Avatar Therapy: Where Technology, Symbols, Culture, and Connection Collide

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The topic of "e-therapy" is of great research and clinical interest in 2012. This article presents a case study that examines several elements of psychotherapy, as administered in the "Second Life" virtual environment. In this case, psychotherapy took place primarily via text messaging between two avatars (client and therapist) who "sat" in a virtual office. The therapist resided in the United States and provided therapy to an individual from a developing nation who was currently residing in another more developed Middle Eastern country for work and to escape political atrocities being committed in his home country. This case example raises many issues that could be explored, including the ethics of providing such therapy, cultural competence, technological details, and providing therapy across national lines. However, due to the complicated and multifaceted nature of providing therapy in a virtual environment, this case presentation focuses on technical issues, such as the basics of providing therapy in Second Life. Given that the patient in this case used multiple avatars (cartoon-like representations of himself) in therapy, the topic of the avatar as the expression of internal representations and conflicts is also examined. This case report also discusses the patient's presenting problems and elements of the therapeutic alliance such as transference and countertransference. Finally, suggestions for future research are made. The author posits that mental health professionals can now reach at-risk patients (e.g., refugees residing in other countries) whom they were not previously able to treat and suggests that mental health practitioners may have an ethical duty to research and provide these kinds of services so that certain underserved populations may be treated. *(Journal of Psychiatric Practice* **2012;18:451–459**)

KEY WORDS: psychotherapy, e-therapy, virtual environment, Second Life, avatar, refugees, underserved populations

CASE PRESENTATION

The world of telemedicine and cyber-medicine is, like all technological innovations, expanding at a seemingly exponential rate. Greater numbers of practitioners are turning to their telephones, and to applications such as Skype, to provide services to individuals who are too busy, too remote, and/or too sick to come into an office. Researchers in the last decade have devoted a great deal of time and energy to examining the impact of these new modes of service delivery.[1–3] The provision of "e-therapy" likely actually began as early as the 1950s, when a telecommunications link was established between two distant locations to facilitate a psychiatric consultation.[4]

This case report describes the administration of psychotherapy to an individual in virtual reality (VR). In this case, at the client's request, therapy took place between avatars (cartoon-like, simulated humans). Both clinician and client had avatar representations of themselves who "talked" in a virtual office. Although this case raises many issues that could be explored, including ethical concerns, the business of online practice, cyberspace culture, Internet addiction, therapy with refugees, and cultural competence, the focus of this report is purely clinical. Specifically, this discussion addresses the following issues: 1) definitions and practical issues regarding the provision of therapy in a virtual environment; 2) the presenting problems of the client, "Randy"; 3) the progression of the therapy; 4) the issue of "avatar as metaphor" (since a virtual environment provides a unique opportunity to explore the implications of the chosen mask), and 5) the therapeutic relationship.

It has increasingly become accepted that many media exist through which a practitioner might provide psy-

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chotherapeutic services. Much has been written about telemedicine, for example.[5,6] Less has been written about providing psychotherapy in a virtual environment, although, in 2008, Gorini et al. stated "We suggest that compared with conventional tele-health applications such as emails, chat, and videoconferences, the interaction between real and 3-D virtual worlds may convey greater feelings of presence, facilitate the clinical communication process, positively influence group processes and cohesiveness in group-based therapies, and foster higher levels of interpersonal trust between therapists and patients."[7] For the purposes of this article, a virtual environment is defined as a computer-based environment that can simulate physical presence in places in the real world, as well as in imaginary worlds. Virtual environments have been used psychotherapeutically, but primarily as means to desensitize clients to phobias and expose them to triggers for posttraumatic stress symptoms[8] and/or to substances of choice.[9] In the case described here, therapy was typically provided in a virtual office, just as it would have been had it taken place in the physical world.

Second Life

Second Life is one of a small but growing number of virtual worlds that exist today. It's a three dimensional world that provides a platform where its users can create custom environments. On the Second Life website, the headline at one time read "Escape to the World's largest user created 3D Virtual World Community."[10] Second Life boasts more than 2 million users, who are generally referred to as residents, although these numbers are impossible to verify due to the popularity of creating alternate accounts ("alts").

The virtual world of Second Life has a culture all its own, with its own social norms and rules.[11] Persons new to Second Life are referred to as "newbies" or just "noobs." Some describe Second Life as a game, but it is not a game in the traditional sense of having "winners" and "losers," and most residents take offense at this depiction. For example, many residents hold online jobs in Second Life that may or may not pay real world money, create 3-dimensional artistic projects, or market their "First Life" goods. Others go to find love or to explore aspects of themselves that they feel uncomfortable exploring in their "First Lives"—for example, there is a large population of individuals who are homosexual in their Second Life, but closeted in their First Life. Although Second Life is not typically described as a game, there are games that can be played in Second Life (e.g., "Zyngo," a combination of bingo and slot machines, developed solely for Second Life). However, in general, residents consider Second Life to be just what it implies, another existence or an alternative reality. In 2008, Boellstorff published a fascinating and detailed ethnography about the culture of Second Life that is useful reading for those who want to better understand how a complex culture can develop in cyberspace.[11]

Figure 1. A Second-Life psychotherapy office

Second Life can be accessed using a home computer. Users need a newer computer and an adequate video card in order for the quality of the graphics to promote a feeling of being immersed. The running of Second Life also requires a high-speed (DSL or better) internet connection. If users' computers and connections meet certain minimum requirements, they can then download a Second Life "viewer" (an application that connects with the Second Life "grid") and create an avatar so that they will be able to participate "in-world" (a phrase used to denote an action that takes place within the virtual environment). In the case described here, the client was seen in a virtual office (see Figure 1) that I rented in Second Life (American dollars were exchanged for Second Life currency called "Lindens" to pay for the rented virtual office).

Case Description

"Ranndy" (not his real name or the name of his Second Life avatar, although his avatar had a similar, misspelled Anglo-name) approached me in-world, requesting psychological services. I had spoken online, at one time, for various support groups, and the patient had heard of me. Payment for sessions was rendered in "Lindens," the currency of Second Life. Ranndy com-

plained of a history of depression and stated that he was also having both occupational and interpersonal difficulties. He was quick to point out that he would not go into a "real" psychotherapy office because of the expense, and for social reasons that involved being a minority in the country where he resided. I also suggested (my bias was that Skype would somehow be a more effective means of service delivery) that we conduct our sessions via Skype, but he was not amenable to this option, giving various reasons for not being able to use Skype, including his own personal discomfort with the medium. In Second Life, "Ranndy" was his original avatar name (as therapy progressed he presented with a second avatar, which will be explored later in this article, who had a less Anglo name). Ranndy was a Libyan male, age 34, living as a refugee in a large city in a more developed yet still Arab country in the Middle East. He had an advanced degree in an engineering field. His main stressors were that he had lost the job that he had obtained in the country where he was now living and he was extremely isolated due to having recently immigrated. The challenges Ranndy faced were monumental and difficult for me to imagine. His home country was in turmoil. He considered his politics to be divergent from the leaders of his country who were, at the time of his therapy, almost committing genocide, and he did not consider it safe to return home. Thus he was alone in a new country that he considered unfriendly. His skin was darker than the general population in the country where he had immigrated and he believed the people in his new country were discriminating against him. Ranndy claimed that finding a new job was a challenge and that he could be legally fired without cause should he find a job. Nevertheless, he considered it imperative to find a job given how shameful unemployment felt to him. Some informal research by the author supported Ranndy's claims about his difficulties.

Ranndy found refuge and meaning online, both through people he met in Second Life and also with other Libyan people with whom he chatted on political message boards. Because he found his unemployment shameful, he was hesitant to tell his family that he had lost his job. At the time therapy began, his mother and sister were on the verge of visiting him and he felt he needed to keep his joblessness a secret from them. He went to great lengths to hide his lack of a job while they were there, and he was relieved when their visit was shortened. Ranndy described his parents as well meaning, but overly strict, and at times, abusive. Here is how he spoke of them:

Ranndy: I can tell you something here, as my dad and mom are teachers?
Therapist: yes?
Ranndy: they believed that they want to create IDEAL people.

And then:
Ranndy: I need to go and meet people.
Therapist: yes–get out and talk to people—socialize.
Ranndy: …like friends and family.
Therapist: Yes?
Ranndy: but i feel ashamed of my ... em job loss.

Ranndy went on to describe his upbringing as one in which education was highly valued but emotional expression was not allowed. He recalls entering adulthood (what Westerners consider adolescence) as a troubling time:
Ranndy: Many things troubling: you become responsible to god for your actions when you become an adult. Then you have to fast and pray. It's optional before that age. You discover…your sexuality. While nobody preparing you to that stage. It's shameful.

Ranndy presented with a host of other issues. At the top of the list was avoidance. There were times when he rarely left his apartment, except in search of a job. He ordered his meals in. He was aware that not having a valid driver's license made him less likely to leave his home; however, he had a phobia about driving that contributed to him putting off obtaining a driver's license for the duration of treatment. He had a number of important goals that he identified, including enrolling in a course and investigating graduate schools abroad, but he came to each session stating that he not made any progress toward his goals. He was eventually able to find employment, but the situation was a precarious one for an Arab. Ranndy was exceedingly lonely and engaged in sexually risky practices, including visiting real-world prostitutes. He was readily able to identify that his use of prostitutes was less about sex than companionship. He reported that, at times, he didn't actually have intercourse with the prostitutes but rather paid them to have a conversation with him.

At one point during treatment, he divulged that he had become quite close to a prostitute and had started supporting her financially; however, he broke off the relationship once he realized she was taking advantage of him. He typically left interactions with prostitutes feeling ashamed and forlorn. He had little compassion

for himself and for the loneliness that drove such encounters. At another point in therapy, he was in a crisis because, during the "heat of the moment," he had neglected to wear a condom during sex with a prostitute. Despite the fact that he spoke with a physician who told him that his chances of contracting HIV were very low, Ranndy was anxious, nearly to the point of being unable to function at work, until he received the results of his HIV test. He swore he would never use prostitutes again and reported, prior to termination of therapy, that he had been able to fulfill that promise to himself.

As is clear from the preceding discussion, Ranndy's list of presenting problems was long. In providing therapy for this patient, the existential question of "what should be the focus of therapy" always loomed. There are many who would argue that online therapy is not appropriate for an individual whose primary issue is avoidance and who likely possesses some elements of social phobia. There are others who would argue that the patient's Internet and sexual addictions should have been the first and foremost target of treatment. However, for me, the most striking aspect of Ranndy's presentation was his nearly unbearable loneliness and his isolation from his homeland, his family, and a culture that he held dear. Local mental health resources were, of course, explored. However, Ranndy repeatedly stated that he had neither the money nor the correct skin color to seek out counseling services in the country where he was living. I conducted an online exploration of resources and found only one or two therapists in the city where Ranndy was living. Thus, the focus of therapy became social support, behavioral activation, and goal setting, primarily utilizing a cognitive behavioral therapy (CBT) and coaching approach. There were times when it was tempting to address transference (Ranndy was exceedingly dependent on me and, in the final session, nearly romantic), but at the time, it seemed difficult to explore such a nuanced topic in the text messages in which many of our sessions were conducted.

As noted above, soon after beginning therapy, Ranndy was able to find employment. He then set other goals for himself, but he mostly failed to achieve them. In therapy, we carefully explored self-sabotage. I slowly attempted to move Ranndy toward the goal of having voice/video enhanced sessions, because I believed that the avatars were serving to keep Ranndy isolated not only from the world, but also from me as his therapist during sessions. I shared this belief with him and, while he only partly agreed with my formulation, he did agree to add voice and, by the last session, video. However, these steps proved to be technologically difficult. Ranndy explained that, in the country where he was living, it was forbidden to use Skype and that he had to go through a proxy server to utilize the service. The result was that it was often difficult to understand him (his accent was also strong making it difficult to make out his words). Eventually, we used a combination of voice and text during sessions.

Ranndy's mood shifted during our psychotherapeutic work and he reported fewer symptoms of depression. He said that he had found new purpose and meaning in Second Life. He began spending the equivalent of hundreds of U.S. dollars per month to purchase several Sims (virtual pieces of land) and construct them to look like his native land of Libya. Ranndy said that, although he did not agree with the politics of Libya's leaders, he thought the land and the culture were beautiful and he wanted to make a tribute to them in Second Life. He was able to maintain outside employment, but he spent nearly every other waking hour online, supervising the construction of Second Life Libya (Second Life allows users to "build" their own 3-dimensional objects and landscapes). He even hired an expert virtual builder to help him construct the simulation. He eventually formed a romantic relationship with this builder, who was about his age and from Western Europe. His mood improved for a time, and he stated that he was in love, although he second guessed whether his feelings, and hers, were real. Ranndy and the builder had a virtual wedding ceremony. Interestingly, Ranndy forgot to inform me that he would have to miss a treatment session due to his wedding.

The fact that the amount of time Ranndy spent online seemed to be affecting his functioning continued to be a serious concern. (Note that a new condition, "Internet use disorder" has been recommended for inclusion in Section III of the DSM-5 as a condition requiring further research.[12]) He confessed that if he could, he would like to "live" in Second Life. He found great purpose and meaning in creating a Libya that people from all over the world could visit and he received emotional satisfaction from his new "mate." For the first time in our treatment, his depression lifted somewhat.

Unfortunately, the romance was short-lived. His partner became increasingly unavailable and seemed not to take the romance as seriously as did Ranndy. Furthermore, he had hoped to meet her in "real life" to continue the romance, but she was not open to this idea. Like individuals in the non-virtual world who mix "business and pleasure," Ranndy found himself in a

predicament. His partner was increasingly unavailable to continue the online rendering of "Second Life Libya" and also had a different conceptualization for it than Randdy. Furthermore, the builds were done in her name which, in Second Life terms, meant that Randdy did not officially own them. He had paid her to create a Libya that he now no longer had conceptual or legal rights to.

One interesting twist in our psychotherapeutic work together was that, during one session, Randdy brought another avatar into our virtual office. This avatar had a more traditional Libyan name (I will refer to him here as "Habib" although this was not the avatar's real Second Life name), and he had darker skin, more like the actual skin tone of the patient. Randdy stated that he had wanted to make an avatar more like himself. I suggested that I begin to meet with this avatar for therapy rather than with the "Randdy' avatar, whom the patient admitted he had purposely created to look Caucasian. Second Life is, after all, perhaps the only place where someone can explore being in the world with an ethnicity other than the one bestowed upon that person at birth. The patient was hesitant about meeting the writer as his avatar "Habib" and, in fact, he never did bring Habib into a therapy session after that. He reasoned that "Randdy" was the account that had access to his funds (this was a belief that was never interpreted to him in therapy—he could have given the second avatar access to his bank account, but chose not to). In Randdy, the patient had created a more powerful, more financially stable, and more Caucasian version of himself. At times, during therapy sessions, we explored the great conflict the patient had about his heritage—he was both proud of his country and ashamed of its leaders' actions, while he was currently living as a minority expatriate in a country where he reported suffering severe consequences because of his background, religion, and skin color.

Therapy was eventually terminated due to unforeseen circumstances in the author's professional life, and Randdy was transferred to another online therapist in Second Life. Randdy reported that, most of the time, his therapy session was the only thing that he looked forward to each week. Interestingly, Randdy agreed to meet in Skype for his last session. As in all terminations, the therapeutic work that had been done and the work that still remained to be done were reviewed. The patient said I reminded him of a song, which he wanted to share, and he sent me a link to a popular American song which we listened to, simultaneously, in session. Based on the lyrics, it was clearly a romantic love song. While the song was playing during session, Randdy became embarrassed, seeming to realize that the song had romantic implications, and he asked that we stop playing it. This interaction poignantly illustrated the attachment that Randdy had formed with me as his therapist. Treatment was terminated, with the acknowledgement that Randdy had, in fact, formed a relationship in treatment, and could export his skills to other relationships. Here is how Randdy's described the progress he felt he had made:

Randdy: Well today miracle happened.
Therapist: Yes?
Randdy: am happy & balanced, and I eat.
Therapist: really? What happened?
Randdy: well after u left me, i thought allot about ur words.
Therapist: yes?
Randdy: I gathered myself and went out. I was wearing a jacket, it was cold. But to my surprise the weather changed. It was warm and a little windy, typically like my country.
Therapist: Yes? Oh, like Libya?
Randdy: i took off my jacket, and think, it is just a jacket. I was wearing my worries all the time. What the use? Life is the same. Same challenges and same disappointing. Worst things do happen. But why am I wearing my worries? I start thinking differently.
Therapist: yes?
Randdy: but am so fragile inside. I went to a coffee shop, I start a nice conversation with people there. I know how to manage conversations. Before I kept silent cuz I thought nothing deserve to say.
Therapist: Yes?
Randdy: but now i feel i need to talk.

The Therapeutic Relationship

Many might argue that a therapeutic relationship cannot develop in a virtual environment, citing the need for sight and for voice in order to relate, attach, and provide adequate psychotherapeutic services. However, I experienced quite the opposite in the therapy described here. Emotions were conveyed, although sometimes through nontraditional means (use of emoticons, for example), and a real and transferential relationship developed without all of the traditional components that most clinicians associate with psychotherapy.

Although I noted earlier in this article that nuanced issues of transference were not addressed in therapy, it

is important to note that they likely could have been. Ranndy seemed to be quite dependent, and at times pushy with the writer, asking for extra sessions, and attempting to extend sessions past the time allotted. He frequently asked for guidance and seemed to idealize me. At times, I felt that I was being used, as the object of Ranndy's loneliness. In retrospect, it might have been wise to explore the parallels between Ranndy's use of me as his therapist and his pattern of seeking out prostitutes for companionship, but this was not done. As mentioned above, during the last session, Ranndy sent a love song to me, seeming to forget that it was a love song. Ranndy nearly constantly asked for feedback and reassurance:

Ranndy: but u r a very good physician.
Ranndy: in your job i mean.
Ranndy: yes am very happy to talk to u, but i have one last Q.
Therapist: yes?
Ranndy: what do u think of my progress.

This exchange, like many others, illustrates Ranndy's idealization of the therapist as well as his frequent need for reassurance.

Ranndy's dependence on the writer to provide support and reassurance, yet his failure to make that relationship more tangible through his resistance to using Skype, may have represented a more global ambivalence about attachments. Certainly, he chose women who were not fully available to him and, arguably, who exploited him. Also, he presented with childhood experiences that were quite mixed; he believed his parents were warm and loving, yet overly harsh and strict, and unreceptive to emotional expression.

Other issues arose for me as a therapist in providing therapy to Ranndy in Second Life. Always looming in the back of my mind was the idea that the therapy was operating in uncharted territory. I felt a lack of confidence that was not typical of me when administering face-to-face psychotherapy, and it was difficult to seek consultation because of the unusual nature of the therapy provision. There may also have been a parallel sense of insecurity regarding the job that was being done. Like Ranndy, I worried about the job I was doing and what my colleagues would think about the therapy. Thus, it is likely that I did not fully engage in the therapy in certain ways because of my own doubts. In addition, although unrelated to the online nature of the therapy, there were times when I wished to avoid Ranndy because of his dependence and occasional demands for more sessions or extended duration of sessions. Still, the frame was held, just as in traditional therapy.

Although the concept of the "avatar as metaphor" was to some extent explored with the patient, I have not yet discussed the issue of the "therapist avatar." During the therapy, I had some awareness of a nagging sense of satisfaction at appearing before a patient as a younger, more subjectively attractive version of myself (although avatars in Second Life are extremely realistic, it is rare to find one who is middle aged and looks authentic). I was also aware at times of my own immersion in Second Life. However, the use of text messaging certainly increased the temptation to multi-task during sessions (as the patient could not see what the writer was doing in the physical world), and this likely contributed to a sense of disconnect that made the provision of therapy somewhat less satisfying. Thus, there was much "grist for the mill" in this "avatar to avatar" therapy and a more careful examination of the relationships likely should and could have occurred.

Discussion

The case described here highlights many of the problems and issues inherent in providing therapy with avatars. At the very least, ethical and legal issues arise, and, as occurred in this case, issues of cultural competence may come up. It appears clear that individuals who populate virtual worlds both need and will obtain services in that environment. In Second Life, many persons in-world claim to practice some kind of therapy, and there are numerous support groups—for persons with disabilities such as cerebral palsy, for persons with addiction problems, and for people with autism spectrum disorders, to name just a few. I have been approached multiple times by virtual community leaders requesting me to provide low cost therapy to individuals from these groups.

Although this case study involved only a single patient, it illustrates the need for more research concerning "virtual therapy" in a good many areas. For example, like many other psychologists, I operated on the assumption that there is something more effective about face-to-face therapy and thus continued to encourage the use of Skype and video with Ranndy. However, no research exists, to date, that has compared Skype-assisted psychotherapy with virtual-reality chat-assisted therapy. Ranndy claimed to feel benefit and

support from the services he received, even when it was primarily text-based.

In 2011, the American Psychological Association, in conjunction with the Association of State and Provincial Psychology Boards and the American Psychological Association Insurance Trust, created a joint Task Force on the Development of Telepsychology Guidelines for Psychologists, to provide guidance about the provision of e-therapy.[13] Although new regulatory bodies are emerging at a rapid rate, practitioners of e-therapy and, in this case, avatar therapy, are still operating somewhat "in the dark" with respect to ethics and standards of practice.

All psychotherapists, whether they are providing therapy in person, over the phone, or in a virtual world, encounter issues related to cultural competence. However, the case presented here suggests that therapists who practice avatar therapy may be more likely to be exposed to individuals from highly diverse cultures and backgrounds. Although the pitfalls of providing therapy to such diverse groups are obvious, conversely, one might argue that psychotherapists have an ethical obligation to provide therapy to individuals who come from countries where the governments are in political disarray. With the Internet, this possibility exists and, hopefully, the mental health field will position itself in a manner that will allow practitioners to treat these difficult-to-reach populations. Relationships can and do develop in virtual space, perhaps even in a manner that can be explored and interpreted. Therapists who use this medium should try to understand their own desire to do so (as opposed to other modes of practicing therapy) and should explore their relationship with their avatar selves. Mental health practitioners are responsible for researching, developing international practice standards, and ultimately providing services for persons who normally would not receive psychological care.

DISCUSSION by Aaron Krasner, MD

The case report by Dr. Quackenbush summarizes her experiences with a rapidly evolving area of psychotherapy, virtual reality psychotherapy (VRP). She discusses an avatar-based, virtual treatment she conducted over the course of several months in a virtual world called Second Life.[14] The therapist/author was based in the United States and the patient, whose identity was disguised, is described as an émigré living abroad in a country inhospitable to him and psychological treatments generally. Dr. Quackenbush conveys a sense of the psychotherapy process by providing excerpts of actual text—the treatment was predominantly text-based, although an effort was made to augment the text with telephone contact. In discussing her experience, she makes cogent and compelling arguments for why VRP may offer unique advantages, especially for patients who for various reasons cannot access conventional mental health treatments. In this commentary, I will review the topic of VRP, focusing primarily on the logistical and ethical challenges posed by this fascinating development in the field.

I am using the term VRP in this article to refer to all psychological treatments that are conducted remotely, either synchronous or asynchronously, via the Internet. Since the mid 1990s, there has been a steady increase in attention to VRP.[15] The first publications on this topic proposed employing VRP—specifically virtual reality exposure therapy (VRET)—for the treatment of anxiety disorders.[16] This application makes sense: it allows therapists to harness the virtual space to facilitate exposures that might otherwise be impossible (consider, for example, trying to do exposure therapy for acrophobia in a rural Midwestern town). The results were compelling: in a sample of college students with acrophobia, nearly all improved on primary endpoints after progressive virtual exposure.[16] Subsequently, other groups have used VRET to target posttraumatic stress disorder,[17,18] substance abuse disorders,[19] and a number of other conditions including affective disorders, so that the National Institute for Health and Clinical Evidence (NICE) in the United Kingdom now lists computer-assisted CBT (CCBT) as a first line treatment for mild depression.[20] In addition, investigators have argued that VRP may cut costs,[8] enrich psychotherapy training,[21] and increase access to care for vulnerable populations.[22] However, although there is a television series on the topic called Web Therapy, rigorous study of the professional, procedural, and practical challenges inherent in providing VRP, especially when considering using VRP for psychodynamic psychotherapy or "plain old psychotherapy,"[23] is lacking, making Dr. Quackenbush's case report timely and salient.

The problems "Ranndy" presents with are not dissimilar from the challenges patients and clinicians routinely address in mental health settings worldwide: avoidance and symptoms of social phobia, loneliness, sexual problems, and ruminative worries. Dr. Quackenbush reflects that ideally these problems would be best addressed in person and recognizes that some experts might suggest that "online therapy is not appropriate

for an individual whose primary issue is avoidance and who likely possesses some elements of social phobia" and that "the patient's Internet and sexual addictions should have been the first and foremost target of treatment." She is also mindful of the ethical quandaries posed by the fundamentals of establishing the treatment frame: in choosing an avatar, Dr. Quackenbush discloses that she elects to represent herself as a younger attractive woman, a potentially complex decision that would be helpful to understand in more depth. But this belies what ethically and logistically pose the greatest challenges to VRP: ambiguity amplification, by which I refer to the unavoidable intensification of the clinical uncertainties that abound in any person in psychological treatment. For example, would it not be possible for a friend of Randdy's to impersonate him remotely? What significance if any might the selection of multiple avatars have for the treatment? It has been argued that rapport is the cornerstone of any psychological treatment[24] and, although the impact of virtual treatments on rapport has been investigated,[25] much remains to be studied. Additional concerns, just to name a few, include licensure (who exactly is the therapist, what are his or her credentials, and where is the therapist physically located?), scope of practice, plans for adverse patient outcomes, malpractice insurance coverage, Current Procedural Terminology (CPT) coding, and documentation procedures. The list of practical concerns is lengthy and before VRP can become more mainstream, position statements from the American Psychiatric Association, the American Psychological Association, and other allied mental health governance structures must begin to address the process of standardizing VRP.

Amplified ambiguity not withstanding, Dr. Quackenbush portrays a treatment that is at once intriguing and helpful. She utilized a supportive psychotherapy perspective, enriched with elements of cognitive behavioral therapy, to target Randdy's problems, and he improves: he gets a job, stops engaging in risky sex with prostitutes, gains insight into his fears, and allows himself to venture into his First Life, ultimately disengaging from his avid use of Second Life. But we are left to wonder why Randdy gets better and thus are confronted with the enduring, sometimes contentious, question about the therapeutic mechanism of action in psychotherapy.[26] Will VRP come to be recognized as a distinct therapy on par with other evidence-based treatments or will it remain an implementation "tool?" For example, VRP might really be a first-line treatment for certain psychiatric conditions for which social interactions with therapists impede access to services (consider Asperger's disorder, anxiety disorders, and possibly certain personality disorders). If VRP is standardized, like telepsychiatry,[27] it has the potential to reach vulnerable and previously inaccessible populations.

Dr. Quackenbush's case report further opens the door for a scientifically rigorous debate about the potential broader applications of VRP. For example, as technology evolves, increasingly realistic and sophisticated models for exposures under controlled conditions are forthcoming—already, one company has developed a VRP model for PTSD in which the topography, sounds, and scenery of Iraq are faithfully replicated and utilized for therapy.[28] Computer games, like Internet based virtual worlds, are also proliferating rapidly and are adored by children. One could, for example, imagine an interactive family video game focused on coping skills as an augmenting treatment for a family therapy or an individual child's psychotherapy. Dr. Quackenbush challenges readers to ponder how the allied mental health professions can incorporate, in an ethical, mindful, and careful manner, rapidly developing new technologies into the way in which psychological services are disseminated and used. The implications of her discussion, from a public health perspective, a psychotherapy research perspective, and ethical and logistic perspective are far reaching and herald what may be a turning point in the use of technology in psychotherapy.

References

1. Castelnuovo G, Gaggioli A, Mantovani F, et al. New and old tools in psychotherapy: The use of technology for the integration of the traditional clinical treatments. Psychotherapy: Theory, Research, Practice, Training 2003;40:33–44.
2. Castelnuovo G, Gaggioli A, Matonvani F, et al. From psychotherapy to e-therapy: The integration of traditional techniques and new communication tools in clinical settings. CyberPsychol Behav 2003;6:375–82.
3. Moreland LA, Frueh BC, Pierce K, et al. PTSD and telemental health: Updates and future directions. National Center for PTSD Clinical Quarterly 2003;12:1–5.
4. Maheu MM, Pulier ML, Wilhelm FH, et al. The mental health professional and the new technologies: A handbook for practice today. Mahway, NJ: Lawrence Erlbaum; 2005.
5. Darkins AW, Cary MA. Telemedicine and telehealth. New York: Springer; 2000.
6. Morgan RD, Patrick AR, Magalette PR. Does the use of tele-mental health alter the treatment experience? Inmates' perceptions of tele-mental health versus face-to-face treatment modalities. J Consult Clin Psychol 2008;76: 158–62.

7. Gorini A, Gaggioli A, Vigna C, et al. A second life for ehealth: Prospects for the use of 3-D virtual worlds in clinical psychology. Journal of Medical Internet Research, 2008;10:e21 (available at www.jmir.org/2008/3/e21, accessed September 17, 2012).
8. Riva G. Virtual reality in psychotherapy: Review. Cyberpsychol Behav 2005;8:220–30; discussion 231–40.
9. Frueh BC, Henderson S, Myrick H. Tele-health service delivery for persons with alcoholism. Journal of Telemedicine and Telecare 2005;11:372–5.
10. Second Life website http://secondlife.com (accessed June 28, 2011).
11. Boellstorff T. Coming of age in Second Life: An anthropologist explores the virtually human. Princeton: Princeton University Press; 2008.
12. American Psychiatric Association. DSM-5 development website: Internet use disorder (available at www.dsm5.org/proposedrevision/pages/proposedrevision.aspx?rid=573, accessed October 18, 2012).
13. American Psychological Association website. Telepsychology Task Force work progresses, March 29, 2012 (available at www.apapracticecentral.org/update/2012/03-29/telepsychology.aspx, accessed September 17, 2012).
14. Boulos MNK, Hetherington L, Wheeler S. Second Life: An overview of the potential of 3-D virtual worlds in medical and health education. Health Info Libr J 2007;24:233–45.
15. Newman MG. Technology in psychotherapy: An introduction. J Clin Psychol 2004;60:141–5.
16. Rothbaum BO, Hodges LF, Kooper R, et al. Effectiveness of computer-generated virtual reality graded exposure in the treatment of acrophobia. Am J Psychiatry 1995;152:626–8.
17. Rizzo A, Parsons TD, Lange B, et al. Virtual reality goes to war: A brief review of the future of military behavioral healthcare. J Clin Psychol Med Settings 2011;18:176–87.
18. Cukor J, Spitalnick J, Difede J, et al. Emerging treatments for PTSD. Clin Psychol Rev 2009;29:715–26.
19. Lee JH, Kwon H, Choi J, et al. Cue-exposure therapy to decrease alcohol craving in virtual environment. Cyberpsychol Behav 2007;10:617–23.
20. Spurgeon JA, Wright JH. Computer-assisted cognitive-behavioral therapy. Curr Psychiatry Rep 2010;12:547–52.
21. Beutler LE, Harwood TM. Virtual reality in psychotherapy training. J Clin Psychol 2004;60:317–30.
22. Gregg L, Tarrier N. Virtual reality in mental health: A review of the literature. Soc Psychiatry Psychiatr Epidemiol 2007;42:343–54.
23. Allen JG. Restoring mentalizing in attachment relationships: Treating trauma with plain old therapy. Arlington, VA. American Psychiatric Publishing; 2012.
24. Horvath AO, Re ACD, Flückiger C, et al. Alliance in individual psychotherapy. Psychotherapy (Chicago) 2011;48:9–16.
25. Andersson G, Paxling B, Wiwe M, et al. Therapeutic alliance in guided internet-delivered cognitive behavioural treatment of depression, generalized anxiety disorder and social anxiety disorder. Behav Res Ther 2012;50:544–50.
26. Chodorow NJ. A different universe: Reading Loewald through "On the therapeutic action of psychoanalysis." Psychoanal Q 2009;78:983–1011.
27. Myers KM, Palmer NB, Geyer JR. Research in child and adolescent telemental health. Child Adolesc Psychiatr Clin N Am 2011;20:155–71.
28. McLay RN, Wood DP, Webb-Murphy JA, et al. A randomized, controlled trial of virtual reality-graded exposure therapy for post-traumatic stress disorder in active duty service members with combat-related post-traumatic stress disorder. Cyberpsychol Behav Soc Netw 2011;14:223–9.

Further Readings

Alleman JR. Online counseling: The Internet and mental health treatment. Psychotherapy: Theory, Research, Practice, Training 2002;39:199–209.

Barnett JE. Online counseling: New entity, new challenges. The Counseling Psychologist 2005;33:872–80.

Barnett JE, Sheetz K. Technological advances and telhealth: Ethics, law, and the practice of psychotherapy. Psychotherapy: Theory, Research, Practice, Training 2003;40:86–93.

Botella C, Banos RM, Villa H, et al. Virtual reality in the treatment of claustrophobic fear: A controlled, multiple-baseline design. Behaviour Therapy 2000;31:583–95.

Elleven RK, Allen J. Applying technology to online counseling: Suggestions for the beginning e-therapist. Journal of Instructional Psychology 2004;31:223–7.

Giuseppe R. Virtual reality in psychotherapy: Review. Cyberpsychol Behav 2005;8:1–21.