Virtual Curriculum: Digital Games as Technologies of Aesthetic Experience and Potential Spaces

CHLOË BRUSHWOOD ROSE
York University

In this paper, I am interested in the following question: What can we learn in the strange spaces of digital games? This is not the same as asking what digital games can teach us or what we learn *from* digital games. Rather, I am interested in thinking about what it is we learn as we play digital games. This question of learning has less to do with the content of the game—although that is an important question too—and more to do with what the experience of the game allows us to think or not think and to be or not be. What do the place and time of the digital game offer us?

Educational research on digital games (of which there is still very little) and, more generally, on media education and educational technology is often preoccupied with questions of 'media effects'. What do media do to us? How do they shape our children's behaviour? Or, as I phrased it above, what do media teach us? This approach is at the root of concerns about whether or not video game content encourages violent behaviour and fears that the frequent use of digital media will somehow negate the benefits of literate media, such as reading, writing, and comprehension. Studies of media effects are primarily concerned with outcomes and media effects research lends itself nicely to an emphasis on outcome-oriented curriculum by asking, how can this new media help us achieve or avoid a certain set of outcomes?

Digital simulations and games along with other uses of digital media, such as net-art and hypertext fiction, are not easily understood by researchers whose purpose is to examine media effects, and neither are they easily ad-

Journal of the Canadian Association for Curriculum Studies
Volume 4 Number 1 Fall 2006

opted by educators who must meet the demands of a very outcome-oriented curriculum. One might expect computer games in particular to provide a clearly demarcated goal or outcome. However, unlike a board game, which players perceive as a linear journey toward an end goal, digital games are immersive and exploratory and in their structure emphasize an experience of the process or journey rather than the achievement of a single outcome.

Through the aesthetics of immersion and interactivity digital games offer an experience through which players must learn a great deal but as a necessity of self-directed participation rather then a pre-determined goal. While classroom-instruction must often prepare students for experiences, such as exams, in which they cannot 'learn as they go', digital games can offer students the experience, with all of its dramatic pleasures, of learning while on a journey primarily by taking risks, making mistakes, and problem-solving. The experience of immersion, the "willing suspension of disbelief and a conscious and voluntary acceptance of the particular conditions of the virtual environment … paradoxically, gives its players in return unrestricted access to possibilities for full participation" (de Castell & Jenson, 2003).

The tension between the outcome-oriented approach demanded by the resurgence of standardized curricula and testing, and the experiential possibilities offered by the structures of digital games becomes most apparent when one looks at the nature of 'educational' computer games (or indeed the fact that educational games must distinguish themselves as such). While a few educational games can boast some school-based success, none has successfully captured the popular cultural imagination in the way commercial games do. Suzanne de Castell and Jennifer Jenson (2003) argue that this lack of success may be due to the ways in which "the importation of traditional classroom rules, roles and relations ends up subverting and undermining the…cultural and imaginative possibilities of gaming for education" (p. 11).

For example, because they are developed in order to achieve a predetermined set of learning outcomes, educational games have a lot of what Brenda Laurel (1993) calls "gratuitous incidents"; that is, the game's puzzles or tasks have little or nothing to do with the narrative they are imbedded in. The narrative or dramatic action, rather than being a unifying experiential structure is reduced "in educational software design…[to] extrinsic, decorative and primarily motivational elements" (de Castell & Jenson 2003, p. 14). This lack of dramatic coherence undermines the player's experience of immersion. As de Castell and Jenson (2003) suggest,

> immersion, paradigmatically an experience of fluidity, of limitless navigability and full participation, is antithetical to the kinds of rigid structures, boundaries and 'no-go zones' that define access to and engagement with schools and schooled knowledge. (p. 14)

Do these tensions make digital media and education incompatible? Some theorists of media education and popular culture argue that when schools co-opt the cultural experiences that students value—sometimes referred to as 'kid culture' (McDonnell, 1994)—those experiences are robbed of the imaginative pleasures they do offer. While media education theorists argue for a broader cultural studies approach to popular culture in the classroom, they also warn against its limitations and worry about the erasure of student pleasure. Carmen Luke (1997) writes:

> the relocation of children's and adolescents' 'leisure/pleasure' texts into the classroom for formal intellectual scrutiny, potentially subverts and belittles whatever pleasure kids derive from such texts and the social relations within which such texts are consumed … teachers unwittingly position students to reveal and possibly disavow their 'secret pleasures.' (pp. 42–43)

While I share similar concerns about the way in which classroom structures may potentially undermine the autonomy of students and popular media as a site of resistance, it is still true that media popular with students, such as digital games, remain a primary site of communication and learning within the dominant culture of schools and society at large. If we view the tensions between digital media and schooling as productive rather than irreconcilable, might we draw other conclusions about their potential relationship, as something more than simply incompatible? What can we learn about learning from digital games as structures of experience?

In this paper, I suggest that what we can learn in playing digital games has to do with the significance of psychic life for theories of learning. Digital games and other virtual media are characterized by tensions between technique and experience, between the real and the imaginary, and between the external world and inner reality. These tensions produce a context in which students may learn how to learn, not as a consequence of the game's content, but as a consequence of its aesthetic qualities and the nature of aesthetic experience. I elucidate this argument by first offering an exploration of the aesthetic experience of digital gaming and, second, by using theories of object relations to develop a theory of digital games as intermediate areas of experience in which students can do the psychic work required in order to learn how to learn.

The aesthetic experience of virtual spaces

The tension between the real and the imaginary—feeling really there and yet being free of real risk—is one quality that constitutes the aesthetic structure of digital games and is often referred to in popular discourse in terms of the 'virtual'. As an adjective, "*virtual* describes things—worlds, phenomena, etc.—that look and feel like reality but lack the traditional

physical substance" (Laurel, 1993, p. 8). In this sense, the important thing is not that a virtual object or environment has a real-world equivalent, but that 'the persuasiveness of its representation allows us to respond to it *as if* it were real' (p. 8).

I want to explore the aesthetic experience of virtuality by describing my own experience playing *realMYST* (Miller and Miller, 2000). *realMYST* is a three dimensional version, with an updated interface, of the game originally called *Myst*, which is widely considered to be the archetypal, if not the first, graphical adventure game. *Myst* is the best-selling personal computer game of all time and introduced an entire generation to the idea of digital gaming. Besides its incredible popularity and commercial success, as a graphical adventure game, *Myst* and the more recent *realMYST* offer a quintessentially immersive experience that relies on the experience of virtuality or tension between the real and imaginary as a defining feature of its aesthetic appeal.

The authors of *realMYST* describe their intent to "build from scratch a world that would take advantage of everything the vast new medium had to offer" (Cyan, 2000, p. 11). The player is meant to experience *realMYST* not primarily as a series of puzzles, but as immersion in a virtual world where she must adapt and explore rather than being told what to do. Indeed, a human figure literally falls into the abyss of an unknown world in the opening sequence of the game leaving the "Myst book," which lands amid darkness. As one reviewer of the game points out, *Myst* may offer the most open-ended beginning in the history of adventure gaming:

> Note how very carefully this (bewildering) scenario draws the player in. You know nothing at this point—but both the interface and the situation leave you with no question as to how to begin. You see a closed book; you open it. You have a mouse and a cursor; you click on the only object on the screen. The world gets even stranger then, but you are already part of it. You have taken the step in. You are complicit in the story…. [Myst] doesn't lecture you, it doesn't condescend, and it doesn't throw a single unnecessary stumblestone between you and the game world. One unashamed impossible riddle, and you are there. Neck-deep. (Plotkin, 2002, n.p.)

The primary goal, if you can call it that, of a game like *realMYST* seems to be the experience of a subjective journey, with all of its pleasures and difficulties.

My own experience of the game began with the sort of bewilderment one might experience landing for the first time in a new place. I was not sure what to do or where to go. The immersive quality of *realMYST* demands that the player 'walk around' and explore an unknown world. The authors have written the following under a heading in the manual that reads 'If You Get Stuck':

> Don't worry! If you're not sure what to do next, clicking everywhere won't help. Think about what you already know, ask yourself what you need to know, collect your thoughts and piece them together. Try and relate the items you've seen to the places you've been. Reexamine the information you've collected, pay close attention to everything you see, and don't forget anything. But most importantly—*think of what you would do if you were actually there.* (p. 9, emphasis added)

Unlike the emotionally engaging adrenalin rush of a 'fast twitch' game (typically of the action genre), *realMYST* requires a self-motivated curiosity and unfolds at a slow pace as the player begins to observe the game's patterns and rhythms. I found that I was unable to play the game unless I was able to immerse myself in the world of *realMYST* almost in an embodied way. For example, having solved a series of puzzles on 'Myst Island' and made my way into another stage of the game called the 'Selenic Age', I began to explore my new digital environment with renewed confidence. I was becoming familiar with the logic of the world of *realMYST*. I was better at recognizing the patterns around me and less cautious about exploring the digital environment. My initial fears that something bad might happen to me in this unknown place had dissipated. A kind of general suspense or fear of the unknown did, however, remain.

I came across a tunnel descending into the earth and climbed a ladder down into it. Seeing nothing of interest when I reached the bottom, I ascended and continued to explore. Only later, when I became stuck trying to solve the problems posed by this particular game stage, did it occur to me that I had missed something in the tunnel. I had missed an important passageway at the base of the tunnel because I had not turned around once I descended. In that moment, I had assumed the flatness of the screen and the adequacy of seeing only what was right in front of me. I had forgotten that I was embodied within the game and able to turn around. I had expected the game to present me with all of the available options.

As I reflected back on my initial exploration of the tunnel, I remembered that (in the game) the sky was dark when I descended the first time. In *realMYST*, the sky lightens and darkens as with the passage of time over day and night, although this happens much more quickly and frequently than it would over a twenty-four hour day. The darkness of the digital environment at that moment had elevated my sense of anxiety—I did not want to be in a dark tunnel when it was already dark outside. I had rushed to get out of the tunnel as a result. While I originally blamed my mistake on my inability to experience the game world as virtually real, my recollection of the event suggests that it was precisely my immersion in the virtual—caught as I was in that place between the real and the imaginary—that produced my anxiety and caused me to rush and leave the tunnel not fully explored.

What are the aesthetic qualities of this kind of virtual experience? How does this experience of the virtual contribute to experiences of learning? Theories of the aesthetic experience of surrender offer us one way of understanding the place between the real and the imaginary characterized by the virtual.

In the past, critics and aesthetic theorists might have described what we now call virtual as pretend. Though they do not describe exactly the same experience, the idea of the virtual and the idea of pretend do both incorporate some notion of surrender to the imaginary or suspension of disbelief. The notion of a 'willing suspension of disbelief' is a concept introduced by critic and poet Samuel Taylor Coleridge in the early nineteenth century. Unlike his contemporaries, who worried (as many do now) about the susceptibility of audiences to the power of popular media, "Coleridge believed that any [member of the audience] could see that a play on stage was not real.… [He also] noticed that, in order to enjoy a play, we must temporarily suspend (or attenuate) our knowledge that it is 'pretend'" (Laurel, 1993, p. 113)—we must ourselves pretend that it is real. This willing suspension of disbelief is a sort of surrender to the artwork or medium, a letting go of our intellectual and practical knowledge of the formal reality of an experience.

Aesthetic theorist Munroe Beardsley (1982) suggests that there are two aspects of this experience of surrender, the first being a kind of object directedness. In order for an experience to be characterized as aesthetic, Beardsley (1982) argues that we must to some degree willingly accept 'the object's control over our mental states' and 'choose to continue the experience because we must actually see and feel the working out of what is there' (pp. 289-290). Connected to this object directedness, a second aspect of the experience of surrender is what Beardsley calls "felt freedom" which he describes as "a sense of release" or "a sudden dropping away of thoughts and feelings that were problematic" (p. 290).

This experience of surrender, which characterizes virtuality, is described by many adult players of digital games as one of their key aesthetic pleasures. A number of the adult gamers that Sherry Turkle (1984) has interviewed describe game play as allowing them to surrender to an altered state of mind into which daily stresses and cares cannot intrude. In one case, a gamer named Marty had replaced his daily practice of transcendental meditation with video games. Central to the pleasure of the game is our surrender to its structure: "The rhythm of the game belongs to the machine, the program decides" (p. 84). Turkle (1984) suggests that "video games allow Marty to feel swept away and in control, to have complete power and yet lose himself in something outside. The games combine a feeling of omnipotence and possession—they are a place for manipulation and surrender" (p. 85).

Like Beardsley, Dewey (1958) also identifies surrender as central to the character of aesthetic experience; however, he insists that this surrender

is also an activity. "Adequate yielding of the self', he writes, "is possible only through a controlled activity that may well be intense… Perception is an act of the going-out of energy in order to receive, not a withholding of energy" (p. 53). More than a 'suspension of disbelief', what Beardsley and Dewey describe is both an investment in and surrender to an object outside of our selves.

Coleridge and others might argue that this experience of surrender depends on our ability to 'forget' the form or technology of the representation, where "any awareness of the system as a distinct, 'real' entity would explode the mimetic illusion, just as a clear view of the stage manager calling cues would disrupt the 'willing suspension of disbelief' for the audience of a traditional play" (Laurel, 1993, p. 116). However, the surrender of aesthetic experience should not be confused with the notion of pretend or surrendering to fantasy. While aesthetic experience may involve the suspension of disbelief required in pretending to enter another world, the concept of surrender here, and indeed the virtual, is characterized more as the giving of oneself to the direction of a particular structure rather than as believing in a fiction as reality.

Laurel tells a story about taking her five-year-old daughter on a ride at Disneyland that combines flight simulator technology with *Star Wars* content. As they are on the ride, Laurel writes of her daughter, "she turned to me in mid-shriek and shouted, 'If this was real, I'd be scared!'" (Laurel, 1993, p.120). Her surrender to the virtual offered Laurel's daughter the opportunity for emotional engagement without 'real' consequences. Laurel (1993) observes, "the distinguishing characteristic of the emotions we feel in a representational context is that there is *no threat of pain or harm in the real world*" [emphasis in original] (p. 114). What this observation suggests about aesthetic experience is that our surrender to the virtual is only possible accompanied by the simultaneous awareness of its limits.

What does this surrender offer as a structure of experience? What kinds of experiences are possible in this tension between the real and the imaginary generated by digital games? What does this experience have to do with learning and curriculum?

The experience of virtuality, whether in the context of a digital game or some other aesthetic object, might seem unintelligible in an educational context concerned with effects and outcomes. Indeed, for many educators working in a climate of curricular standardization it may even be difficult to justify the educational value of the more 'traditional' aesthetic experiences offered by art galleries and concert halls, let alone the virtual experiences of digital games and other new media. However, in the final section of this paper I want to suggest that the virtual experiences engendered by digital gaming may be crucial to understanding the complexities of curriculum

and the process of learning how to learn. Theories of object relations aesthetics help us to interpret these virtual experiences by reminding us that the subject's use of the object may not always meet external expectations and demands.

What if learning were conceptualized as a highly subjective and idiosyncratic journey of the student as she continually renegotiates her object relations in the world? How might the object relations of digital games elucidate the relations of curriculum?

Object relations as relations of learning

To address these questions, we might consider the importance of playing, in this case as the site of affect and virtual experience, and its significance for learning. As educators, we are not always comfortable with the idea of playing, especially when it seems to happen at the expenses of our rules and requests in the classroom. However, even when we instigate 'playing games' among our students, we often remain wary of their unruliness. Laurel (1993) notes that, among mathematics teachers, when a game was effective in the classroom, "it was reclassified… as a "simulation", thus circumventing the categorical problem with games" (p. 96). Similarly, many educational researchers, including those who advocate for the benefits of computer gaming, make a theoretical distinction between play and 'serious play' (Rieber, Smith, and Noah, 1998; de Castell and Jenson, 2003). Why is this distinction necessary if not to satisfy an educational bias that positions learning as antithetical to play?

In contrast, for object relations theorists like Donald Winnicott, the place and time of playing are crucial for the child's negotiation of the relationship between inner life and external reality, which forms the basis of the child's capacity to learn. As a space between the coercion of the external world and the demands of inner instinctual life, playing functions as an intermediate area of experience, which is essential in both initiating and maintaining our capacity to forge a relationship with the world. In this way, playing can be understood as both the site of learning and that which makes learning possible.

Object relations theories suggest that the dynamics that characterize the negotiation of a relationship between inner life and external reality continue throughout our lives. We turn to games and art and even intellectual pursuits as potential spaces, as holding environments, as sites of creative illusion, as intermediate areas of experience, which allow us to remake our relation to external reality, interminably. Where the psychical subject of object relations theory is concerned, there is no predictable progression toward integration or wholeness. Instead, there are *moments* of integration as we experience the

illusionment, disillusionment, and re-illusionment that characterize creative living and allow us to recognize ourselves as subjects in relation to others.

When describing the intermediate area of experience for older children, adolescents, and adults, Winnicott (1989) uses the term 'playing,' and it is important to understand that his idea of 'playing' is quite different from our common sense notions of playing at a game. While our common sense understanding often positions playing in opposition to working, Winnicott (1989) opposes playing to compliance, whether it is the behavioural compliance demanded by the external world or the instinctual compulsion that characterizes inner life. For Winnicott (1989), playing is the site of imagination and creativity, the wellspring of all work; playing is an intermediate experience and a basic form of living; "playing is doing" (p. 41). What is important, he argues, is the preoccupation and focus that characterizes the experience of playing, not unlike the object-directedness or active surrender that Beardsley and Dewey describe.

The content of play is not as important as discovering that "playing has a place and a time" (Winnicott, 1989, pp. 40-41). The place and time of playing is a potential space between the external world and internal reality in which the relation between those two spheres can be safely negotiated. Here we might recall Laurel's (1993) insistence that what characterizes the intermediate space to which one surrenders in aesthetic experience is the absence of real threat or harm. Further to this, object relations theory suggests that the potential space of aesthetic experience or playing can offer a stable 'holding environment' for the child's fantasies, fears, and hostile impulses.

In their study of danger and pleasure in relation to video games, Walkerdine, Thomas, and Studdert (2000) observe this strange moment involving two girls playing a computer game called Crash Bandicoot 3:

> What was different and interesting about this part of the game is that it involved a dinosaur-like monster who confronted the players, coming towards them as a monster rather than running away from them and therefore being under their control as is usual. The girls were sitting in front of the console swinging their legs and alternately screaming and giggling as the monster came towards them…. The girls were not very good at the game, but this hardly seemed to bother them. In fact, their defeat by the monster seemed to be pleasurable and was accompanied by squeals of 'ooh, he's got us!' (p. 5)

Instead of continuing to follow the trajectory of the game that is given in advance by its design, the two girls proceed to replay the part of the game where the monster comes toward them as if to attack, over and over again.

The girls' intense pleasure and complicated affective experience in relation to the monster seems to be a direct result of the virtual structure of the digital game, which is both real and unreal, and exists somewhere between

their internal worlds and external realities. This structure allows the girls a context in which to negotiate the complex relations of both *having and losing control*. Walkerdine et al. (2000) observe that while the girls experience danger and fear in relation to the monster who comes at them, at the same time 'it is the girls who could control the monster coming towards them and it is they who could impede and defeat its progress' (p. 6). For these young girls, the virtuality of the digital medium allows it to function as an intermediate area of experience between internal life and the external world, in which difficult relations of power and control can continue to be explored and also relieved.

As a holding environment in which the object (initially the mother and later the external world) can both withstand and survive the child's aggression, the game provides a potential space that facilitates the child's negotiation of self-object differentiation and adaptation to external reality. In order to accept the difference between inner life and external reality, as children and throughout our lives, we require 'holding environments' that allow both the creative illusion of object-relating *and* the necessary destruction of object-usage, which places the object outside of the subject's omnipotent control. Through object-usage the subject is able to recognize the object as separate from her self and as an entity in its own right. Pitt describes object-usage this way:

> A more fulsome practice of self-fashioning requires a move from creating objects to finding them already there…This shift, which marks the beginning of object-usage, is characterized, on the one hand, by a recognition of the illusoriness of the qualities one has invested in the object (which is not the same thing as abandoning it altogether) and, on the other hand, by a recognition of the nature and behaviour of the object that belongs to itself. (Pitt, 2003, p. 122)

The subject perceives this shift, first of all, as a destruction of the object as it has previously existed. Second, the object's perceived survival of this destruction allows the subject, as Pitt (2003) writes, 'to begin to tolerate and even enjoy living in a world where words do not mean what you want them to and where other people exist whose desires oppose your own' (p. 123).

It is in this negotiation of subject and object, and ultimately in our acceptance of the external world as separate from us, that we develop the capacity to learn. Digital games and other virtual spaces can function as holding environments for these complex negotiations. In relation to such media—which provide, in Marion Milner's (1993) words, "a framed space and time and a pliable medium" (p. 31)—the subject is able and, indeed, encouraged to engage in creative illusion and object-usage. Like children's picture books (Spitz, 1993) and other visual arts (Milner, 1993), digital media, rather than emphasizing the premature adaptation to external reality, support us in the work of symbolization through the acceptance and

exploration of the interpenetration of the realms of fantasy and reality. As such, the virtual nature of digital games makes them uniquely suited to the negotiations through which we can learn how to learn.

For educators, this use of digital media can appear startling and strange. As in the example observed by Walkerdine et al. (2000), describing the pedagogical significance of digital media as technologies of experience and potential spaces requires different theories of the relationship between subject and object and between cognition and affect in learning.

The idea that the subject's epistemological experience is primarily cognitive returns us to a theory of learning as determinable and progressive: if the subject is a cognitive being then she progresses developmentally toward a permanent state of wholeness. Once we understand the subject's developmental sequence, then we can predict it and determine it, design it and program it. For this reason, cognitive models of the subject are particularly popular among educators who are interested in developing curricular experiences that are outcome-oriented and standardized.

Object relations theory offers an implicit critique of this set of assumptions by insisting that our experiences are in large part subjective, idiosyncratic, and fundamentally affective rather than cognitive. Furthermore, the work of Winnicott reminds us that the dynamics of learning will always be to some degree unconscious and therefore unknowable. We will never entirely know how to do learning and yet it will continue to get done. In this way, attempts to predict the learning of our students are to an extent futile. Our students will learn in spite of us, when we think we don't want them to. And they will be learning how to learn even when we think they aren't.

Winnicott (1986) illustrates the idiosyncrasy of learning and offers an implicit critique of cognitive theories when he describes the limits of the split-off intellect. He writes, "it is the human being who, by an accumulation of experiences duly assimilated, may achieve wisdom. The intellect only knows how to talk about wisdom" (Winnicott 1986, p. 60). Perhaps with a certain foresight about the kind of metaphors that would become popular among cognitive theorists, Winnicott himself likens the split-off intellect to a computer. In a talk given to mathematics teachers, Winnicott reminds us that the intellect alone cannot learn. Indeed, the student who can manipulate the most complex mathematical concepts and yet comes undone when faced with mundane and practical matters is a perfect example of this. Conversely, Winnicott insists that even children who do not seem able to master the most rudimentary mathematical concepts may still be learning mathematics.

For Winnicott (1986), learning mathematics may have very little to do with mathematics itself. Indeed, Winnicott seems to suggest that learning in general has far more to do with the child's psychical readiness—which is comprised of cognitive and affective as well as conscious and unconscious

concerns—than her intellectual prowess. Put another way, non-curricular experiences, such as playing digital games or in Winnicott's example the care of a mouse, may provide the framework for the child to learn or to ready herself for learning in ways that we cannot always witness or assess. Object relations theory further suggests that the inaccessibility or privacy of these experiences may be crucial to the student's learning.

Pitt (2003) identifies the capacity to be alone—whether of the child, the analysand, or the student—as one use of the object and thus one dynamic of learning, 'the movement between creation and discovery'. Referring to the psychoanalytic session, Pitt describes the freedom to be silent and to avoid intrusion this way:

> Rather than understanding silences in the analytic encounter as the frustrating symptoms of resistance on the analysand's part to forge on with the work of analysis, Winnicott observed that silence was frequently the evidence of the analysand's wish and capacity to be alone—with the analyst present…the analyst [must] be able to withstand uncertainty about the meaning of a silent period and to adjust to a correction made by the analysand. (p. 121)

Pitt suggests that this dynamic, like the other dynamics that characterize the subject's use of the object, manifests itself in relations of learning. Like Winnicott, Pitt suggests that the work of the teacher and of education must include the capacity to tolerate not knowing how the student experiences the teacher's intrusions and the ability to withstand the uncertainty of learning.

Conclusion

In the context of Winnicott's work and a theory of object relations aesthetics we can see that, while the external world of the school can demand that we master certain behavioural tasks, the intermediate area of experience is where we learn how to learn, where we become able to live creatively, where we can feel and sense without the demand to think, where we work out the dynamics that become our way of relating to the external world and ourselves. Thus, while 'playing' through digital media may not provide an experience that easily lends itself to the transmission of educational standards and outcomes, it may in fact offer students a space in which to learn how to learn and to think, or as Maxine Greene (1995) might suggest, to engage in learning as a re-ordering of the self.

Greene (1995) describes learning as a "release of imagination" and a "practice of freedom" and I often wonder what she means. Greene writes that to place imagination at the core of understanding requires that we "do away with habitual separations of the subjective from the objective, the inside from the outside, appearances from reality" (p. 140). Through my own study of digital media I have found myself beginning to wonder if the

practice of freedom Greene refers to might be something like Winnicott's freedom to play. Winnicott (1989) opposes play to compliance—whether the behavioural compliance of the external world or the instinctual compulsion of inner life. Like Winnicott, I believe Greene suggests that one must play in order to learn, and that playing requires a freedom from *the demand to learn* that is so keenly felt in classrooms.

As virtual media, which inherently do away with the separations Greene identifies—between the inside and the outside—digital games can offer sites of creative illusion and potential spaces for the kind of play or practice of freedom that can help us learn how to learn. The exploration of this pedagogical possibility requires that we begin to consider something other than the *effects* of these digital media on our students. How can education tolerate the student's use of digital games?

Perhaps most importantly, the presence of digital media in educational contexts suggests the possibility of new questions that aim to explore curriculum not primarily in terms of its content but 'as a method for observing how we experience ourselves in the world' (Pitt, 2003, p. 89). The virtual aesthetic of the digital game offers a new context for curriculum theorists to explore questions not only about media effects or textual content or representation but about the human dilemma of learning and the elusive necessity of potential spaces.

References

Beardsley, M.C. (1982). *The aesthetic point of view: Selected essays*. M. J. Wreen and D. M. Callen. (Eds.) Ithaca: Cornell University Press.

Cyan, Inc. (2000). *Real Myst User Manual*. Hiawatha, IA: Mattel Interactive.

de Castell, S., & Jenson, J. (2003). Serious play: Learning gaming culture. *Journal of Curriculum Studies, 35* (6), pp. 649-665.

Dewey, J. (1958). *Art as experience.* New York: Capricorn Books. Original edition, 1934.

Greene, M. (1995). *Releasing the imagination: Essays on education, the arts, and social change*. San Francisco: Jossey-Bass Publishers.

Laurel, B. (1993). *Computers as theatre*. Reading, MA: Addison-Wesley Publishing Company.

Luke, C. (1997). Media literacy and cultural studies. In *Constructing critical literacies: Teaching and learning textual practice*, S. Muspratt, A. Luke and P. Freebody (Eds.). Cresskill, NJ: Hampton Press.

McDonnell, K. (1994). *Kid culture: Children and adults and popular culture*. Toronto: Second Story Press.

Miller, Ra., and Miller, Ro. (2000). *Real Myst.* Hiawatha, IA: Mattel Interactive and Cyan, Inc.

Milner, M. (1993). The role of illusion in symbol formation. In *Transitional Objects and Potential Spaces: Literary uses of D.W. Winnicott*. P. L. Rudnytsky (Ed.) New

York: Columbia University Press.
Pitt, A.J. (2003). *The play of the personal: Psychoanalytic narratives of feminist education*. New York: Peter Lang.
Plotkin, A. (2002). "Review: RealMyst." Available at http://www.eblong.com/zarf/gamerev/.
Rieber, L.P., Smith, L. & Noah, D. (1998). The value of serious play. *Educational Technology* (November-December), pp. 29-37.
Spitz, E.H. (1993). Picturing the child's inner world of fantasy: On the dialectic between image and word. In *Transitional objects and potential spaces: Literary uses of D.W. Winnicott*. P.L. Rudnytsky (Ed.). New York: Columbia University Press.
Turkle, S. (1984). *The second self: Computers and the human spirit*. New York: Simon and Schuster.
Walkerdine, V., Thomas, A., & Studdert, D. (2000). *Young children and video games: Dangerous pleasures and pleasurable danger*. Paper read at International Forum of Researchers on Young Children and the Media, at Sydney, Australia. Available at http://bitsi.csu.edu.au/csss2000/papers/walkerdine.html.
Winnicott, D.W. (1986). *Sum*, I am. In *Home is where we start from: Essays by a psychoanalyst*. New York: W.W. Norton & Co.
Winnicott, D.W. (1989). *Playing and reality*. New York: Routledge. Original edition, 1971.