# FCJ-074 A Game of One's Own: Towards a New Gendered Poetics of Digital Space

Tracy Fullerton, Jacquelyn Ford Morie and Celia Pearce, USC School of Cinematic Arts, Los Angeles Jacquelyn Ford Morie, USC Institute for Creative Technologies Celia Pearce, Georgia Institute of Technology, Atlanta.

## Introduction

> Je suis l'espace où je suis
>
> I am the space where I am.
>
> -Noël Arnaud, L'Etat d'ebauche

In the opening pages of her classic essay, A Room of Ones Own, Virginia Woolf describes being blocked from entering the "turf" of the University in Oxbridge by an administrative gate-keeper.

> Instantly a man's figure rose to intercept me. ... His face expressed horror and indignation. Instinct rather than reason came to my help, he was a Beadle; I was a woman. This was the turf; there was the path. Only the Fellows and Scholars are allowed here; the gravel is the place for me' (Woolf, 1929).

This scene invokes the ways in which women have been systematically barred from the digital playground, both as players and as creators of play space. To a large extent, the video game industry in the U.S. remains dominated by a boys-only ethos that harkens back to the gender-biased practices in the British academia of Woolf's day.[1] Games that are female-friendly are often couched in derogatory or dismissive terms: The Sims (Maxis, 2000) is 'not really a game'; casual games are not counted as 'real' games by many in the industry.[2] The result is that certain types of games, game mechanics, play patterns, and, as we'll see, particular types of game spaces have tended to dominate the field of games.

Although this paper discusses the ways in which digital game spaces have been strongly gendered towards male constructions of space and play, this does not necessarily mean we advocate creating exclusively female (or 'pink') games. As Woolf points out in her essay, the solution is not simply to create a distinctly feminine voice (although this is one potential angle of approach), but rather to promote the cultivation of an 'androgynous mind', which, she suggests, is already possessed by male authors of great note throughout history (she cites Shakespeare as an example). We propose drawing from a number of cultural practices, literary sources, and existing games in order to pave the way for a playground that is more open to female players. Thus we promote not only the definition of new feminine game spaces, but also encourage designers to think in terms of 'androgynous space' that engages all aspects of all persons: a space into which women and girls are invited and welcomed, but in which men and boys can also enjoy more diverse and nuanced forms of play than are typically available to them.

## The Production of Space

### Gendering Game Space

The concept of space itself is not a simple one, and it is not possible to do it justice here. Space may be described by its physical dimensions, or by its mathematical, material, or geographic properties. It may also be understood as a social practice or psychological phenomenon, as in the work of Situationist Henri Lefebrvre (1991). The ways in which humans understand and represent space are social constructions that serves as a barometer of a particular culture and time. At different points in history, and within different contexts, space and its representations have proceeded from varying cultural ideals — from the 15th century paintings in which size of objects was used to denote importance, not relative position in a landscape, to the secret mathematics of vision that instructed the creation of perspective in Renaissance art and architecture. When Europeans arrived in the Americas, one of the rationales for colonialism was that the natives were 'not using' the land. Other representations of navigable space include cartographic traditions such as Mercator projections, which distorted the relative size of the continents in order to fit the entire globe on a cylinder, and modern GPS coordinate systems. In 1946, Buckminster Fuller created the 'dymaxion map', or 'Fuller Projection', an icosahedral globe that represented the continents at true scale. Representations of space often reveal the priorities and perceptions of the prevailing culture

at the time. Both Pearce (1997) and Konzack (2006) have noted a spatial transition in video games. In contrast with earlier more abstract forms of expression in digital games, there is tendency within the game industry today to focus on the production of 'realistic' representations of space — detailed, three-dimensional models of what Lefebvre would call 'lived space', or what Soja terms 'Firstspace' (1996). But whose lived space? Game space, due in part to the constraints of the computer, and in part to the way in which 3D technologies have been developed, is overwhelmingly Western, Cartesian and male.

10 The success of 3D computer modeling within the film industry as a means of bringing fantasy to life seems to have also resulted in a fixation on 'realistic' representation within the game industry. However it must be acknowledged that this fixation on realism — especially in the representation of game space — is somewhat different than the concept of actual lived space. Espen Aarseth, echoing Janet Murray's previous work, has claimed, 'the defining element in computer games is spatiality', however, he says it is 'the difference between the spatial representation and real space' that makes gameplay rules possible. In describing a topology of game spaces, ranging from textual, two-dimensional, isometric, three-dimensional, etc., he concludes that in their careful planning as playable game spaces, they are in fact, not realistic at all, but allegorical, 'figurative comments on the impossibility of representing real space' (Aarseth, 1998).

11 Aarseth's description of how game spaces ignore real-world constraints, using teleporters and distributing resources across the terrain to make gameplay fair, is not as interesting as his unintentional focus on what is done in game landscapes themselves, i.e. the 'unreality' of these landscapes is not only due to their order and balance, but also to their inherent usefulness for a certain type of gameplay — generally battle. As Aarseth (1998) says, 'Every game of Myth (Bungie Studios, 1997) is a fight for position in the landscape ... the units will go and do as ordered (with a simple click on the unit and then a click on the position or enemy to be taken) but when the chaos of battle erupts, efficient control is no longer possible, and much therefore depends on how well the player has taken advantage of formation, landscape variation and knowledge of enemy positions'.

12 **Dangerous and Contested Spaces**

13 Aarseth's description of a landscape designed for battle is typical of many digital game spaces, and speaks to a predominantly male concern that space is potentially dangerous and always contested. In order to better understand the specifics of this gendering of game space, it is useful to analyze in more detail the prevailing characteristics of these environments. Looking back to the abstract battlefields of games like chess or Go, or to today's real-time strategy (RTS) or 'God Games' like the Age of Empires (Ensemble Studios, 1997) and Civilization series (Micropose Software, 1992), it is clear these games define space primarily by its ability to be captured or held by players. Core mechanics revolve around intellectual problem-solving and resource management with the main objective being to amass armies, expand territories, control resources, and dominate the play space of the game.

14 Turn-of-the-Century feminist Charlotte Perkins Gilman characterizes the contrast between male and female relations to space:

15 > The basic feminine impulse is to gather, to put together, to construct; the basic masculine impulse is to scatter, to disseminate, to destroy. It seems to give pleasure to a man to bang something and drive it from him; the harder he hits it and the farther it goes the better pleased he is (Gilman, 1911).

16 She also points out the 'universal dominance of the projectile' in male sport, epitomized in digital games by the contested space of the first-person shooter (FPS) genre. The core game mechanic of a typical first-person shooter can be seen as a cross between a carnival shooting gallery with moving targets, cops and robbers, and in the case of team-based games such as Counter-Strike (Le and Cliff, 1999) or Halo 2 (Bungie Studios, 2004), what might be described as 'tag on steroids'. These games conceive of moving through space in a distinctly masculine fashion, in terms of both its role in the game experience, and the narrative milieu in which they take place. They epitomize what Judith Butler would call 'disciplinary regimes' that through repetitive performance construct both gender and gendered space (Butler, 1990). Their game mechanics value particular skills: mastery of quick reflexes and an ability to solve complex spatial rotation problems in real time.

These are the hallmarks of the FPS, skills which cognitive research suggests, by and large, tend to favor males (Terlecki and Newcombe, 2005).

17 In contrast to the narrative maze described by Murray, in which a story unfolds through a process of spatial navigation (Murray, 1997), the FPS maze is envisioned as an obstacle course around and through which tactical maneuvers take place. The 'story' is often incidental to the game mechanic, providing merely a motivation, back-story and mis-en-scene for what is otherwise a fairly generic activity. In these games hiding places, vistas, avenues of escape and dead-ends combine with strategic decisions about weaponry to create a particular type of tactical pleasure. While these pleasures can appeal to both males and females, it is clear that they are geared to the former audience (apropos Gillman). And, when the theme or story overlay is added, we see an even stronger orientation to male domains.

18 Thematically, these games revolve around narratives of warfare, anti-terrorism, invading aliens, zombies, science fiction, combat with robots, etc. Aesthetically, their settings tend to be highly rectilinear, typically manmade spaces, often the bruised and embattled remains of an urban environment, warehouse, office building, space ship, space colony, or high tech laboratory gone horribly wrong. They are typically constructed of hard materials: cinder block, metal grid work, HVAC infrastructure, with heavily mechanical components, reinforced by the sound effects of footsteps echoing on metal or concrete floors. They are often bleak, militaristic, post apocalyptic or futuristic. Spaces are dimly lit and color palettes are dark and monochromatic. Consider the sharp contrast between the color palette of Half-Life (Valve Software, 1998) or Doom (id Software, 1993) and that of a game such as Animal Crossing (Nintendo EAD, 2002). In the former, exterior scenes are rare, and if included, tend to take place in battlefields, deserts, decimated landscapes or contested areas of urban blight. If, as Duchenaut et al (2004) suggest, games provide the digital equivalent of a 'Third Place' outside of home and work (Oldenburg, 1989) what kinds of 'Third Places' are we creating with these landscape of destruction? As Bachelard states, in The Poetics of Space:

19 > It is also a terrible trait of men that they should be incapable of understanding the forces of the universe intuitively, otherwise that in terms of psychology of wrath (Bachelard, 1964, 1958).

20 It is interesting to contrast these scenarios with Gilman's Utopian vision of Herland, a novel in which women form the dominate culture in a society free of war, poverty and even garbage (Gilman, 1979, 1915).

21 **Levels and Secrets**

22 Another common trait of male-gendered game spaces is their organizational structures. The majority of digital games are presented in a series of 'levels' which escalate in difficulty, barring those who cannot master the skills and secrets of the game are barred from advancing. Like a skyscraper, the indomitable symbol of the business hierarchy, or the strict chain of command in the military, games are positioned to 'keep out' those who have not passed the tests of earlier levels. Progression and advancement are possible only through 'beating' these levels, 'conquering' their secrets in a highly linear fashion. And secrets themselves are framed as tasks or challenges, which often hold access to even more exclusive spaces. Only by knowing exactly where the entrance to a secret level is, can the players prove themselves worthy of entering. What is found inside these secret spaces are rewards that are sometimes humorous, sometimes offensive, and sometimes reinforce an insider's knowledge of the game. Examples of these secret levels and places can be found in the early Atari game Adventure (Robinett, 1980), with its infamous Easter egg room displaying programmer Warren Robinett's forbidden credit, to a secret 'glitch' that became known as 'Minus World' in Super Mario Bros (Nintendo, 1985), insider joke levels such as level 31 in Doom II, which borrowed enemies from id Software's earlier game Wolfenstein 3D (Muse Software, 1981), or the infamous secret 'Hot Coffee' scene in Grand Theft Auto: San Andreas, which, when unlocked, enabled a sex 'minigame' between the main character and his girlfriend.

23 Knowing how and where to access these secrets is the province of 'real gamers' and while these male fantasies of progressing through power acquisition, tactical mastery, secret knowledge or geographic domination can and are certainly enjoyable for women to play, they are not necessarily 'indigenous' to the ways in which women and girls experience space, especially in the context of

play. Just as Virginia Woolf argued that women need an indigenous voice of their own, women also need the opportunity to explore and manifest their own indigenous fantasy play space.

24 **Girls in Boyland**

25 Historically, in the non-digital playground, girls have been spatially constrained in their play activities. The 'roaming radius' study done in the U.S. in 1960s by John Newson and Elizabeth Newson (1968) demonstrated that in the playground, boys are typically allowed to roam further than girls. Follow-up studies in the 1970s found that a typical ten- to twelve-year old boy was allowed to travel a distance of 2,452 yards, while girls of the same age might only travel 959 yards (Margolis and Fisher, 2001). It was not until 1972 with Title IX, over 50 years after women's suffrage, that girls were allowed equal access to the sports field in schools. Encoded in these constraints are implicit stereotyped anxieties about the vulnerabilities of girls: on the one hand, they are weaker and more fragile than boys; on the other, they may fall prey to sexual predators.

26 Reactions to such constraints often call for inclusiveness — girls must be 'allowed' to play in boys' spaces, by boys' rules, in order to master them and increase their ability to compete more efficiently in a male-dominated world. In From Barbie to Mortal Kombat, Henry Jenkins proposes:

27 > We need to open up more space for girls to join–or play alongside–the traditional boy culture down by the river, in the old vacant lot, within the bamboo forest. Girls need to learn how to explore 'unsafe' and 'unfriendly' spaces, and to experience the 'complete freedom of movement' promised by the boys' games, if not all the time, then at least some of the time, to help them develop the self-confidence and competitiveness demanded of professional women. They also need to learn how, in the words of a contemporary bestseller, to 'run with the wolves' and not just follow the butterflies. Girls need to be able to play games where Barbie gets to kick some butt (Jenkins, 1998).

28 There are many facets to the notion of 'Barbie kicking butt'. On the surface, the concept could be epitomized by Lara Croft, the busty adventuress who takes on male game space in hot pants, a tight tank top and a holster. Early on, Lara's creators insisted that centering on a strong female character in Tomb Raider (Core Design, 1996) would translate into strong appeal to women and girls. But this noble intention did not materialize: Lara Croft, like many other female game characters, is a male fantasy of Barbie kicking butt. Similarly, in games like Virtua Fighter (SEGA-AM2 Co, 1995) and Tekken (Namco, 1995), sexy female characters don what author Pearce has dubbed 'kombat lingerie' to engage in what might otherwise be considered traditionally male activities. In the end, these may be merely examples of what Simone de Beauvoir (1952) would characterize as the woman as 'other' inhabiting a 'masculine universe' in a male-defined role.

29 Whether or not these environments are empowering to women is debatable: putting a female character into a male game space, particularly one that caters more to male fantasies of female empowerment than those of actual females, seems only to make matters worse. Indeed, these female objects of male fantasy not only fail to resonate with many women players, but alienate them still further. As T.L. Taylor's research shows, many women play the over-sexualized, underdressed avatars in Massively Multiplayer Online Games (MMOGs) in spite of their design, and would prefer to have a less excessively endowed character if given the choice (Taylor, 2003). In the long run, Lara and her butt-kicking buddies have failed where Barbie has succeeded. Perhaps its appeal (or lack thereof) lies not in the representation of character but the gendered nature of the space itself. Perhaps butt-kicking is not what many girls and women have in mind as a form of empowerment through play.[3]

## Feminine Conceptions of Space

30 ### Literary Models for Regendering Game Space

31 Following Woolf's lead, we have identified some literary and game traditions that offer rich conceptions of space from a female perspective. In these spaces, female characters figure predominately, if not solely, and the ways in which they interact with the space, as well as the character of the spaces themselves, can be looked at as models for a more feminine conception of space. Indeed, many late 19th and early 20th Century male authors had a better grasp of feminine space than today's game designers. Classic children's literature, such as Alice in Wonderland (Carroll, 1865), The Wizard of Oz (Baum, 1900), The Chronicles of Narnia (Lewis, 1950), The Secret Garden (Burnett, 1909), and Mary Poppins (Travers, 1934), among others, offer a cast of female heroines who open portals to and explore magical, alternative, sometimes highly treacherous

mythical and imaginary worlds that often provide an allegory for inner-space. These women are brave, curious, adventuresome, and smart, solving complex problems to arrive at their destinations, which invariably turn out to be some inner state of transformation.

Again we can invoke Bachelard (1964), who speaks of

> ...[attributing] grace to curves, and, no doubt, inflexibility to straight lines? Why is it worse for us to say that an angle is cold and a curve warm? That the curve welcomes us and the oversharp angle rejects us? That the angle is masculine and the curve feminine? A modicum of quality changes everything. The grace of a curve is an invitation to remain.

**Secret Places**

Secrecy is, like the game spaces described above, a large part of classic children's literature, and specifically literature focusing on female characters. Frances Hodgson Burnett's The Secret Garden, for instance, has been a perennial tome of girlhood for decades and tells of how orphan Mary Lennox and her invalid cousin, Colin, find a long-neglected secret garden, a place to grow and heal, both physically and psychologically, through cultivating a natural environment. In the musical stage performance based on the book, Mary echoes Woolf's insistence that to write a woman must have a room of her own:

I need a place where I can hide,

Where no one sees my life inside,

Where I can make my plans, and write them down

So I can read them.

A place where I can bid my heart be still

And it will mind me.

A place where I can go when I am lost,

And there I'll find me

(Norman and Simon, 1993)

The affinity with nature, a common theme, is central to Purple Moon's Secret Paths series (Purple Moon Software, 1996-1998), in which girls explored various landscapes and then met in a secret tree house to share stories. Like the psychologically safe space offered by Burnett's Secret Garden, the secret tree house of the Purple Moon game was framed not in terms of mastery and exclusivity, like the hidden game levels described above, but rather in terms of growth, bonding, intimacy, privacy and narratives. This female-framed secrecy presents a very different set of play mechanics and design possibilities. In Remembrance and the Design of Place, architecture professor Frances Downing says of secret spaces:

> A secret place always has aspects of a 'removed' existence, being a place that, physically or mentally, it is created for retreat, intimacy, enclosure, screening, and protection. These often are places of power and control that cannot be known or invaded by 'outside' forces (Downing, 2000).

In enumerating the many domains of the experience of space from accounts of male and female architects, Downing points out the notion of the unfinished places that invite contribution from the inhabitant: secret, ancestral, places of self, sensate places, places of desire, comfort, region, vicarious, gregarious and abstract. Of secret spaces she says: 'Built forms of this domain often were places that were unfinished — attics, root cellars, or under the stairs. Often their unfinished nature provided a sense of ownership through an ability to complete the place with one's presence. Closets and large furniture also were important in this category'. These alternative universes cry out for player agency, for players to not only be transformed by, but also to transform the space as part of the play experience and, as we will see, they are also often the transitional point into another type of imaginative space, which we will discuss next.

**Enchanted Worlds**

Even before J.R.R. Tolkien presented the definitive fantasy world that set the stage for numerous digital games, girls in literature had the power to open portals into alternative universes. The late 19th and early 20th Centuries hosted a parade of what would now be called 'tween' girls venturing forth into the uncharted territory of inner space: Alice ventured down the rabbit hole and into the

inner space of the looking glass; Dorothy rode a gust of wind to a magical land; Lucy lead the way into a vast alternative, allegorical universe.

43 Dorothy and Alice provide an interesting juxtaposition of girls in gamespace. They are similar in many ways, and yet their motivations and passages are quite different. Dorothy, longing for adventure and escape from the mundane of the domestic, is swept away against her will on a gust of wind. She commits a seemingly heroic act by accident, by landing inadvertently on the Wicked Witch of the East. Her nurturing and generous personality makes her the unwitting leader of a motley crew of displaced 'persons' (not necessarily people). The 'yellow brick road' becomes Dorothy's avenue, quite literally, for adventure. In the words of George Sand: 'What is more beautiful than a road?' (Sand, 1845). Yet adventure notwithstanding, the outcome of Dorothy's travails is the realization that, indeed, the domestic space has all she needs.

44 Alice, suffering equally from tween girl ennui, is much more pro-active about her adventures. Rather than merely wishing herself into an enchanted world, she actively seeks it out. The following passage from the delightful 1923 digest of children's literature, Boys and Girls of Bookland, provides insight not only into Alice's universal appeal, but also into her modus operandi:

45 > Alice, you must know, was an adventurous young person, much more so than the heroines of the ordinary fairy tales, for when they wandered away from home it was generally because they were forced to do so, while Alice deliberately made up her mind to travel, and Did It! (sic) (Smith, 1923).

46 Alice's adventures take her through a variety of transformations in scale, another aspect of space; she grows and shrinks (an allegory for growing up) and even swims through a pool of her own tears. It is also worth noting that Alice was a 'gamer' of sorts: both of her excursions took her into worlds that revolved around a central game: cards, in Alice's Adventures in Wonderland (Carroll, 1865), and chess in Through the Looking Glass (Carroll, 1871). Thus Alice's imaginary worlds are also very explicitly 'game worlds' in a way that perhaps the others mentioned here are not.[4]

47 Note that three of these four adventures originate via portals to parallel universes that are situated in domestic space. As Bachelard points out: 'the house shelters daydreaming, the house protects the dreamer, the house allows one to dream in peace' (1964, 1958). Thus the domestic becomes a portal into imaginary worlds. Furthermore, he points out the evocative nature of drawers, chests and wardrobes — secret enclosures that are meant to be opened, and which recur throughout the literature of this genre. The wardrobe, the mirror are portals into the imagination for the inquisitive girl adventurer. 'For to great dreamers of corners and holes, nothing is ever empty' (Bachelard, 1964).

48 Although domestic space can be a site of play and pleasure, (as described in the following section), it can also connote stifling captivity for women, as in Perkins Gilman's The Yellow Wallpaper (Gilman, 1997, 1892), in which a woman is confined in a deteriorating room by a loving yet paternalistically controlling husband. She is also discouraged from writing, because it exacerbates her 'hysteria', thus the room also represents the repression of her inner life, and consequential descent into madness. Conversely, for Woolf, A Room of One's Own (and of one's own making) also means the space (and time) in which to daydream; it is 'room to move', room to amble, wander and let the imagination run wild (Woolf, 1929). Alice's adventures are literally explained away as dreams. In Narnia, Lucy leads a group of adventurous children into a world of spiritual allegory through a wardrobe, one of the domestic realm's secret containers that are 'meant to be opened' (Bachelard, 1964, 1958). Both Dorothy and Alice inhabit dream worlds to which their imaginations give rise. Lucy and the children of Narnia also inhabit a dream world, but one which is deeply serious and allegorical. None of these make-believe worlds is a matter of 'following butterflies' but challenges each young woman in complex ways and with complex characters and relationships as they navigate through the terrain of imagination.

49 Enchanted worlds are a rich terrain for game space. In the history of computer games, we see inklings of this in the original Myst (Cyan Worlds, 2003). The long-standing best-selling CD-ROM and its antecedents greatly expanded the female audience of digital entertainment. Rich in content and story, Myst transported players to imaginary worlds, and exploited the 'portal' concept described above, using books as the magic entrée into parallel universes. While the early Myst games revolve primarily around male characters, Myst Online: Uru (2007) (their multiplayer online sequel) features Yeesha, a female protagonist engaged in a conflict around the enslavement of a secret race held captive in the dungeons of an underground city. Yeesha is a kind of freedom

fighter within the imaginary world. The gameplay, as with all Myst games, revolves around complex puzzles, unraveling narrative riddles and labyrinthine plot twists, with a core game mechanic of discovery. Uru is unique among MMOGs in that it is a purely cooperative game with no points, no levels, no combat and no competition. The combination has appeal across genders and ages, but has a particularly strong draw to older gamers and women. The Myst games take this notion of enchanted worlds to a high art form, and, like some of their literary predecessors, explore the allegorical and sublime aspects of the genre, rather than focusing on conquest or territorial conflict within them. Other game worlds that follow this trajectory include the Zelda series (Nintendo, 1986), Ico (Sony, 2001), and Shadow of the Colossus (Sony, 2005), each of which present worlds filled with wonder and magic, as well as terror and danger. Notably, each also enmeshes the exploration of space with the rescue of a princess.

**Domestic Spaces**

Lived domestic space itself is also another important site of play and exploration often portrayed in children's literature. Louisa May Alcott's Little Women (Alcott, 1900) is arguably the definitive work in this genre, depicting and embodying a transitional space between girlhood and womanhood. Here the 'little women' are in-transit from one mode to another. The 'attic', like Mary's garden, serves as a kind of girls-only clubhouse in which the sisters can engage in all manner of make-believe and collective daydreaming. This unique scenario is made possible by the absence of men, whose disappearance from the domestic scene during the Civil War creates a uniquely female-centric environment in the home. Only the boy Laurie and the old man, his grandfather, speak to any male presence in this female-centric story. Even when the men return in the second half of the book, they play a secondary role, though their presence certainly represents a tectonic shift in the household. Heroine Jo evokes Woolf's image of Jane Austen, sitting in the family parlor room quietly writing her grand novels amidst the hustle and bustle of a busy household (Woolf, 1929).

Woolf considers Austen's a uniquely female voice. Indeed, Pride and Prejudice (Austen, 1813) centers on the doings of the women in the Bennet family, although their actions revolve almost entirely around the males, who, while dominating the power structures, seem to recede into the background in terms of personality and charisma. Even Darcy, the romantic focal point of the lead character, is a quiet, brooding and frankly not very interesting individual. The women in the story may come off at times as petty and materialistic, but they are certainly more dynamic than the majority of the men. The core mechanic, of the narrative, if one can call it that, is the elaborate machinations around relationships of gender and power.

Unlike literature, where domestic space has been front and center, especially in the form of the novel, it has been largely absent from gaming. Janet Murray points out the Holodeck milestone of Star Trek: The Next Generation's Captain Janeway's Lucy Davenport, an open ended narrative of domestic life that looks more like a 19th Century novel than the violent conflicts preferred by the male crew members (Murray, 1997). Domestic space has been explored by a number of women game researchers, including Mary Flanagan and Maia Engeli, both of whom have used the context of 'art' to address this oversight (Flanagan, 2003; Engeli, 2000; Engeli, 2005). As Bachelard points out, domestic space has always been and continues to be a strongly female domain; while men inhabit domestic space, it is women who create it: 'In the intimate harmony of walls and furniture, it may be said that we become conscious of a house that is built by women, since men only know how to build a house from the outside, and they know little or nothing of the "wax" of civilization' (Bachelard, 1964).

The Sims, more than any other game, answers Bachelard's question: '…how can housework be made into a creative activity?' The Sims was both radical and baffling to some for its preoccupation with the mundane, domestic life of ordinary characters. It in a sense inverted the classic game formula, stepping away from the action of the battlefield or the adventures of the fantastical. Designer Will Wright, no doubt one of the more androgynous minds in the game industry, is very conscious of the metaphors operating in his games. He describes his original 'sim' game, Sim City (Maxis, 1989), as having the obvious metaphor of 'a model railroad come to life', but the mechanic is more that of a garden (Pearce, 2002). As Bachelard (1964) so eloquently states:

> The cleverer I am at miniaturizing the world, the better I possess it.

> Miniature is an exercise that has metaphysical freshness; it allows us to be world conscious at slight risk. And how restful this exercise on a dominated world can be!

According to designer Will Wright, while The Sims can be equated with a dollhouse — a miniature household complete with miniature problems and relationships — the game mechanic is in actuality more complex, depending on individual play styles. Often, he says, players start in one mode and veer off in a different direction. For some, the game mechanic feels more like juggling, trying to balance a variety of tasks. For others, it's more of a construction activity, with a focus on building or modifying the home. Still others have adopted the game as a kind of virtual sound stage in which to create stories (Pearce, 2002). This echoes what co-author Morie called 're-active worlds', which she predicted would prevail in the future of VR (Morie, 1992).

### Narrative Spaces

Myst, Zelda, and Shadow of the Colossus all take place in spaces that convey a story. Early research into games and gender (Pearce, 1997; Laurel, 2001), found that women and girls resonate with games that have storylines and character development, and they might even stray from the game's goals to explore a secondary plotline. These are what Pearce has called 'narrative environments' and Flanagan terms 'navigable narratives'. Similar to the labyrinth described by Murray (1997), they utilize techniques of spatial storytelling to convey aspects of the narrative. Players discover, uncover and reveal the plot elements as they progress through the game. Thus rather than a terrain of contested territory, the game becomes a space imbued with story and mystery to be discovered and uncovered.

## Constructing and Cultivating Space

### Doll Houses and Gardens

The Sims also falls into the category of what one might call constructing or cultivating space. This engages the garden metaphor, as well as the notion of players creating or building the game as they play it. Players also use The Sims to create their own stories, and its skinning tools to create their own characters and objects. A more primitive precedent to this was Little Computer People (Activision, 1985), a Commodore 64 dollhouse simulation. We can see the convergence of the fantasy environment with constructivist play is the asynchronous multiplayer console game Animal Crossing (Nintendo EAD, 2002). In this game, players live, work, play and are part of a community that grows and changes from day to day, season to season. Once the initial training has taken place, players are free to do as they wish: catching insects, fishing, picking fruit, gathering nuts, collecting sea shells, digging for fossils or composing a new town song. Players can sell items they catch or find for 'bells' (the Animal Crossing currency) or, if the player has a degree of community spirit, they may choose to donate items to the Museum for the enjoyment of all. The Museum will accept one of each unique item — one of each type of fish, each type of insect, each painting, etc. While some types of fish, for example, are prevalent in the game's waters, others can only be caught at a certain time of day (or night) or at a certain season of the year. Players dedicated to creating a Museum showcasing all the varieties of fish or insects in the Animal Crossing world must work at it diligently, for no other reason than community pride, as items donated to the Museum bring no material gain to the player. This altruistic feature is particularly interesting, as it taps into a theme often seen in the children's literature referenced above. Like Little Women's Amy painting miniatures to sell at a charity event, Mary's dedication to cultivating her 'little bit of earth' and sharing it with Colin in The Secret Garden, or Oz's Dorothy's nurturing her ragtag crew, the pride of accomplishment and being part of a community that is grateful for the fruit of one's labor are key pleasures embedded in the game space and its play mechanics.

The garden concept can also be seen in the console game Okami (Clover Studio Co, 2006). Here players take the role of a wolf Goddess to bring back to life the bleak landscape of a cursed land. Throughout the game, the Goddess bonds with the denizens of the world, sows seeds of good will by giving them food and gifts, leaves a trail of flowers in her path, and brings dead things to life with a Japanese sumi-e brush, with which she can also vanquish evil spirits in battle. With its spiritual themes, deep connection to the natural world, and constructivist gameplay, Okami provides another model for alternative, regendered game space. We see these themes re-emerge throughout both Japanese game space, as in the Zelda series, and anime, such as the films of Miyazaki.

**Constructing Community Space**

64 This form of additive or constructivist gameplay represents an emerging and growing direction in video games, and one that seems to resonate with female players, both children and adults. In games like Animal Crossing and The Sims, players actually contribute to building the world. We also see a predominance of female players, particularly the supposedly elusive adult woman, in multiplayer virtual worlds such as There.com (There, Inc., 2003) and Second Life (Linden Lab, 2003), where the pleasure of play is categorically linked to creative mastery. In The Sims, the number one character 'skin' is Britney Spears, created by numerous tween fans of the performer. Environments like There.com and Second Life provide adults with numerous opportunities for creativity, merging fantasy with constructivist play. It is also clear that the game designers have explicitly targeted female players. In both virtual worlds, fashion is a prevalent form of player productivity, dominated by female players as both consumers and creators. Architecture and design contribute to the construction of the world itself, with women being among the most recognized designers in both virtual worlds. These sorts of creative engagements are particularly appealing when they take place in a social context; while women may be less motivated to work with 3D graphics software for its own sake, doing so in a context of social agency seems to provide the extra motivation needed to develop a wide range of technical and creative skills that might otherwise go untapped (Pearce, 2006).

65 **Social Spaces: Women and MMOGs**

66 One genre where we see growing participation from women, although they still represent less than 20% of the typical gaming population, is massively multiplayer online games (MMOGs) (Yee, 2003; Seay et al, 2004). T.L. Taylor, one of the few scholars writing about women's play preferences in this area, points out that a key pleasure for women is exploration. She cites a study by Schott and Horrell, who found that 'Although…girl gamers…avoided competitive play, they did find a similar engagement with exploration suggesting that "respondents were focused around the freedom that RPGs (role-playing games) gave to exploration of its virtual environment for the accumulation of symbols that possess general life enhancing qualities"' (Schott, 2000). It should be noted that while exploration is a prevalent feature of MMOGs, it usually produces a fraction of the 'experience points' of combat activities, suggesting that what is a high-value play pattern for women is of less value to game designers. Socializing, also of high value among women, is seldom scored and sometimes inadvertently penalized. Further, Taylor points out that in virtual worlds women have a unique status in that they are in no more physical danger than their male counterparts, which would not be the case for a similar situation in real life (Taylor, 2003).

67 Bearing in mind that role-playing MMOGs have many appealing factors for women, one has to wonder why they are not more popular with female players? In spite of their inclusiveness, there are other implicit and explicit demarcations that bar women from the playground, and can sometimes take the form of blatant player discrimination. Avatar representation is one: women often grudgingly accept the representations they are offered (Taylor, 2003; Pearce, 2006). Another is mechanics, which disproportionately reward combat activities; another may be the linear achievement model of success. There may also be social factors involved. Players in female avatars (whether male or female) frequently report sexual harassment. In a study by Pearce of Baby Boomer Gamers, one female Battlefield 1942 (Digital Illusions, 2002) player recalled being told 'this game is not for girls," spurring her to join an 'Older Gamers' guild, where she found she was treated with respect (Pearce, 2006a).

68 Pearce's research with players of the Myst-based MMOG Uru revealed a number of relevant findings. Fifty percent of the study subjects were female (an extremely rare ratio for any game study), and players ranged in age from the teens to the seventies. Pearce did not find any major distinction between male and female play styles, but it was clear that cooperative exploration and puzzle solving were the characteristic preferences of this community. They were less interested in competition and most were by and large disinterested in games that entailed killing or combat. One interesting quality of this group was the ways in which they "read" the space; because they were tuned to the Myst style of navigation and puzzle solving, they were always looking for secrets, clues and story threads. The architectural structures created by these players in There.com, for instance, usually included hidden rooms that required some problem solving to access (Pearce, 2006). These players saw games and virtual worlds not as realms to be conquered, nor as tactical

battlefields. Rather, they saw them as scenic, social environments where one could, as Lisbeth Klastrup puts it, 'joyfully dwell in the virtual world'.

## Virtual Reality as Regendered Play Space

### Drawing from Precedents in VR

One area where we can explore more gender-balanced approaches to constructing spatial gaming experiences is in the field of virtual reality (VR). While VR is considered by some to be passé, supplanted to a certain extent by the ubiquitous rise of screen-based gaming, the medium has a rich continuing history of artistic experimentation. Due in part to the creative potential of full sensory immersion, as well as the research and artistic frameworks in which it is developed, it is not surprising that a significant number of early influential virtual reality projects were created by women. Unfettered by commercial conventions, women have been able to freely explore and construct a wide range of digital spaces that, while seldom 'games', both exemplify and inspire the imaginative potential of game space. As Marie-Laure Ryan has pointed out, 'The virtual is an inexhaustible resource' (Ryan, 2001).

What makes these places — these inhabitable digital spheres in full three dimensions — different than the game spaces discussed thus far? Hélène Cixous and other poststructuralist feminists studied how gender was created and/or destabilized within the structure of the medium, with particular focus on writing (Cixous, 1981). If we expand these ideas to the realm of Virtual Environments, we start to see interesting patterns that begin to stabilize a feminist perspective of creation. While hundreds of Virtual Environments have been built since VR's heyday in the early 1990s, most of those that emerged from male-dominated laboratories were rationally built architectural spaces. In contrast, those made by women (primarily women artists who have gained access to the equipment) interpret the medium from completely different viewpoints, and provide some insights into potential future directions for regendering game space. In this section, we describe selected works that exemplify these differences.

### Narrative/Performative Space

Co-author Pearce developed a VR theme park experience that placed players in teams for an underwater adventure to save the Loch Ness Monster's eggs (Pearce, 1994). This attraction was specifically designed to appeal to diverse ages and particularly to women, based on the theme parks industry's model of targeting diverse audiences and marketing to female heads of households. Combining a scenic underwater fantasy environment, team-based cooperative and competitive play, a treasure hunt/exploratory game mechanic, and prehistoric monsters, resulted in a game that appealed across a broad spectrum of player types.

Figure 1. Virtual Adventures, designed by Celia Pearce for Iwerks Entertainment and Evans & Sutherland in 1993.

Another key example is Brenda Laurel and Rachel Strickland's PLACEHOLDER (Laurel et al, 1994), which sought to use digital space as a means to inscribe landscape with a sense of spirituality and narrative. Drawing from local landscapes and native lore around the around the Banff Centre in Alberta, Canada (where the piece was developed), they placed players in the roles of animals who could explore landscapes, listen to and leave their own stories behind. A highly evocative piece focusing on embodiment and relationship to nature, PLACEHOLDER aimed to create a radically different experience of virtual reality than we see in some of the games described earlier. Laurel was also building ideas presented in her influential book, Computers as Theater (Laurel, 1991), in which she introduces the idea of computers creating a ritual and performative space not unlike the traditional role of theater.

### Emotional Space

Co-author Morie has worked primarily with the emotional space afforded by virtual environments (Morie et al, 2005). Her VR work Virtopia created with Mike Goslin in the early 1990s was a series of diverse experiences to which a participant traveled by plunging into brightly colored pools at oases sprinkled about a vast virtual desert (Morie and Goslin, 1992-1994). Each world provided a space that evoked a particular emotion: for example, angst in the case of 'Fang City' and nostalgia in 'The Conversation Room'. Her most recent work, The Memory Stairs (Morie, 2004-present) explores the psychic space of memories and the deeply hidden emotions associated with them.

Figure 2. Laurel and Strickland's Placeholder allowed players to add voice annotations to a virtual world.

(Images used with permission from the artists.)

Figure 3. Jacquelyn Ford Morie's Memory Stairs

(Images used with permission from the artist.)

Rita Addison's Detour: Brain Deconstruction Ahead (1995a) is an example of 'empathic VR'. In this installation, created with Marcus Thieubaux, David Zeltzer, and Dave Swoboda at the Electronic Visualization Lab at the University of Illinois Chicago, photographer Addison documented the sensory damage she sustained as a result of a brain injury. The piece was designed to convey an emotional experience that Addison found impossible to describe with words (1995). She subsequently created similar works to help family members of stroke victims better understand what their loved ones were experiencing.

Figure 4. Rita Addison's CAVE-based Detour: Brain Deconstruction Ahead was hailed as the first 'empathic' VR.

(Images used with permission from the artist.)

Char Davies' Osmose (1995) is a unique exploration of personal psychic and emotional space. Davies sought to shift the focus from action and agency to presence and immersion, or what she terms "immersence." "Immersents" were placed into a sublime relationship with an abstract environment that blended naturalistic forms with highly technological representation and textual poetry. There was no overt goal and using a head-mounted display and sensors, players navigated in a fashion modeled after SCUBA diving, inhaling to rise, exhaling to sink and leaning from side to side to navigate. This is a radically different relationship to space than games such as Doom, which are focused on tactical agency and strategic exploitation of spatial constraints. Visitors to this environment described falling into a meditative state (McRobert, 2006).

Figure 5. Char Davies's Osmose used a SCUBA diving metaphor as the interface to navigate a sublime spiritual space. (Images used with permission.)

**Procedural Space**

The work of Artificial Life (A-Life) artists Christa Sommerer and Laurent Mignonneau prefigured some of what we have begun to see with recent more "procedurally" oriented approaches to space. The Nintendo DS Game Electroplankton (Nintendo, 2006), for instance, has some resemblance to their A-Volve (Sommerer, 1994), a VR installation in which players created their own creatures and encouraged them interact in a pool of actual water. Sommerer and Mignonneau have also created an installation where various plants sprout where you stand, and another in which moths are made to follow a player-controlled flashlight. These spaces follow the 'garden' model described earlier, where the player is engaged in the cultivation of natural spaces and creatures. Other examples include Rebecca Allen's Bush Soul Nos. 1-3 (Allen, 1997-1999), in which players enter into dynamic relationships with virtual creatures, and Jane Prophet and Gordon Selley's TechnoSphere (Prophet and Selley, 1995). We anticipate that we will see the emergence of this type of space with the upcoming game Spore (Maxis, 2000), in which players create and nurture their own evolving organisms in a 3D world.

## Conclusion

The construction of space in the mainstream videogame industry has evolved primarily around male models of space and agency. In this paper, we identify a direction for a new poetics of game space that is more inclusionary and gender balanced, and advocate, after Woolf, for an androgynous mind of game design. Drawing from classic literature, as well as contemporary practices of VR art, we have provided illustrations of the rich diversity of inclusionary game space possibilities. Although they represent only a handful of examples, these experiments in alternative space all possess a quality decidedly lacking in many video games: a sense of wonder, a sense of the sublime, a sense of awe. Players seek to experience a sense of wonder within a magical world, a key pleasure of the literary forms described above. We encourage the exploration of these and other unique spaces in game design and game culture, towards more egalitarian and expanded domains for play where everyone can feel included, inspired, enlivened and entertained.

## Authors' Biographies

Jacquelyn Ford Morie is a Senior Researcher at the university of Southern California's Institute for Creative Technologies (https://www.ict.usc.edu). Her research includes fully immersive multi-sensory virtual environments as well as new mobile

technologies used in the service of training and education. She is a member and co-founder of the game collective Ludica and is a visiting lecturer in game design at the Unversity of California, Los Angeles. Morie holds masters degrees in both Fine Arts and Computer Science, and was awarded her PhD in 2007 for her Immersive Environment research from

the SMARTLab at the University of East London.

Links: https://www.ict.usc.edu/~Emorie, https://www.ict.usc.edu/, https://www.ludica.org.uk/

Tracy Fullerton, M.F.A., is an Assistant Professor in the Interactive Media Division of the USC School of Cinematic Arts and co-Director of the Electronic Arts Game Innovation Lab where she does design research in new genres of gameplay. Prior to joining the USC faculty, she was a professional game designer for fifteen years; her textbook on the design process Game Design Workshop: A Playcentric Approach to Creating Innovative Games is in use at game programs worldwide. Tracy's recent credits include faculty advisor for the award-winning student games Cloud and flOw and game designer for The Night Journey, a unique game/art project with media artist Bill Viola.

Links: https://www.tracyfullerton.com/, https://interactive.usc.edu, https://www.ludica.org.uk/

Celia Pearce, Ph.D., is an Assistant Professor of Digital Media in the School of Literature, Communication and Culture at Georgia Tech, where she also directs the Experimental Game Lab and the Emergent Game Group. Previously she helped launch gaming and media arts initiatives at University of California Irvine and University of Southern California. Prior to entering academia, she was a designer interactive attractions, exhibitions and games. Her game designs include the award-winning attraction Virtual Adventures (for Iwerks and Evans & Sutherland) and the Purple Moon Friendship Adventure Cards for Girls. She is has authored numerous papers and book chapters, as well as The Interactive

Book (Macmillan 1997) and Communities of Play: Emergent Cultures in Online Games and Virtual Worlds (scheduled for publication by MIT in 2009.) She is also Festival Chair for IndieCade and co-founder of Ludica, a women's game collective. Links: https://www.cpandfriends.com, https://egl.gatech.edu, https://egg.lcc.gatech.edu, https://www.ludica.org.uk

## Notes

[1] A number of studies, including the IGDA report on industry demographics in the U.S. (https://www.igda.org/diversity/report.php) and Li Haines' 2004 report Why are there so few women in games? for Manchester: Media Training Northwest.

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[2] The schism between 'real' games and games played primarily by women can be seen in the fact that the premier online game database Moby Games only accepts entries for games published on disk or available as full downloadable packages. No web-only games, such as those created in Flash or Shockwave, are included in their knowledge-base. Moby also has no reference to any of the titles from Purple Moon.

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[3] That said, there are certain contexts in which women and girls can and do derive pleasure from competing on equal terms in male space. The Frag Dolls, for instance, a professional women's gaming team initiated by developer Ubisoft, are champions at games such as Splinter Cell (2002). And Grrlgamer.com is a web site devoted to female players where female-targeted reviews weigh equally between more 'hardcore' (read: male-centered) games and those that might traditionally be thought of us more female-friendly, such as casual game Diner Dash or Pet Pals: Animal Doctor.

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[4] American McGee's Alice (Rogue Entertainment, 2000) is a re-imagining of the classic story using the mechanics of a first-person shooter game. In this cynical version of the adventure, Alice is traumatized and institutionalized before returning to a much-changed Wonderland where she battles through gnome-ridden tunnels and boojum-guarded strongholds armed with a rusty

'vorpal blade' (from the original Jabberwocky) and razor-sharp playing cards. In this more male-oriented game design, the imaginative word play and puzzling incongruity of the original 'game world' of Wonderland is replaced with direct conflict and dangerous environments.

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