spectators, designers, owners, professionals, caddies, bar staff, or green-keepers.

Players ostensibly compete against each other whilst making these spatial stories, according to a number of different formats of play, but in practice compete with themselves, to improve their practice, whilst also frequently struggling across course terrain. The rules of the game are enshrined and carefully protected, but are constantly tested by an industry concerned with capitalizing on a sport facing falling global participation. The game is frequently hated by those who do not play it, whilst offering a context and cultural capital for participants as members of a golf club.

Players deploy technologies on and off the course which together make the sport possible: the apparently banal and taken for granted golf ball reveals at once spectacular technological achievement, but also the futility of human control.[19] Golf club design is carefully regulated. Behavior for players becomes disciplined in a rational Foucauldian process, in which institutions enact and regulate unruly golfing bodies.[20] The civilizing qualities of the game come together rendering golfers as unique subjects.[21]

Mapping Golf

Mapping in these contexts might also profitably be explored as hybrid, as a field of potential, part of an assemblage that responds to, and in turn impacts upon, many different actors, technologies, feelings, actions and processes. The mapping of golf, hence, can be thought of as having emergent qualities – with mutable meanings associated with different mapping moments on or off the course, and which in turn reflect particular mapping modes.[22] Contemporary digital mapping is a mode that seems particularly appropriate for this kind of processual thinking. The digital map appears to be less of an immutable mobile[23] than its hard copy predecessor, and digital map interfaces seems to afford more diverse ways of interacting with, and changing the medium, which can be clicked, or increasingly tapped and stroked into being.[24] There has also been a blurring of the boundaries between those

Press, 1984.

19 Harry Brown, *Golf Ball*, London: Bloomsbury Publishing, 2015.

20 David Collinson, and Keith Hoskin, 'Discipline And Flourish: Golf As A Civilising Process' in *Science And Golf II: Proceedings Of The 1994 World Scientific Congress On Golf*, London: Spon, 1994, pp. 620-625.

21 Monica Varner and David Knottnerus, 'Civility, Rituals, and Exclusion: The Emergence of American Golf during the Late 19th and Early 20th Centuries', *Sociological Inquiry* 72, no.3 (2002): 426–441.

22 See Martin Dodge, Chris Perkins and Rob Kitchin, 'Mapping Modes, Methods and Moments: A Manifesto for Map Studies', in Martin Dodge, Chris Perkins, and Rob Kitchin (eds) *Rethinking Maps: New Frontiers in Cartographic Theory*, London: Routledge, 2009, pp. 220-243.

23 See Bruno Latour, 'Visualisation and Cognition: Drawing Things Together', in Michael Lynch and Steve Woolgar, *Representation in Scientific Activity*, Cambridge, Massachusetts: The Massachusetts Institute of Technology Press, 1990, pp. 19-68.

24 See Sam Hind and Sybille Lammes, 'Digital Mapping as Double-Tap: Cartographic Modes, Calculations and Failures,' *Global Discourse: An Interdisciplinary Journal of Current Affairs and Applied Contemporary Thought* (2015); Sybille Lammes, 'Digital Mapping Interfaces: From Immutable Mobiles

who deploy digital maps, as against those who make and control the medium. In the sharing economy the digital map is much more hybrid.

It is suggested through this book that play offers a great potential for understanding these changing relations. A playful mapping can at once have an agency, and capacity to influence events, but also be part of broader groupings of social things. Mapping is performed and has hybrid characteristics in relation to the places it purports to represent, at once contributing to the making of places, but also strongly made by these places.[25] It has also been argued that a more ecological approach to the relations of people and mapping, focusing upon affordances[26] can yield useful insights. Meng suggests that:

> As a part of nature, the affordance is objectively measurable and independent of the individual's ability to recognize it. It does not have to be visible, known or desirable. A thing can have many affordances. For instance, a graphic display surface affords to see, touch and further actions such as carry, damage etc. However, from a pragmatic point of view, an affordance makes sense only when the individual can be aware of it and act on it, depending on his personal capability and the environmental constraints.[27]

So what emerges during the process of deploying a map is perceptual and social. The temporalities of mapping can evoke memories, contribute to a particular sequence, or anticipate possible futures by scripting action. Past present and future come together in mapping,[28] and it is the affordances of map deployment that can most usefully be explored to reveal mapping practice.

So my argument is thus that the mapping of golf is much more than representational.[29] The cases described in this chapter enroll complex sets of actors, and like the location based games described in chapter 3, they merge the physical and virtual worlds. They too depend upon a digital mapping of the world that changes players' relations to territory (see chapter 1). However, the mapping practices described below differ from location-based-games,

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to Mutable Images,' *New Media & Society* (2016); Chris Perkins, 'Plotting Practices and politics: (Im) mutable Narratives in OpenStreetMap', *Transactions of the Institute of British Geographers* 39, no. 2 (2014): 304-17.

25 Vincent Del Casino Jr, and Stephen P. Hanna, 'Beyond The 'Binaries': A Methodological Intervention For Interrogating Maps As Representational Practices', *ACME: An International E-Journal for Critical Geographies,* 4 no.1 (2005): 34-56.

26 James J Gibson, 'The Theory of Affordances' in R. Shaw and J. Bransford (eds) *Perceiving, Acting, and Knowing - Toward an Ecological Psychology*, New York: Lawrence Erlbaum Associates, 1977, pp. 127-143.

27 Liqiu Meng, 'To See And See Through Graphics: Toward Affordance-Driven Geovisualization' in Virtual Geographic Environments- An International Conference On Development In Visualization And Virtual Environments In Geographic Information Science, 2008, Hong Kong: Chinese University of Hong Kong, 7-8 January 2008.

28 See Alex Gekker, Sam Hind, Sybille Lammes, Chris Perkins, Clancy Wilmott, and Dan Evans (eds) *Time Travellers: Temporality and Digital Mapping*. Manchester: MUP, 2017.

29 Lorimer, Hayden, 'Cultural Geography: The Busyness Of Being 'More-Than-Representational", *Progress In Human Geography*, 29, no.1 (2005): 83-94.

because of the ongoing history and culture of golf as a pastime, beyond the digital, with its rich and demarcated accumulation of traditions, rituals and commodities, and its crafted designed landscapes. Its spatial hybridity is complemented by links and juxtapositions between the real and the virtual. This hybridity blends digital and analogue technologies. It draws attention to the provisional qualities of mapping's claims to authority, and to partial and ambiguous links backwards and forwards across time, in which memory and habit are linked by navigation and strategy through mapping. It reflects affordances and perceived affordances. And approaching these affordances as fields of play involves, I suggest, deploying knowledge that is plural, and which draws on insights from many different theoretical positions, instead of privileging more narrowly defined positions.

Playing with Maps and Mapping Play

It is argued throughout this book that interesting relationships exist between playing and digital mapping. This chapter explores a different aspect of this relationship and suggests that mapping can be a productive lens through which to approach the game of golf. In this chapter the hybrid qualities of play are the central focus, alongside the ways in which these are wrapped up with digital mapping technologies in playful contexts on and off the course.

Foundational thinkers in play studies reflected on play as separate from other aspects of life, focusing, for example, upon the qualities of the magic circle.[30] Read in this way golf is a rule-bound game with clearly defined boundaries, separate from other aspects of society, played in contexts where golfers suspend their everyday concerns with workaday matters. As a game golf also clearly reflects Roger Caillois's game motivations of agôn, alea, mimicry and ilinx.[31] Agôn is reflected in competitive instincts of golfers; alea is the play of chance, the randomness of a ball finding a bad lie; mimicry is perhaps less central to golf with its emphasis upon roles and make believe; whilst ilinx concerns the play of physical sensations, experienced during a round, the elation of a perfect shot, the tired final drive etc. As such golf clearly sits as playful, but is rather different to free-form play. Players of golfing-based videogames might also be seen in this fashion as hermetically sealed from other media or pastimes. The interface or platform framing game play might limit affordances emerging from playing these games, and the sport of golf itself would be seen as related, but separate from video-game based re-mediations of the sport.[32]

However, more recent approaches to play have been much more willing to focus on the relations between a network of people, things, feelings, actions, technologies. Emblematic of this turn towards a more situated understanding of play is the work if Miguel Sicart.[33] Sicart views play as a mode of being human, citing diverse evidence relating to playing with toys, playing games, and exploring the relations of play to design and to technologies. He

30 Johan Huizinga, *Homo Ludens: A Study of the Play-Element in Culture*, Amsterdam: Amsterdam University Press, 1938.

31 Roger Caillois, *Man, Play and Games*, Urbana and Chicago: University of Illinois Press, 2001.

32 J. David Bolter, and Richard A. Grusin, *Remediation: Understanding New Media*, Cambridge, MA: MIT Press, 2000.

33 Miguel Sicart, *Play Matters.*

draws on notions of play as a portable tool, but also focuses on the world beyond play per se, which might be construed as being playful. As such this notion of a socially embedded understanding of play seems particularly appropriate for any consideration of golf mapping, and gels with recent emphases on the ludic turn in society.[34] Drawing on this more relational understanding of play Sutko and de Souza e Silva explore aspects of hybridity in two case examples of locative games.[35] They seek to 'understand games and play as activities intrinsically and inseparably connected to our physical spaces and to our daily lives by focusing on the interconnection between play and ordinary life, game community, and player identity'. They go on to suggest that 'play is thus best understood as an experiential activity that emerges from and intertwines with our ordinary daily experiences'. Richardson also argues for an approach to playful hybridity, which foregrounds the embodied, somatic and phenomenological aspects of game experience. She suggests that scholars have fixated too much on the limiting qualities of interfaces and framings that frequently define game studies interpretations of playful activities, arguing that these framings 'are ill-suited as descriptors for the complex layering of material and virtual contexts specific to mobile location-based and mixed reality gaming'.[36] They and other theorists of hybrid games reflect on how a more relational approach to the construct can inform our understanding of gaming practices enacted by participants in different games in the genre.

Once boundaries of play become recognized as being more fluid, so its more mutable and relational qualities become more evident. Playful technologies change the nature of participation and impact on places. Thrift argues strongly that artefacts associated with new kinds of play, which he terms 'supertoys', are far from neutral in the co-construction of playful spaces.[37] So the videogame impacts on many aspects of everyday life, and other aspects of real world golfing technology fundamentally alter the experience of play, but are in turn read and impacted in complex fashions during everyday practice. In sports a hybrid and ambiguous ethos can also be read in Michel Serre's reflections on the status of the ball as a quasi-object:

> A ball is not an ordinary object, for it is what it is only if a subject holds it. Over there, on the ground, it is nothing; it is stupid; it has no meaning, no function, and no value. […] The ball isn't therefore the body; the exact contrary is true: the body is the object of the ball; the subject moves around this sun. Skill with the ball is recognized in the player who follows the ball and serves it instead of making it follow him and using it. It is the subject of the body, subject of bodies, and like a subject of subjects.[38]

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34 See Joost Raessens, 'Playful Identities, or the Ludification of Culture', *Games and Culture* 1, no. 1 (2006): 52-57.

35 Daniel M. Sutko and Adriana de Souza e Silva, 'Location-Aware Mobile Media and Urban Sociability', *New Media & Society*, 13, no.5 (2011): 807-823.

36 Ingrid Richardson, 'The Hybrid Ontology Of Mobile Gaming', *Convergence: The International Journal Of Research Into New Media Technologies* 17, no. 4 (2011): 419-430.

37 Nigel Thrift, 'Closer to the machine? Intelligent environments, new forms of possession and the rise of the supertoy', *Cultural Geographies* 10 (2003): 389–407.

38 Michel Serres, *The Parasite*, Minneapolis: University of Minnesota Press, 2007: 225.

In this chapter I suggest that these hybrid ideas can usefully be deployed to approach a wider variety of playful contexts beyond hybrid games per se. In so doing I pick up on the work of Brian Sutton Smith and his concerns with the ambiguities of rhetorics associated with play.[39] Sutton Smith identified seven rhetorics associated with play as a form. The *progressive* play of childhood can be seen as a normative process designed with a goal in mind. Sutton-Smith's play of *fate* reflects the role of chance impacting on playful experiences or outcomes. His *power* of play is clearly evident in the competitive ethos that pervades games. Play as a quality associated with *social identity* is an important fourth rhetoric, in which shared activity contributes to experiences. A more individual rhetoric concerned with *imaginative* notions of play highlights more creative possibilities. Individual innovation and individual expression emerge in rhetoric associated with the playful *self*, where players frequently define themselves and their identity, by their participation in a game. So too is *frivolous* play, reflected in the jocular participation, or subversion. These different rhetorics associated with cultural connotations of play frequently relate in an ambivalent fashion to shared conceptions of a game; they are argued over, and enacted in different ways in different places. The rest of this chapter explores the extent to which the mapping of golf conforms to these different approaches, highlighting the extent to which golf might also be regarded as a locative game, and the need for different kinds of hybrid understanding to emerge in this context. To make these links between concepts and practice, I first explore a genealogy of the emergence of golfing based videogames, highlighting how their affordances relate to aspects of mapping and playing that underpin this section. I then move on to contrast more detailed case evidence from a digital mapping application on real golf courses, as against a recently published and complex example of one videogame.

Golf Games

Computer-based golfing games have been readily available since the release in 1977 of *Miniature Golf* on the Atari 2600 platform. In October 2016 the Moby Games website listed a total of 427 different golf games, from a total of 4885 in the sports genre.[40] Very different affordances and game play are deployed in these contrasting examples of playful mapping, a sample of which is summarized in table 4.1.

Many of these computer, console and smartphone-based golf games are highly stylized, and only very loosely related to the real game of golf. Miniature golf for example involves putting, but is more akin to arcade games than simulating any real golf experience. However, many golf video games do depend upon some kind of mapping of the course, against which the game is played, reflecting Aarseth's Lefebvrian reading of the significance of spatiality for computer games.[41] Mapping in golf games serves as a representation of space, but also as symbolic imagery with aesthetic qualities, and as a powerful part of spatial practices. A hybrid blending of practice, backdrop and imagination emerges during game play and on the real course. Chesher also starts from the Lefebvrian triad in his comparison between the

39 Brian Sutton Smith, The Ambiguity of Play.

40 Mobygames is the most comprehensive listing of videogames (see www.mobygames.com).

41 Espen Aarseth, 'Allegories of Space: The Question of Spatiality in Computer Games' in Markku Eskelinen and Raine Koskimaa (eds) *Cybertext Yearbook 2000* Jyväskylä: University of Jyväskylä, 2000, pp. 152-171.

affordances delivered in sat navigation devices and computer games, and his conclusions about the sociality of mapping experiences also chime with the deployment of maps on the golf course itself, and with the deployment of game play on the virtual course.[42]

Gekker (this volume) suggests that interactivity and salience are important characteristics underpinning the affordances built into game maps, and his analysis draws in the main on open world character-based role-playing games, and shoot-em-ups. This typology also seems to work in golf games. Game-play takes place in and across a course backdrop that is increasingly immersive, with a player-centric perspective, and where simulation of the real extends to crowd noises, birdsong and the sound of clubs swinging. The verticality explored by Fraser and Wilmott (this volume) is also an important part of the player experience in many golfing games, just as it is on the real golf course. Temporality, however, is frequently under player control, in video games, often alongside a capacity to replay shots, something that many golfers desire on the course, but which is precluded by rules governing play. Navigation through a hole or course in golfing videogames, and strategy dictating shot selection, are frequently helped by deploying a full-sized map view, with a top down map-like perspective. The Cartesian qualities of the top-down and simplified map view of a hole on a course are also useful in games that support course design, and here the map serves as an artifact to be changed, a crafting of the real. So mapping in golfing games plays roles that are instrumental and useful, but are also both conceptual and associative. These hybrid and blended experiences reveal frequently complex rhetorics at play.

Game title	Year	Publisher	Affordance	Platform
CustomPlay Golf	2005	Fusion Software	Course design	Windows
InfiniTee Golf	2001	InfiniTee Golf	Course design and game play	Windows
Jack Nicklaus Perfect Golf	2016	Perfect Golf	Course design and game play	Windows, Mac and Linux
Let's Golf series	2009	Gameloft	Game play	Android, Blackberry, iPad, iPhone, Playstation 3

42 Chris Chesher, 'Navigating Sociotechnical Spaces: Comparing Computer Games and Sat Navs as Digital Spatial Media' *Convergence: The International Journal of Research into New Media Technologies,* 18, no.3 (2012): 315-330.

Game title	Year	Publisher	Affordance	Platform
Mario Golf	1999	Nintendo Co Ltd	Fantasy golf	Nintendo 64, Wii, Wi U
Mini Golf Matchup	2016	Scopely Inc	Mini golf	Android, iPad, iPhone
Miniature Golf	1977	Atari inc	Mini golf	Atari 2600
Outlaw Golf	2002	Hypnotix	Fantasy golf	X Box, Nintendo, GameCube, Playstation 2
PGA Tour Series	1990-1998	Electronic Arts	Game play	Amiga, DOS, Game Gear, Genesis, Mac, SEGA, Playstation, Windows
Rory McIlroy Golf Tour	2015	Electronic Arts	Game play	Playstation, X Box
Sid Meier's Sim Golf	2002	Electronic Arts	Course development	Windows
The Golf Club	2014	HB Studios	Course design and game play	Playstation, Windows, X Box
The Links Series	1990-2003	Microsoft	Game play	DOS, Mac, Windows, X Box
Tiger Woods PGA Tour Golf	1998-2013	Electronic Arts	Game play	Gamecube, Playstation, PS2, PSP, Windows, X Box
Vertiginous Golf	2015	Surprise Attack Games	Fantasy golf	Linux, Mac, Windows
World Tour Golf	1986	Electronic Arts	Course design and game play	Commodore 64, Amiga, DOS

Table 4.1 *Examples of Golf Games.*

In most of these games players compete against the course, or each other, in agônistic battles.[43] Some version of a simulation of a course appears on a screen in front of the player, whether PC, tablet, TV monitor, games console, tablet, or smartphone. An input device such as a mouse becomes the club, and clicks simulate the golf swing, striking the ball, which moves across the virtual layout of the course. Innovations since 2000 (such the *Nintendo Wii)* have introduced bodily action into player control, leading to a more immersive feeling, enhanced gameplay training potential and a more embodied experience. These immersive trends also reveal the limits of a purely representational view of the mapped course: instead, the course is best interpreted as part of the game, which is made through the bodily practices of the players. The controller becomes almost a quasi-quasi object,[44] where a simulated material action strands for an action in the real world – and where a number of different real objects (the golf ball, the clubhead, the player, the course landscape etc) become melded together into a hybrid assemblage of actions, affording impressions of participation in the real experience, whilst remaining obstinately artificial.

Sutton-Smith's critique of rhetorics of play can be seen across the genre. A progressive rhetoric of playing with simple golfing video games can lead to improved performance in the real game, by exposing players to simulation of real course management strategy such as club selection. In their evaluation of performance Fery and Ponserre concluded that 'if the user is engaged in a learning skill strategy, golf video games seem to be useful in sport skills acquisition.'[45] But the video game and the real sport are not isolated and relations between them together construct difference and new possibilities. Players are never completely in control in the virtual game or on the real course, a probabilistic engine partly determines the outcome of shots online, and a randomness pervades shotmaking in the real world. Sutton-Smith's play of chance strongly influences shot outcomes in many computer-golf simulations.[46]

In 2009 I outlined four contrasting examples of strategies taken by game designers towards the spatiality of golf, reflected in differing affordances and product designs, with varying ludological and narrative characteristics.[47] These can be summarized as comprising: games deploying stylized game play where little attempt is made to contextualize golfing environments; course management simulations; realistic emulations of existing courses; and user designed and shared courses.

The console and smartphone markets in particular are dominated by the first example. Game play is emphasized, as is competition between players, instead of the landscape and course on which the game is played. Minigolf games include 'Fantasy golf' abounds in titles such as *Mario Golf*, *Vertiginous Golf*, or the over-the-top, violent and comedic *Outlaw Golf*. The

43 Roger Callois, Men Games and Play.

44 Michel Serres, *The Parasite*.

45 Yves-Andre Fery and Sylvain Ponserre, 'Enhancing The Control Of Force In Putting By Video Game Training', *Ergonomics,* 44 no.12 (2001): 1025-1037.

46 Brian Sutton Smith, The Ambiguity of Play.

47 Chris Perkins, 'Playing with Maps' in Martin Dodge, Rob Kitchin and Chris Perkins, *Rethinking Maps*, London: Taylor and Francis, 2009, pp. 167-188.

cartoon-like characters, and extreme courses in these games actively subvert and parody the rather staid, conservative and regulated play of the real game, evoking the subversive and frivolous qualities of play highlighted by Sutton-Smith. Here mapping is a backdrop to the action – but little attention is paid to where the action takes place.

A second kind of golf game focuses on simulations such as *Sid Meier's Sim Golf* where mapping emerges gradually and under player control, and where the design of a successful facility is the aim. The aim is to build a map reflecting qualities that will attract customers to the course. Maps are the interface through which the player makes the course, rather than the ground on which the game is played. The level of hole-detail in this kind of game is limited: mapping animates success in attracting revenue. Realistic depiction of a golfing landscape is not the aim – a stylized depiction and isometric view depicts the emerging golfing landscape as the player makes the game.

A third strategy focuses on attempts to emulate the real game of golf, with photo-realistic depictions of course scenery. These games frequently simulate existing and famous real golf courses, with game play under user control, against a mapped or photo-like backdrop, and have dominated in terms of sales over the nearly forty-year history of the development of golf gaming. Long-running franchises of games include the *Links* series, released over the period from 1990 until 2003 by Microsoft; and franchises from Electronic Arts, the *PGA Tour series* (1990–8), the market leading *Tiger Woods PGA Tour Golf* (1998-2011), and the currently dominant *Rory McIlroy PGA Tour Golf*. Different course backgrounds have been supplied with games since the early days of the genre, emulating classic real golf courses such as Augusta, Georgia, or St Andrews. Users play on courses supplied with the software, or download or purchase new courses. The real blends with the virtual: vision and sound create a perceptual experience across which realistic competition can take place.

A final strategy is to emulate the landscape architectural qualities of course design, by giving players the ability to create and map out their own courses. The first course-editing suite to be made available with a game was released in *World Tour Golf* in 1986 from Electronic Arts. The *Links* series encouraged users to share courses, a trend continued in *Tiger Woods PGA Golf Tour*. Substantial numbers of user-designed courses are now available over the web. Other products trade on the novelty of being able to play on a new course at every game – for example with *InfiniTee Golf*. This more creative rationale for play was most developed in *CustomPlay Golf* where software sophistication overlapped with that deployed in the real world of golf-course architecture, and where making the course was marketed as being as important as playing on it. Sophisticated procedural course editing software forms the core of this kind of gameplay, and current examples such as *The Golf Club* from HB Studios, or *Jack Nicklaus Perfect Golf* trade on the overlap with real world deployment of software by consultancies designing real courses, and also deployed as engines for successful entries in amateur hole design competitions.[48]

48 Courseforge is used by leading specialist golf course design consultancies such as Nicklaus Design. The winning entry in the 2016 Golf Digest Amateur Architect competition was created using the Jack Nicklaus Perfect Golf CourseForge engine, see http://www.golfdigest.com/story/a-devoted-computer-

The affordances delivered in mapping interfaces deployed in these games have changed over time. Screen resolutions have improved and processor speed has increased, facilitating increasingly realistic depictions of landscape. Mapping has become more complex, with increasingly sophisticated landscape depiction and control over textures, models, sound effects and the ways these relate to game play. Early games simply offered vertical views onto the golfing landscape. Split-screen vertical and third-person perspective views of the course appeared in the mid 1980s in *World Tour Golf* series. Current games support multiple views, zooming in on characters and parts of the course, deploying default or user control. Three-dimensional displays allow panning and zooming around objects. There has been a shift towards incorporating multi-window designs, with zoomable maps, where the viewing angle can be changed. Users increasingly are able to control these map views, selecting whether to see the course from the player, audience, birds eye, or isometric perspective. The sophistication of game play has been greatly improved by the development of smoother animation and better modeling of the physics of shots and golf ball flight.

There has, as elsewhere in the gaming world, been a shift towards multi-player gaming, and towards multiple platform versions of the same game, which evoke Sutton-Smith's social rhetoric of play.[49] The web has facilitated online competitions and tours for nearly twenty years, which mirror the real world of golf competition. But just as wider notions of play are increasingly being studied as social and situated,[50] so has playing with golf maps become increasingly social. And the sociality underpins playful mapping on and off the course. A more detailed consideration of the practices around two golfing games reveals the importance of moving beyond function and representation.

Skycaddy

On a real golf course golfers need to know how far they are from a green or desired landing area, in order to select an appropriate club. With this knowledge shots are less likely to be wasted, an overall improvement in scores becomes more possible and play can become faster. The course can therefore be managed better. The spatiality can be controlled by a selective deployment of spatial technologies, and the risk of failure can be averted. So on-course deployment of mapping technology offers the progressive potential for this improvement in play.

Until 1999 technological support for this improvement was limited and mapping was separate from distance measurement. Laser-based rangefinders had delivered a precision of .5cm accuracy since the mid 1960s, but were separate from course mapping and expensive. Many clubs fixed markers into fairways to measure distances to the green, and also provided in-situ maps on tees to indicate a simple guide to each hole layout. Printed yardage books and hard copy course planners included mapping of individual holes that documented key locations important for course management and club selection, and indicated precise

game-golfer-wins-the-2016-armchair-architect-contest.

49 Brian Sutton Smith, The Ambiguity of Play.

50 See Jana Rambusch, *Situated Play*, Linkoping: Linkoping Institute of Technology, 2008.

locations of easily identifiable landmarks, such as significant trees, or bunkers as well as distances to the green.[51] So at the end of the millennium club choice still depended upon golfer perceptions of landscape.

With the release of *Golflogix* for Garmin-based GPS receivers in 1999 GPS signals came to be used in handheld devices for the first time on the course.[52] Three different kinds of Golf GPS devices are now available: handheld dedicated receivers, wristwatch-based displays syncing to mobile devices, and smartphone apps. *Skycaddy* from *SkyGolf* is now the market leader in this sector and supplements aerial coverage of holes with ground-based digital mapping, updating 5 000 courses a year, and with digital course mapping available for around 40 000 courses worldwide.[53] Its premium product The *SkyCaddy Touch* offers a colour touchscreen, with different mapped screen interfaces (see figure 4.1).

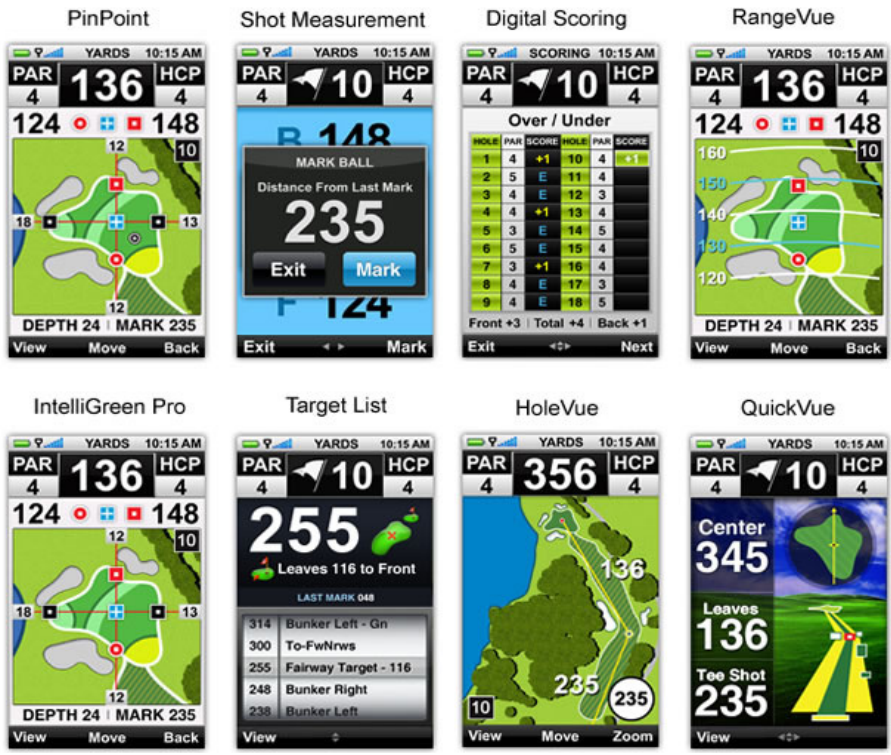

Figure 4.1 *SkyCaddy*[54] *Touch Interfaces.*

51 See Chris Perkins, 'Mapping Golf', for an analysis of a genre that has spread to cover the majority of courses across the world.

52 http://www.sporttechie.com/2013/10/15/trending/golflogix/.

53 http://newskycaddie.skygolf.com/content/welcome-skycaddie.

54 Source: http://www.golfalot.com/equipment-news/skycaddie-touch-2720.aspx.

A golfer can tap the birds-eye Interactive Holeview screen, to indicate distances to any point on the hole against the mapped backdrop. Or they can generate yardage arcs for display against the hole. Or when approaching the green the system delivers the capacity to view complex aspects of the green complex such as distances to the front, center and back. Distances update in real time as the golfer moves across the screen map. This is complemented by technology to accumulate analytic data relating to individual shots and hole performances, which can in turn be interfaced with other packages to improve swing. The style of the digital mapping, and affordances that it offers closely resemble isometric views offered in digital mapping by many golfing videogames, and the relatively late adoption of GPS technology on the course was able to learn from the virtual application of design, as well as from the style of earlier hard copy mapping of golf holes published in course planners. A convergence of technology has once again taken place, with a blending of hybridity enacted on course.[55] An online Cloud-based community of users can connect with other golfers, track scores, generate and analyze statistics, explore courses, download Trueground course maps, as well as sharing achievements and communicating with other users.

So this mapping application exists as part of an ecosystem of technologies and affordances emerging in different contexts. In a crowdsourcing of its precision and accuracy, course owners are encouraged to update local course maps when layouts change: the mapping is deployed to manage courses as well as improve play. There are however, political and cultural limits to this playful deployment. The regulated nature of the game limits its use. Until 2006 USGA / RA rule 14.3b prohibited the use of artificial devices in all competitions 'for the purpose of gauging or measuring distance or conditions that might affect play'.[56] Only after the relaxation of this rule from 2006, to allow courses to enact local exceptions, did the market for Rangefinders and GPS devices significantly pick up. Industry views of the benefits of the technology are boosterist – with current surveys suggesting that the devices improve shot confidence, lead to quicker play and to better scores.[57] But within the game not all golfers regard control or precision as the best way to improve their game, or to enjoy their rounds. There is a considerable opposition to a data-driven and digital route to golfing perfection.[58] The day-to-day deployment of the technology on the course may actually hinder better score making, by distracting attention from the 'feel' for a shot. By 2016 indications suggest that market saturation may have been reached for GPS receivers with free apps on smartphones eroding sales. So in practice the normative and progressive narrative associated with playing with maps on a handheld device on the course is strongly problematic. The rhetoric is rendered as a complex and mutable series of experiences, in the reality of the application of the technology. Devices such as *SkyCaddy* offer a hybrid bringing together many different technologies, and the hybridity extends to much more than digital mapping, leading to a frequently contested series of gradual changes.

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55 See Henry Jenkins, 'The Cultural Logic Of Media Convergence'.

56 http://www.randa.org/Rules-of-Golf/MainRules/14-Striking-the-Ball/SubRules/3-Artificial-Devices-Unusual-Equipment-and-Unusual-Use-of-Equipment#14-3.

57 http://ngfdashboard.clubnewsmaker.org/Newsletter/1gz95ynihmt?a=1&p=2354955&t=410827.

58 See for example Geoff Shackelford, *The Future of Golf: How Golf Lost Its Way and How to Get It Back*, Seattle: Sasquatch Books, 2005.

The Golf Club

The Golf Club is a recently published and multi-platform game marketed by HB Studios, and branded as the next generation of golf sims, embodying as it does a sophisticated procedural generation of course layouts, but also a rich depth of social interaction during gameplay. The game was released in 2014, for PC, X Box and Playstation. A second version was released in 2016, with significant upgrading to the sociality of the interface.

A central and interesting feature of the game is the slick capacity to generate new courses across which tournaments can be played. The game's promotional web site summarizes these capabilities: 'The Greg Norman Course Designer gives you the ability to create from scratch or mould anything on the course. You can alter the terrain, move tees, move greens, move holes, delete holes, add holes, bunkers, rivers, ponds, trees, foliage, buildings, animals and other objects. During editing, you can play the ball from any spot to review holes and make changes as you see fit.' [59] Figure 4.2 shows an editing screen from this designer module. To date over 100 000 different courses have been created and shared amongst a growing community of users.

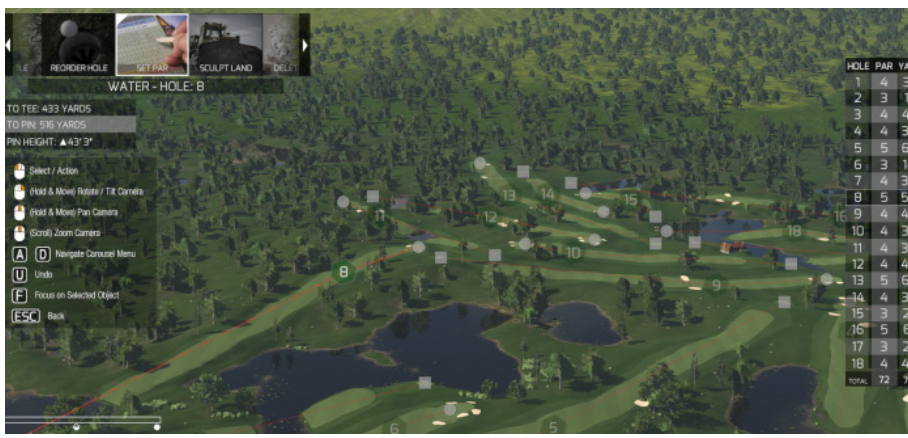


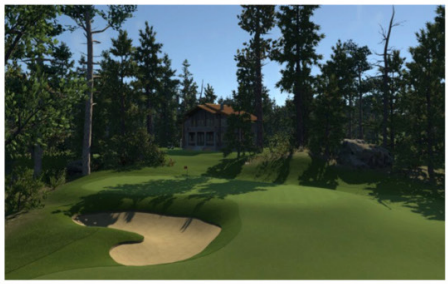
Figure 4.2 *Greg Norman Course Design Engine.*[60] Hole design tool.

A second important aspect of the game is no different from other multi-player platforms – a community increasingly shares and evaluates the courses that are playfully constructed during the design phase (see figure 4.3).

59 http://thegolfclubgame.com/2014/01/11/features-of-the-golf-club-game/.
60 Source: http://thegolfclubgame.com/2016/05/04/tgc-retrospective-greg-norman-course-designer/.

Old Beaver Creek

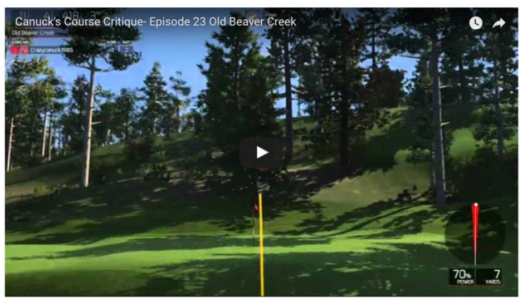
Designer: Bill Rader & Brian Jeffords



Date Added: 12/21/2014
Theme: Boreal
Type: Fictional
Par: 72
Yardage: 6829
Green Speed: Medium
Firmness: Medium
Difficulty: Easy
FPS Rating: Smooth
Likes: 77

Course Description:

Old Beaver Creek is a course that I kind of picture in the mountain/hills of northwest South Carolina or thereabouts. Lots of foliage, a lovely lake with some spectacular lake houses that are accessible by plane and boat only, old beaver creek itself... it's a great place to kick back, play a round, grab a pole and try to wiggle in a few big ones while you're out there!



Member Reviews:

The scenery and planting is exceptional on this course
Reviewed by: Todd Driver on 12/23/2014

Greens are fair. Excellent mix of long and short holes. Very creative short Par 4's. Very playable, but challenging. Great green complexes.
Reviewed by: Robert Davis on 12/24/2014

Canuck's Course Critiques

Dam Phenomenal Course

Pros
- Amazing hole design, not one "so so" hole.
- The planting of trees and rocks was superb.
- The creek that ran through the course and fed into the lake gave some spectacular views.
- Excellent bunkering and contouring.
- Basically everything...

Cons
- Umm..... I've got nothin'....

Verdict- Easy. Go play it. It will be on your favorites list for sure. My first full mark rating. Well done chaps. 5/5- Exceptional

Reviewed by: Andre Quenneville on 1/3/2015

Figure 4.3 *Review page for Old Beaver Creek*. The default easy course layout for tournaments at The Golf Club.[61]

61 See: http://www.tgctours.com/Course/Details/4358.

Why does a developer need to waste time honing pre-prepared course designs when it can successfully crowd-source the making of playful terrains to the customers who buy the software? All that is needed is to generate an interface that makes the successful completion of the game a central part of the ludic experience. This offers an increased number of possibilities for comparative performance, social capital for the top designers, and also a sense of control and creation. The designs are the property of the corporation, but shared amongst the playing community, and once again the sociality of the physical and virtual play is evoked.

It is the sophisticated blending of two genres that makes the Golf Club interesting, the strongly social gameplay is married to the iterative and creative possibilities for course design, delivering a hybrid of affordances to players. Earlier golfing games had also attempted this fusion, but had been hampered by technical limits in interface design.[62] A further hybridity emerges in the affordances offered by the procedural dynamics. These are sufficiently sophisticated to be deployed by designers of real courses[63] – as well as by game players. The lucrative gaming industry that has spawned the game is seeking new outlets for its products, but the golf course design industry also sees advantages in associating its brand with a newly emerging market sector, and in particular in an age when fewer and older golfers are playing on real golf courses.

So game play takes place across these terrains and is cross-referenced to the individual state of a course that is open for revision by anyone with a game license.

Conclusions

A hybrid experience emerges in the golfing cases discussed in this chapter. This hybridity comprises a blurring of analogue and digital experiences, a blurring of play and work, and a blurring of the playful affordances that emerge out of this context. In the first case the normative intent of designers concerned with deploying mapping to precisely fix and improve real world golfing practice, is subverted by golfing performances on course, by the political economy surrounding golf, and by playful rhetorics beyond the progressive, that are enacted by users of the technology on and off the course. Playful deployment of the app or GPS device subverts narrow technologist claims about the affordances delivered by adopting the technologies. In the second case hybridization characterizes the game design itself, and a competitive game play deploys mapping in ways that contrast strongly with the more creative making of the course maps across which tournaments may subsequently be enacted. Social elements of the gameplay enacted in a playing community in turn impact on the reception of individual course designs. But hybridization can also be seen in the way that different affordances are delivered as part of the same gaming environment. Using the game to design a virtual course is subtly different from using the game as part of the plans to make a new real world course. The real and virtual world of golf merge in a convergent ecology deployed in the Greg Norman Golf Designer.

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62 See Chris Perkins, ‘Playing with Maps’.

63 See HB Studios, ‘Highly Realistic’ Golf Game Being Used to Design Real-World Golf Courses’, http://www.gamespot.com/articles/highly-realistic-golf-game-being-used-to-design-re/1100-6421142/.

But these cases are about much more than a phenomenological approach. I have also suggested that a blurring of thinking can be a useful way of approaching case evidence where a co-production of ideas emerges. I have used Sutton Smith's notion of rhetorics of play, in conjunction with Gibsonian approaches to ecologies of behavior, and Lefebvrian notions of spatiality, to begin to interpret what can most productively be read as a co-produced and hybrid emergence of mapping spaces and practices. This co-production has clear implications for any consideration of spatiality and therefore for the mapping practices that come to be enrolled into the case evidence. But it also has implications for how the cases unfold – for the ways in which possible futures are called into play and indeed for broader considerations of temporality and for processual understandings of digital mapping and play.

So the argument moves beyond concerns with hybridity evoked by play theorists interested in hybrid games[64] and instead focuses on interplays between contrasting and different contexts. The cases have highlighted how mapping technology might be deployed in a playful fashion in the real world, but outside of anything that could be defined as a video game, and secondly, by way of contrast, document a case where multiple actants come together in different aspects of a contemporary golf based video game, that is linked to the reality enrolled into locative games, but strongly differs from the first range-finding case. I have argued that we should pay attention to the practices across different versions of the game, and the affordances that these differing materialities facilitate.

My argument has been that the digital development of golf-based video games has followed a trajectory that is encouraging hybridization, and that instead of privileging one particular approach as yielding the 'best' explanations of practice on or off the course, we should instead deploy ideas in a creative fashion, blending insights from different approaches. As such the golf games described in this chapter are significantly different from other cases in this book. But they bring together concerns with the locative charted in chapter 3, and set these against playful engagements with the real world charted in chapters 2, 5 and 6, whilst also speaking to the more game related concerns of chapter 7 and 8. The success of hybrid clubs is mirrored in the potential of a hybrid approach to the apparently separate fields of golf, mapping and playing.[65]

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64 See Daniel M. Sutko and Adriana de Souza e Silva, 'Location-Aware Mobile Media: Urban Sociability'; and Richardson, Ingrid, 'The Hybrid Ontology Of Mobile Gaming.'

65 Hybrid clubs merge some of the characteristics of irons with fairway woods, delivering a comparable loft of shot, but with an ease of use from fairway and rough alike. As such they also bring together interests of the golf industry and player demand, reflecting a market-led application of new technology to the game. An appropriate metaphor with which to close an argument for hybridity!

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