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**Virtual Worlds for Kids**

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**Virtual worlds as a site of convergence for children's play**

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**Abstract**

*Virtual worlds have made notable inroads into the lives of children, affording online extensions of their offline lives. In this article, we propose a conceptual framework for understanding the space that virtual worlds occupy in children's play and the ways in which children's participation in them overlap with their everyday play experiences, both offline and mediated. We argue that virtual worlds can be viewed as sites of convergence for children's play in that virtual worlds allow for almost all aspects of children's play to converge, primarily manifested in the convergence of social spheres, the convergence of play spaces and playthings, the convergence of cultures and the convergence of learning experiences. We explain how such convergence, while presenting valuable opportunities for children to learn and develop, will not be fully exploited without a corresponding ability on the part of parents and children to recognise potential risks; and for parents and educators to scaffold these learning opportunities.*

**Keywords:** children, virtual worlds, play, sociability, identity formation, literacy, online risks and opportunities



## Virtual worlds as a site of convergence for children’s play

*A little girl, seven, is playing with her neighbour, also seven, in her bedroom. The two girls are playing school, where her Barbie doll is the teacher of a first grade class whose students are her Little People, Pokemon, Power Rangers and Sesame Street action figures. The classroom furniture is an elaborate assembly of Lego pieces, MegaBloks and Littlest Pet Shop accessories. At recess, the students eat hamburgers and fruit salad which the girls lovingly made out of Play-Doh. Class is dismissed and her Thomas the Tank Engine set has been commandeered as the makeshift school bus which takes the students home. The neighbour arrives to pick up her daughter and the two girls exchange reluctant goodbyes, before quickly brightening up and saying to each other, “See you in Barbie Girls.com later!”. “ We can play school there too!”.*

As children around the world explore virtual worlds in increasing numbers, scenes like this will be played out countless times in varied settings around the world. Even as children continue to play with toys, dabble in art and craft and expend their energy through sports, online play and virtual worlds have made notable inroads into the lives of children, affording online extensions of their offline lives. Each of the toys mentioned in the earlier scenario has an online presence in the form of websites with interactive games, smartphone apps or full-fledged virtual worlds boasting of multiple environments, activity genres and levels of play. Defined as “persistent virtual environments in which people experience others as being there with them - and where they can interact with them” (Schroeder 2008, p. 2), virtual worlds for children and adults alike offer a “third place” (Steinkuehler & Williams, 2006, p. 885) for recreation and sociability.

When contrasted with their adult counterparts however, virtual worlds for children bear some distinctive features (Cao, Lim & Lin, 2010). First, because they are designed for children, activities within virtual worlds tend to be age-appropriate, illustrated with colourful graphics and involving relatively easy tasks. Second, virtual worlds for children explicitly invite parents’ involvement and supervision, and provide parental guidance advisories and support channels. Third, most proprietary virtual worlds for children are isolated from the rest of the online world in the sense that there are no advertisements and hyperlinks which can lead children to unsecure third-party locales. Fourth, as most sites are monitored by adult chaperones and several prevent participants from sharing phone numbers or personal information with one another, policies and safeguards are in place to protect children from unwanted interactions. Fifth, virtual worlds for

children often have an espoused educational purpose, with companies claiming that children can improve their literacy and social skills through participation in these worlds.

With children around the world using the Internet at younger and younger ages, virtual worlds for children are also growing in popularity. According to KZero (2010), a total of 570 million accounts for youth virtual worlds have been created, constituting more than 70% of virtual world accounts worldwide. To cater to rising demand, the market for children's virtual worlds is expanding with one study estimating that 225 out of 366 virtual environments are targeted at kids aged 12 and below (Association of Virtual Worlds, 2008). The most popular of these worlds for the 6- to 10-year-old age group included Club Penguin, purchased by Disney in 2007 for \$700 million, when it had increased its registered users by 329% over the previous year (Marketing Charts, 2007). Webkinz World, owned by Ganz and targeting 8- to 11-year-olds, claimed nearly 4 million unique visitors each month in 2010. Neopets, purchased by Viacom in 2005 for \$160 million and appealing to 8- to 11-year-olds as well as a slightly older female audience, received about 1.5 million unique visitors each month in 2010 (Barnes, 2010). For the 10-to-15 year-old age group, Habbo Hotel had the largest number of visitors in 2010, with upwards of 15 million unique visitors a month thanks to tie-ins with the Twilight film series and MTV (PRWeb, 2010).

While these figures may seem impressive, it should be noted that the numbers participating in virtual worlds are relatively small and that such activity is only part of kids' mediated experiences in their everyday lives. Nonetheless, with the rising adoption of home computers and the growing ubiquity of broadband Internet access, all online activity by kids, including their participation in virtual worlds, is set to intensify. As at 2010, 71% of households in developed countries own computers and 65.6% enjoy Internet access, with the corresponding figures for developing countries being 22.5% and 15.8% respectively (International Telecommunications Union, 2010). In addition, emerging trends in the organisation of family life also contribute to greater media use amongst kids (Cassell & Jenkins, 1998). In Europe and North America for example, families increasingly live some distance from work and school, and in many locales there is little sense of a neighbourhood in which young people can play outdoors safely. Now that parents are fearful that their children might encounter trouble due to a lack of supervision, young people spend more time in their own homes, and media provide a "safe"

alternative to the outdoors. Even in Asia, where families place a strong emphasis on children's academic performance, parents consider media diversions a convenient and productive way for children to relieve stress; and parents use media to incentivise good behaviour in their children by for example, granting time for watching television or playing computer games (Lim, 2008; 2009). In light of these concomitant trends, virtual worlds - with their immersive interactive environments and multiple affordances for exploration, sociability and self-discovery - are a significant addition to the slate of media options that children can access, and another key arena for play.

In this article, we propose a conceptual framework for understanding the space that virtual worlds occupy in children's play and the ways in which children's participation in them overlap with their everyday play experiences, both offline and mediated. We argue that virtual worlds can be viewed as sites of convergence for children's play in that virtual worlds allow for almost all aspects of children's play to converge, primarily manifested in the:

- convergence of social spheres
- convergence of play spaces and playthings
- convergence of cultures
- convergence of learning experiences

In the subsequent sections, we explain how such convergence, while presenting valuable opportunities for children to learn and develop, will not be fully exploited without a corresponding ability on the part of parents and children to recognise potential risks. We begin with a review of the role of play and learning in children's lives.

### **Play, Learning, and Virtual Worlds**

Since the 19<sup>th</sup> century, people have struggled over the value of games and leisure in children's lives, with some arguing that games are meant to function as educational tools and are detrimental when they fail to connect with educational goals (Cross, 1999; Fleming, 2006). Not surprisingly, there has been a great deal of suspicion about gaming, and about computers and electronically mediated gaming in particular (Levin & Rosenquest, 2001; Palmer, 2007). Many

seem to see gaming as a distraction from the more focused efforts that are believed to be central to the educational achievement of children.

However, the value of children's lives goes beyond what they must learn in order to achieve a developmentally successful adulthood; children are constantly learning from the people around them and from the environments in which they are located. Learning is part of what it means to be human, and thus its scope is much broader than the goals of education. Moreover, learning is fundamentally a social practice rather than something that occurs in an individual's head (Lave and Wagner, 1991). Thus, as more and more scholars have looked at the problems within the formal educational system, new avenues have opened for considering how, and where, children have opportunities to learn. Gardner's (1993) influential work on multiple intelligences suggested that learning occurs best in a variety of differing complementary settings. This led scholars to begin to consider how young people engage in play not just as an important leisure activity, but as a site for informal learning that occurs outside of, but in some relationship to, the formal learning that happens in school settings (Gee, 2003; Greenfield, 2009; Plowman, McPake, & Stephen, 2008).

Social and developmental psychologists have also been interested in the role of play in relation to learning and development. At the life-stage of 7-12 years, children transition from a mental state of "egocentrism" to "socialization", and are keen to learn more about the world around them (Wadsworth, 1989). Hence, spontaneous play and exploration allow a cognitively and socially active child to observe relationships between people and things, and to observe how the physical world around him/her functions (Duncan & Lockwood, 2008). In their imaginary, make-believe play, children create elaborate worlds which are influenced in part by their exposure to media culture (Götz, Lemish, Aidmann & Moon, 2005). A number of people have therefore begun to argue that it is high time to pay greater attention to children's play in order to learn more about how children themselves participate in learning and experiencing life through play (see, eg. Ito, 2004; Ito et.al., 2008). The articles in this special issue thus are contributors to this ongoing conversation about children's play and about the new spaces in which play, learning, and identity-formation are occurring.

### **Convergence of social spheres**

Most children first learn about virtual worlds such as Webkinz or Neopets from siblings, relatives, or their friends at school. Like the girls introduced in the opening story of this article, when they are not in school together, young people enjoy playing with their “offline” school friends in these online locations. They also interact there with people they may not know offline, and, in some cases, they interact with their family members, as well. Thus, when they are engaged in play in virtual worlds, they are simultaneously interacting with a variety of people who play different roles in their everyday lives. This situation can bring about what Michael Wesch (2009) has termed “context collapse,” in which young people must negotiate between the social expectations of different groups at the same time. Sometimes, as Bleumers and Jacobs assert in this volume, family members find that virtual worlds can open up possibilities for new kinds of cross-generational interactions. In Bleumers and Jacobs’s study, different generations within the same family trialed an application which allowed them to set up a home in the virtual world, create avatars and communicate with one another using emoticons, moderated text or picture chat; and engage in individual and multiplayer mini-games. While the respondents were circumspect about the ability of virtual worlds to facilitate remote family interaction, they appreciated the increased offline interaction that it generated because it helped to bridge the children’s and adults’ worlds.

In an exploration of the dyadic dynamics of parent-child interaction in a kids’ virtual world, Burley (this volume) reflects on exploring Club Penguin together with her daughter. She notes the joys of them sharing this virtual space as they become a ‘family of penguins’. She also airs her frustrations at being unable to sustain this virtual relationship with her daughter, who comes to view her mother’s penguin as not sufficiently ‘cool’ and in fact, as a source of embarrassment. Mother and daughter then find their own ways to negotiate these virtual tensions which threaten to seep into their everyday relationship. Indeed, just as people are beginning to gain awareness about the problems of “context collapse” within the social network site Facebook, children in virtual worlds are similarly experiencing new situations in which they must encounter and negotiate with people from differing parts of their lives as they attempt to interact within a common virtual world. Future research on virtual worlds for kids, therefore, might think more about how, with whom, and for what purposes kids enter these spaces. These entrances, exits,



and negotiations should be considered in relation to privacy, so that certain spaces are reserved in which children may interact only with other children. Moreover, children need to be granted permission to determine when and under what circumstances they will interact with adults in these sites. Game designers and educators who would seek to maximize the potential of these spaces for learning need to respect the different social spheres in which young peoples' social lives operate. In this regard, Meyers, Nathan and Unsworth (this volume) suggest that designers of children's virtual worlds be more mindful of the tensions between safety and surveillance, and shift the responsibility for safety away from in-built technological features toward children and their adult caregivers, as well as to increase the transparency of technical features and surveillance practices so as to better educate users.

### **Convergence of play spaces and playthings**

Virtual worlds can also become important "third places" (the first being the family and the second, school communities), somewhat like public playgrounds, in that they serve as important spaces for children's play, exploration and development (Oldenburg, 1991). Virtual worlds, as an additional "third place" for children, are unique in their permeability, facilitating the individuals' transit from their offline worlds into their online lives (Castronova, 2005). In a virtual world, a child's play spaces can converge in the sense that physical play spaces such as the child's bedroom, the neighbourhood playground, the school classroom, the suburban mall etc., can all be replicated and augmented virtually. Similarly, children's playthings can converge in virtual worlds through their online iterations. For example, virtual worlds which are associated with particular brands of toys such as Lego World and Littlest Pet Shop, enable children's playthings to assume an online existence. Through the children's manoeuvres in these virtual worlds, their playthings interact via and with avatars within these immersive, multi-layered environments, thus acquiring a complexity and "authenticity" of being that children's offline play with these toys cannot quite approximate. Children can thus bring imaginative play from one platform to another, trying out interactions between stuffed animals, for instance, and then trying the same interactions when one's avatar interacts with that of others. Of course, marketers, too, are aware of the potential for playthings and play spaces to intersect and overlap. Before a child could buy a Webkinz stuffed animal and play with it in virtual space, children could buy toys with tie-ins to children's television programming and bring to life both scripted and

imagined stories involving its beloved characters (Seiter, 1995). In an interesting example of online-offline migration of children's play, Druin (2008) witnessed a group of seven and eight year olds using stuffed animals to recreate Webkinz's online environment in their classroom which they had renamed Webkinz School, leading Druin to label Webkinz a 'convergent toy' (para. 2).

Notably, this convergence of play spaces and playthings has also been an important source of revenue, and controversy, in relation to the highly commercialized virtual worlds that host the highest number of young visitors. Although children are savvy about television advertising, they are less attuned to online "stealth marketing" (Calvert, 2008) because they fail to understand how web businesses profit from online product placement or user profiling and data mining (Seiter, 2005). To better grasp the implications of this trend, more scholars are studying how online spaces are being exploited for the purposes of marketing to children. For example, Flowers, Lustyik and Gulyás (this volume) review online junk food advergimes targeted at children in Hungary and the UK. They observe that junk food advergimes offer engaging virtual playgrounds that aggressively blend brand and product values with entertainment features. They note that regulators have responded to this insidious fusion of commercial and non-commercial content by stepping up public education programmes in 'consumer literacy', while some non-governmental organisations have innovatively developed their own advergimes to promote healthy lifestyles.

### **Convergence of cultures**

Virtual worlds also provide a platform for children to experiment with identity formation because they are sites of cultural convergence. Cultures which are of particular salience in the lives of young people - an individual's own culture, peer culture and media culture – can be experienced and asserted within virtual worlds. When children visit virtual worlds, they can use a range of tools to represent themselves and construct personal narratives. They can employ the language of peer culture and the images of media culture to create online instantiations of themselves that enjoy agency and autonomy. On BarbieGirls.com for example, a girl can be her own best version of Barbie by developing her very own Barbie-like avatar. This process of bricolage enables children to transpose their own personalities onto the avatars of pop culture icons, and a child could literally star in his/her own favourite cartoon. Through their avatars,

children are also able to experiment with a variety of roles that might be quite different from those they adopt in their everyday lives. In one study of children's uses of a virtual world, for instance, the researchers found that children adopted eight different roles: nurturers, explorer-investigators, self-stampers, social climbers, fighters, power-users, life-system builders, and collector-consumers (Gauntlett & Jackson, 2008). Although this research did not capture all of the identity positions that are possible within virtual worlds, it does suggest that children can move in and out of roles and can find in these places opportunities for low-risk identity experimentation. For instance, Lu (this volume) recounts her "intense identity experimentation" within Neopets.com as she transitioned from a child to a tween, with her personal development reflected in the evolution of her avatars. However, the cultural convergence and identity formation that is enabled by virtual worlds is circumscribed by the predefined scripts which companies offer. This sociotechnical scripting of the online space in terms of who one can be and what one can do is both limited and limiting. Furthermore, identity experimentation in a virtual world can be a potentially costly venture. As Lu herself discovered, the pressure for one's avatar to have a unique outfit or special powers can be strong and such enhancements come at a price. Just as children feel the need to fit in in their daily interactions with friends, this instinct may be felt just as strongly, or perhaps even more so in the highly visual and visible online environment. Compelling demands from children for more money to spend on these online accoutrements, and parents' resistance to acceding to them, can be a source of tension which families need to be prepared for. Future research on parental mediation of children's Internet use should scrutinise this nexus between the financial and emotional burdens of mediating children's explorations of virtual worlds. These financial aspects of parental mediation of children's media use, although seemingly prosaic, can have very real implications for the quality for family relationships, as prior research on parent-child negotiations over mobile phone usage has demonstrated (Green & Haddon, 2009).

### **Convergence of learning experiences**

Virtual worlds are also a site of convergence for children's learning experiences. These experiences vary in terms of what children are learning about (speech, text, visual representations, social interaction, civic participation etc.), modes of learning (observing, doing, experimenting, role-playing etc.), and the levels of autonomy children which enjoy while

learning (independent, supervised, collaborative, distributed etc.). With their complex, immersive and multi-dimensional environments offering a spectrum of opportunities for children to exercise agency, virtual worlds facilitate these afore-mentioned learning experiences in a dynamic mix of combinations, potentially enabling the acquisition of multifarious skills. Jenkins (2009) argues that in the new media environment, children need new skills that build on *and* go beyond traditional literacy, research and analytical skills. These skills include (i) play, the ability to experiment with one's surroundings in the course of problem-solving; (ii) performance, the ability to assume different identities during improvisation, (iii) simulation, the ability to create fluid models of real-world processes, (iv) distributed cognition, the ability to use tools that enhance one's mental capacities and (v) transmedia navigation — the ability to keep up with narratives and information that transcend multiple modalities. Of the broad range of skills that Jenkins identified, the five listed here are the ones that can be exercised and honed within virtual worlds.

The learning experiences which virtual worlds afford children, as well as the skills which children can acquire through participating in them, are the focal point of two of the papers in this collection. Tuukkanen, Iqbal and Kankaanranta (this volume) review participatory practices in children's virtual worlds and deliberate over the potential of these worlds to educate children about their civic life. They propose a framework for children's participation in virtual worlds which views children as social actors, learners of civic participation and as citizens. To complement their framework, they surveyed children on their participatory practices in virtual worlds and found the children highly interested in socializing with friends and engaging in avatar-related activities, but less engaged in traditional forms of civic participation. With respect to children's knowledge of health matters, Kafai and Fefferman (this volume) argue that virtual epidemics can play a critical pedagogical role in educating school children on the spread of infectious diseases. They surveyed Whyville players during an outbreak of the virtual epidemic Whypox in Whyville.net; and tracked their online movements and chat interactions before, during, and after the outbreak. They found that the players use their own experiences and observations of the community to learn about processes of infection and immunity, the interactions of social behaviour, and reactions to perceived health risk. With this understanding, Kafai and Fefferman develop a series of learning laboratories where students can experiment with different parameters in epidemic simulations, identify and develop vaccines, analyze

archival records of past epidemics, and discuss ethical issues. The virtual environment thus affords a depth of exploration and experimentation that would be impossible to replicate in real life. These two papers provide compelling evidence of the educational potential of virtual worlds, while also acknowledging the limits to which educational objectives can be met.

Today's commercially developed virtual worlds have some important precedents in both the educational and leisure realms. While many of today's parents may remember the first time they participated in batting a white speck across a black screen in the primitive 1972 game of Pong, the 1980s and 1990s saw a transformation in the computer software design industry, with the rise of "edutainment" programs that sought to appeal to children while also attracting the dollars of the parents who wanted to harness the computer for learning (Ito, 2009). Electronic games with a distinctively educational mission first found success with the 1985 release of the popular game *Where in the World is Carmen Sandiego?*. Since that time, Ito (2009) has observed three educational philosophies that have guided the development of software for children: instruction, exploration, and construction. Whereas virtual worlds for kids usually align most clearly with exploration as they allow for open-ended play, they also have the potential to engage young people in the process of creating and manipulating spaces. How well different sites provide spaces for such engagement, however, is part of an ongoing debate that future research on virtual worlds for children can seek to advance.

### **Opportunities, risks and scaffolding**

As Livingstone (2007) observes, online risks and opportunities are inextricably linked in that the very medium that affords opportunities also introduces risks. In this regard, virtual worlds are certainly no exception. Given the relative novelty of virtual worlds for children, and the technological challenges which parents may encounter in supervising children's play in them, the tried and tested mediation strategies applied to children's television viewing (e.g. Valkenburg, Krccmar, Peeters, & Marseille, 1999) or general Internet use (e.g. Eastin, Greenberg & Hofschire, 2006) cannot be easily migrated to this new realm.

But virtual worlds are also spaces in which young people find meaning and enjoyment with their peers. They offer challenges, rewards, and opportunities to learn through experimentation, and as children experiment, they also learn the value of patience and



perseverance in problem-solving. Prensky (2006) has argued that games teach children about cause and effect relationships, long-term winning versus short term gains, creating order from chaos, complex system behaviours, counter-intuitive results, the use of obstacles as motivation, and the value of persistence. Most children engage in virtual worlds from their home, giving parents an opportunity to discuss these aspects of learning and to draw connections between such informal learning and the goals of formal education. Parents and older relatives can help children learn to make positive choices about what worlds they enter and for what length of time, and they can model critical questioning of materials and interactions found in those worlds. Additionally, as young people often have greater expertise and comfort with digital and mobile media than their parents, new media such as virtual worlds can also provide family members with opportunities to experience role reversals: a child can become the teacher to the parent, a situation that can allow the parent to demonstrate respect for the child's ability to learn and exhibit mastery (Ribak, 2001; Clark, 2010).

Those who care about young people know that transformative things can happen when children have a stake in what they are learning and sharing with others. The challenge for parents and educators, therefore, is to bridge the increasing gap between how educators teach, and how young people find meaning in what they are learning (Davidson and Goldberg, 2009). In this process, educators, policymakers, and parents must be encouraged to find positive alternatives to the discourse of negative media effects so that they can begin to rethink the positive potential that digital media affords in scaffolding learning. Educators continue to realize the benefits of working closely with the people in the child's home environment to scaffold learning across the various settings of the child. This is evident in the work of Siibak and Vinter (this volume), who provide an overview of teacher perceptions regarding young children's internet use and media education in pre-schools. Through focus-group interviews with Estonian pre-school teachers, they find that teachers consider the role of the family on children's computer use to be more significant compared to their own.

### **Conclusion**

Today's children are growing up in a wired world full of gadgets. At the same time, parents experience ever-increasing demands on their time due to a 24/7 workplace. With increased structured child supervision and escalating expectations within formal school settings,

many children have less unstructured time for play with peers, even as they have greater access to the digital realm than ever before. As a result, there is a great need for children to have dedicated online spaces that encourage imaginative play and interaction.

Such play areas are still in development, however, and are largely, although not exclusively, emerging in the realms of edutainment and commercially-driven ventures. These spaces raise new questions and are encouraging all stakeholders to rethink what we expect with regard to play, learning, cultural barriers, and risks. Future research must continue to explore questions such as: how is learning best encouraged through online virtual worlds, and how can this learning be linked with the goals of literacy, self-development, and educational achievement? How do virtual worlds help their young participants to preserve or overcome cultural barriers? What policies are appropriate for regulating these spaces to minimize commercial intrusion while maximizing individual and collective creativity? And how can parents, educators, policymakers, and game designers work together to maximize potentially positive outcomes?

In this editorial and throughout this special issue, we have explored the ways in which virtual worlds for children may be understood in relation to convergences of social spheres, of play spaces and playthings, of cultures, and of learning experiences. Each of the papers in this issue provides empirical evidence which illustrates different facets of such convergence, providing in their totality an overview of children's play in virtual worlds and lending insight into the perspectives of the different stakeholders – families, parents, educators, governments, corporations and of course, the children themselves. In putting together this special issue, we recognise that virtual worlds are assuming a growing presence in children's lives and are thus worthy of greater academic attention, with this issue being a small but significant step in advancing the knowledge of this area. We believe that studies of virtual worlds open up and speak to concerns likely to be of relevance to many scholarly fields. The articles here mark an important step in taking the conversation forward.

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