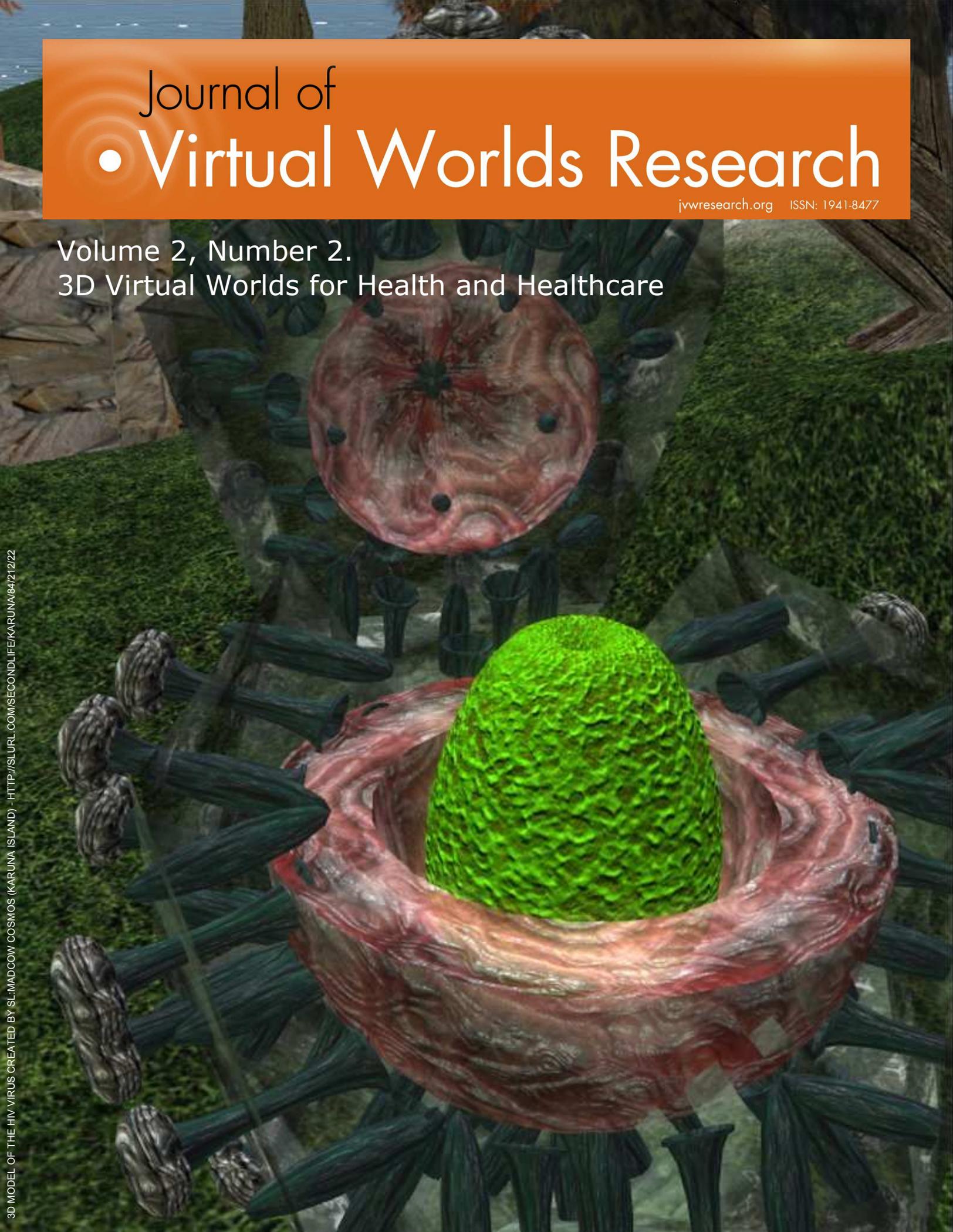


# Journal of • Virtual Worlds Research

jvwrsearch.org ISSN: 1941-8477

Volume 2, Number 2.  
3D Virtual Worlds for Health and Healthcare



# Volume 2, Number 2

## 3D Virtual Worlds for Health and Healthcare

### August 2009

**Editor** Jeremiah Spence

**Guest Editors** Maged N. Kamel Boulos  
Susan Toth-Cohen  
Simon Bignell

**Reviewers** Nabil Habib  
Ray B. Jones  
Rashid Kashani  
Inocencio Maramba  
Kathleen Swenson Miller  
Pamela Mitchell  
Carol Perryman  
Anne Roberts  
Maria Toro-Troconis  
Jane "Esme" Wilde

**Technical Staff** Andrea Muñoz  
Kelly Jensen  
Roque Planas  
Amy Reed  
Margaret Hill

**Sponsored in part by:**



**The Journal of Virtual Worlds Research is owned and published by:**



The JVWR is an academic journal. As such, it is dedicated to the open exchange of information. For this reason, JVWR is freely available to individuals and institutions. Copies of this journal or articles in this journal may be distributed for research or educational purposes only free of charge and without permission. However, the JVWR does not grant permission for use of any content in advertisements or advertising supplements or in any manner that would imply an endorsement of any product or service. All uses beyond research or educational purposes require the written permission of the JVWR.

Authors who publish in the Journal of Virtual Worlds Research will release their articles under the Creative Commons Attribution No Derivative Works 3.0 United States (cc-by-nd) license.

The Journal of Virtual Worlds Research is funded by its sponsors and contributions from readers. If this material is useful to you, please consider making a contribution. To make a contribution online, visit: <http://jvwresearch.org/donate.html>



# Journal of • Virtual Worlds Research

jvresearch.org ISSN: 1941-8477

**Volume 2, Number 2**  
**3D Virtual Worlds for Health and Healthcare**  
**August 2009**

## **Towards a Virtual Doctor-Patient Relationship: *Understanding virtual patients***

By Vanessa G. González, Macquarie University, Australia

### **Abstract**

*The use of online virtual communities to deliver health information has grown with the creation of 3D online virtual worlds such as Second Life. The existence of virtual spaces offers the opportunity to use new media and spaces of social interaction, participation and collaboration to deliver realistic and vivid health experiences. While the potential seems great, in practice, there are significant limitations in using virtual online communities to deliver health information. First, for many residents, these virtual worlds are fantasy spaces where they can escape the limitations of their bodies to engage in social interactions. Second, virtual worlds lack the cues that usually signal medical authority, making virtual residents skeptical about health information and advice obtained in Second Life. This article explores key issues surrounding the health practitioner-patient relationship in virtual worlds.*

**Keywords:** Virtual worlds; health; doctor-patient relationship.

## **Towards a Virtual Doctor-Patient Relationship:**

### ***Understanding virtual patients***

By Vanessa G. González, Macquarie University, Australia

*“I suppose health education could work but not sure how else SL [Second Life] could have health benefits. Once you have a diagnosis there is a fabulous medium on the Internet and resources in the surgery/hospital. I wouldn't feel the need to go on SL for that if I had a serious diagnosis I may use SL as my escapism. SL isn't good for your RL [Real Life] health.”*

SL Resident, [November, 2008]

According to Bar-Lev (2008, p.519), individuals competently manipulate new technologies as they negotiate, redefine, and reinvent existing cultural codes to make sense of their illness experience. Technologies like virtual worlds offer newer possibilities for people and health practitioners to renegotiate relationships around health issues (Huang, Boulos & Dellavalle, 2008):

*“I believe that the explosive trend [toward increased use of the Internet for answering health questions] shown by Pew reflects individuals' distrust and lack of information - so that they search for information as self-defence, and as a way to exert some control over relationships where the power imbalance has always been enormous. Hundreds and thousands of 'us' showing up at the doctor's offices with our printouts is like a decentralized army - demanding that the interactions be two way dialogs. At Second Life, they can be. I feel like we're building the future.”*

Health Practitioner (quoted in Bell, 2008, pp.11-12)

The use of new technologies for health purposes is founded upon positivist attitudes about science (Sinha, 2000). Newer technology is inherently better than old, according to this paradigm, and the potential for market expansion is unlimited (Sinha, 2000, p.297). Yet, despite many predictions that virtual worlds would become a new frontier in health information and delivery, this expectation has not been realized. As Lori Bell found in her study of a Second Life (SL) project called “Health Info Island,” “targeted [health] marketing to the general population in this virtual environment continues to be an ongoing challenge” (2008, p.41). What are the constraints on using virtual worlds to deliver health information?

In this brief think-piece, I will explore issues in the patient-doctor relationship using preliminary findings from my ethnographic research on the social aspects of health in virtual environments as a springboard for discussion. The participant observation conducted in this research suggests that two primary concerns shape patients' views about the use of virtual worlds for real life health purposes.

The first concerns patients' reluctance to cross borders between their real and virtual lives. For some of its inhabitants, SL is about play, fun, and escapism from real life, as the following quote from a SL resident shows:

*“Here you are Superman, you can fly! A paraplegic can walk here! This is a good refuge to escape from RL. If you’re not going well in your RL, in SL you get disconnected from it. People lose their sense of danger here and abandon themselves more. SL might be functional in cases of depression. But I personally see SL as a place to enjoy.”*

SL resident, [October, 2008]

A second concern surrounds the authenticity and reliability of the people who deliver health care and information. As the passage below illustrates, residents find it difficult to trust other people in SL:

*“Even if I knew the doctor in SL personally, I wouldn’t trust them to be able to diagnose through SL so trust is in two parts: 1/ trust in who they are/how qualified they are 2/ trust in their ability to remotely diagnose via SL. I would prefer a top level domain be set up for medical websites. Sorry never going to happen for me.”*

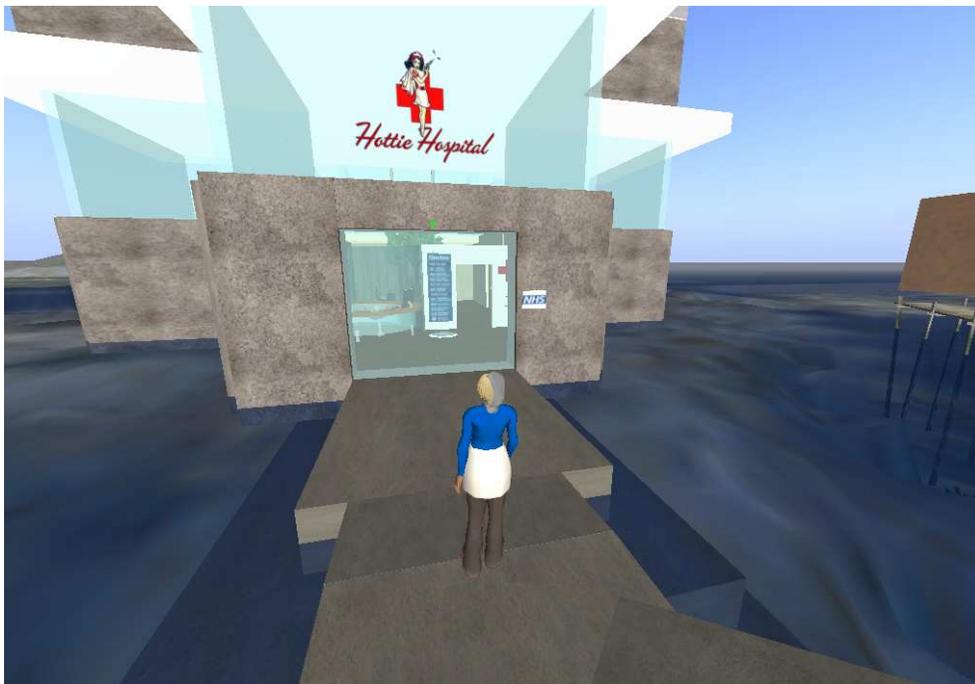
SL resident, [November, 2008]

Using a virtual environment for real life health purposes necessarily entails a deconstruction of body boundaries (Sharp, 2000). Body boundaries are transgressed when medical professionals attempt to use virtual environments to reach real people. This deconstruction of boundaries that operates in virtual environments obliges us to look at different ways of engaging with people and how their uses of these technologies can help us to achieve a real connection between professionals and patients. In these scenarios the traditional doctor-patient roles have the potential to operate in a different way. However, the ways in which these relationships could be renegotiated still remain unclear.

A substantial body of literature has documented the extent to which people are using the Internet to enquire about their real life health (Madden & Fox, 2006), and so I expected to see a similar interest in personal health in Second Life when I first started my research there in September 2008. Yet while I visited numerous medical sites and clinics in SL, I found them all empty. Universities, clinics and other health organizations had gone to considerable effort to set up elaborate architectural structures with placards and displays of health information, but not a single avatar was in sight. I wandered these empty structures, looking for health-seeking behavior in SL, but in vain. The only clinic where I found avatars was a setting for sexual role play in which people enacted sexual fantasies between doctors and patients.



**Figure 1** The author touring health spaces in SL: Health Info Island.



**Figure 2** The author touring health spaces in SL: Hottie Hospital.

Ambiguous uses of the same technology, with people crossing the borders of the Internet to improve their understanding about their bodily health issues and at the same time using it as an alternative to play and escape from the limitations of their real body, highlights an important obstacle for the usefulness of SL as a place to make sense about our health.

Sexuality is a clear example of the ambiguous uses of this technology. SL is a highly sexualized place. One can buy genitals and programs that enable virtual sex. Indeed, businesses related to sexuality are very prominent in SL (Hemp, 2006). In addition, sex is a core concern in health-related Internet searches, especially among young people (Kanuga & Rosenfeld, 2004, Wynn, Foster & Trusell, 2009), who value the anonymity afforded by the Internet when seeking information about sexual and reproductive health.

*“Hmm, a little strange perhaps, going to a doctor in SL seems a little weird. It would be like: hi doctor, I'm not really a cat in real life... and I have sex problems, it would be too comical. But then you pointed out that people like the anonymity and sure for people who can't cope with that... but then I think an anonymous phone call would be better.”*

SL Resident [October, 2008]

The quote above clearly points to these fuzzy boundaries. Why do some people in SL think it is “weird” to express their real sexual problems in SL and decline talking about these real-life concerns with others? Perhaps replication of real life cultural patterns in virtual environments (Boellstorff, 2008) is an answer to that question. Perhaps the same cultural codes that make it difficult to talk about sexual problems with others in real life is mirrored in SL. Alternately, some persons may find that the anonymity of virtual worlds may actually enable them to share more about themselves than are accustomed to doing not in real life (Stein, 2007).

People's values about which uses of technology are good or not good for their health are at stake here, and diverse cultural codes and values are operating in debates over whether SL can serve as a medium for transmitting health information. Health professionals and clinicians should be careful about assuming that avatars share their positivist enthusiasm for advancing and building the future of our science through a medium that for many, fundamentally symbolises escape from a mundane, physical reality. To create a real “virtual” connection with patients in SL, health professionals must be creative and self critical about our practices and be cautious to not replicate the same discourses that generate power imbalances between practitioners and patients, as we run the risk of being ignored.

Further research enquiry towards building virtual doctor-patient relationships could examine what cues might signal medical authority in virtual online scenarios to improve trust between doctors and patients, or how to effectively take advantage of the highly sexualised context of SL in order to provide effective sexual health advice. In order to succeed with further inquiries we also need to step out of our scientific discourse and further explore the values, attitudes, behaviours and cultural patterns that play a major role in health related activities in virtual worlds.

## **Acknowledgements**

I wish to thank Dr. L.L. Wynn for her guidance, support and encouragement on this work. Also thanks to Samina and Stephanie for their editing.

## Bibliography

- Bar-Lev, S. (2008). We Are Here to Give You Emotional Support: Performing Emotions in an Online HIV/AIDS Support Group. *Qual. Health Res.* 18(4), p. 509-521.
- Bell, L. (2008). HealthInfo Island Final Report. Alliance Library System. East Peoria Illinois.
- Boellstorff, T. (2008). *Coming of Age in Second Life: An anthropologist explores the virtually human.* Princeton University Press.
- Hemp, P. (2006). Avatar-Based Marketing. *Harvard Business Review.* p. 48-57.
- Huang, S., Kamel, B.M.N. & Dellavalle, R. (2008). Scientific Discourse 2.0 Will your next poster will be in Second Life®. *EMBO reports* 9(6), p.496-499.
- Kanuga, M. & Rosenfeld, W. (2004). Adolescent Sexuality and the Internet: The Good, the Bad, and the URL. *J Pediatr Adolesc Gynecol* 17, p. 117-124.
- Madden, M. & Fox, S. (2006). Finding Answers Online in Sickness and in Health. *Pew Internet & American Life Project Report.* Retrieved 25 November, 2008, [http://www.pewinternet.org/PPF/r/183/report\\_display.asp](http://www.pewinternet.org/PPF/r/183/report_display.asp)
- Sharp, L. (2000). The commodification of the body and its parts. *Annu. Rev. Anthropol.* 29. p.287-328.
- Sinha, A. (2000). An overview of Telemedicine: The Virtual Gaze of Health Care in the Next Century. *Medical Anthropology Quarterly* 14(3), p.291-309.
- Stein, R. Real Hope in a Virtual World. The Washington Post 2007, October 6, A01 (<http://www.washingtonpost.com/wp-dyn/content/article/2007/10/05/AR2007100502391.html>).
- Wynn, L.L., Foster, A. & Trussell, J. (2009). Can I get pregnant from oral sex? Sexual health misconceptions in e-mails to a reproductive health website. *Contraception* 79, p. 91-97.