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Technology, Psychology, and Posttraumatic Stress Disorder

The belief that technology can make anything possible has been widespread since the mid 1990s. The Internet became the world’s first twenty-four hour library and emails became letters that arrived in less than a minute. There isn’t a single aspect of life that has not been impacted by technology. It even snuck its way into different professions, including medical fields. There are robots that perform precise surgeries, even better than the most qualified humans. And on the rise, in the field of psychology, is virtual reality exposure therapy. In all new endeavors in psychology, especially when dealing with humans and mental illnesses, compassion, and a willingness to improve life for the benefit of these individuals are the most important qualities to have. In Willa Cather’s 1927 *Death Comes for the Archbishop*, two characters that represent these qualities best are Father Latour and Padre Jesus de Baca.

Trauma itself can be defined as an individual witnessing or being threatened by death, serious injury and the possibility of causing harm to themselves or others (Diagnostic and Statistical Manual of Mental Disorders). The symptoms for posttraumatic stress disorder, known as PTSD, include experiencing the trauma repeatedly through nightmares, flashbacks, and intrusive thoughts; avoidance of people, activities or places that remind the individual of trauma; difficulty sleeping and/or concentrating; a rise in anger and irritability. Symptoms must be present for one month after a traumatic event occurs, although it may take longer for these symptoms to appear at all (Diagnostic and Statistical Manual of Mental Disorders, Symptoms of PTSD).

Traditional exposure therapy combined with talk therapy was perceived to be the most effective treatment for PTSD and trauma cases in the late 20th century. Exposure therapy is meant to help those with prolonged fear or anxiety of a certain place or thing become less fearful. In doing so, they create habituation and extinction of the fear in their mind, meaning the patient is able to tolerate their fear without excessive anxiety, become accustomed to it, and thus feel less threatened by their fear (Olasov Rothbaum, et al.). In traditional exposure therapy, patients may re-experience their memories by imaginal exposure, which is revisiting their traumatic event in a safe environment. There is also en vivo exposure, which is approaching a real situation that the patient has avoided since their traumatic experience (Olasov Rothbaum, et al., Rizzo, et al.).

 There are challenges to using imaginal and en vivo exposure therapy. In cases like imaginal therapy, the therapist relies fully on what the patient is imagining or remembering inside their mind. It may be difficult for the patient to remember and describe, as many avoid the memories on purpose. For this reason, it is difficult for the patient to fully engage emotionally, as they may not be able or willing to tolerate it, which gives the therapist little to help them with. In the case of en vivo therapy, it is quite difficult to realistically transport a patient and therapist to settings that may be similar to the ones where they experienced their trauma, for example, a hospital, a desert location, or a helicopter (Olasov Rothbaum, et al., Rizzo, et al.). Due to these challenges, it can be difficult for the patient to obtain all therapeutic benefits from these forms of treatment. In addition, an issue with all mental disorders, therapy, and the combination of both, is stigma. There is a strong stigma among peers and leaders in the military when it comes to dealing with mental health (Rizzo, et al.). If a moderately ranked individual seeks help, they may be perceived as weak, as if they cannot handle military life and its consequences. Even if an individual holds an honorable status, finding help is worrisome. One study finds that an individual who tests positive for a mental disorder is two times more likely to be concerned about finding help, and is more likely to avoid it. However, in a recent study, those in the military perceive VRET, virtual reality exposure therapy, as less stigmatizing (Rizzo, et al.).

VRET was first used with people who had specific phobias or anxieties, such as fears of flying, heights and spiders. When this method proved effective in treating patients with these forms of anxiety, psychologists and therapists turned to individuals coping with PTSD.

In 1999, VRET sessions were composed to help a Vietnam War veteran with chronic combat related PTSD cope with his trauma. In this initial study, the VRET apparatus composed of a head mounted display with headphones, through which the patient was able to hear the audio from the virtual reality experience, while also being able to hear the therapist at all times. The patient was able to communicate through a microphone attached to the headphones. The patient sat on a “Thunder Seat” which produced vibrations through a chair, and was able to move in the virtual world with a joystick (Olasov Rothbaum, et al.). These sessions lasted for 90 minutes, twice a week, over the course of 7 weeks. In the beginning session, the therapist explained how the therapy would work, especially from a viewpoint in which the patient knew they would be emotionally processing past events. Over the course of 4 sessions, the therapist introduced a breathing exercise to provide relaxation and introduced the patient to two different settings, a jungle and a helicopter. This was to ensure the patient was accustomed to the workings of VRET. For the last 10 sessions, the patient described, in present tense, their memories to the therapist who matched descriptions in the virtual world as best as possible. At the end of these sessions, the patient and therapist would practice the breathing exercise, then discuss the patient’s reactions. Before treatment, the patient matched the DSM-IV definition for having severe PTSD. Effects were not immediate with this specific patient, but six months after, the patient was categorized as only having moderate PTSD (Olasov Rothbaum, et al.). In this initial study, this was a promising outlook.

Ten years later, in 2009, VRET is more advanced, and more suited to soldiers coming home from Afghanistan and Iraq. A small handful of military bases are holding clinical trials for this technology and its potential benefits. One of those bases is Camp Pendleton in Oceanside, California. In general, these trials consist of sessions very similar to the 1999 study of the Vietnam veteran. They are able to smell, provided by olfactory stimulations, they are able to feel rumbling of tanks through a chair similar to the ’99 “Thunder Seat”. They are able to hear sounds in real time, and the joystick may be interchangeable between a handheld device or a replica of a gun with a small “thumb mouse” (Rizzo, et al.). Over 5 weeks, a patient will spend time with a therapist and the VRET system for 90 to 120 minutes two times a week for five weeks. Sessions are similar to that of the 1999 study, however, they appear to go at a slower pace. The patients in the 2009 sessions are introduced to imaginal and en vivo exposure for two to three sessions before experiencing VRET itself. When VRET is introduced, it is explained to them why VRET is an effective treatment, and the patients spend less time experiencing the world in a neutral setting. They do spend more time recounting their experiences through VRET, however. The settings for the 2009 patients are towns situated in deserts, with people who look like the natives of the country and other American soldiers, along with a Humvee setting, with as many passengers needed to fit the patient’s real life experience. There are also times when patients complete “homework” after certain sessions. For example, the second session focuses on teaching the patients about imaginal and en vivo exposure. The “homework” for that night is to come up with a list of places they might be able to experience en vivo exposure. The “homework” for each of the sessions afterwards is to listen to the recordings of their VRET experience, which will increase habituation (Rizzo, et al.).

In constructing this coping device, while keeping the ever-present image of stigma in mind, it is important to be patient and open-minded. Dealing with mental illness, no matter the time, place, or people, calls for compassion. Giving time and effort into making sure the people who protect our country are protected themselves is important. Changing and improving new systems to create benefits for individuals suffering from mental illness is important. Father Latour and Jesus de Baca take on these roles well in *Death Comes for the Archbishop*. Both characters are willing to help those around them in the community, for the community’s own benefit.

Father Latour, for example, helps two women, Magdalena and Sada, find peace in their lives through religion, the same way psychologists are helping service members and veterans with PTSD. In Magdalena’s case, she seeks out Father Latour and Father Vaillant after she tells them to run from her husband. She is looking for a way out of a life that has been full of hurt and pain, and they help her establish a new life in the local convent (Cather 77). In Sada’s situation, she is found by Father Latour, outdoors in the middle of the night, and he brings her into the church for the first time in several years. He helps to bring her faith closer to her, and she leaves warm and happy (Cather 214). In another case, he removes an immoral Father Martinez for the community’s sake. After Martinez’s dictator like reign over the church is over, the people are slow to warm up to Father Latour and the new priest that has been appointed (Cather 159). The two are new and unfamiliar, yet people recognize they have promise. This is how the adoption of VRET progressed as well. In its early uses, and even today, when its heard by those who are unfamiliar with it, it seems odd to use what most might consider a video game to help people cope with PTSD. Psychology is not blind to time change and recognizing what will and will not work with people in a given society, just as Father Latour recognized that people respond differently to certain leadership styles. Father Latour was kind to his people, yet firm and stood by his beliefs. This can be related to service members not diagnosed with PTSD, helping to advance the technological aspects of the VRET system for the benefit of those who are diagnosed. The individuals provide feedback on the overall experience, but focus on visuals and the reality of the entire experience. In fact, feedback from these service members were the reason the option of navigating with a gun became a choice. Many commented on the fact that in a real situation, it would be dangerous to walk without one, and it added to the overall experience and credibility of VRET.

Compassion can be well represented by Padre Jesus de Baca, an old, half blind priest who lives among a community of Native Americans. He raises parrots for them, as they see the parrot as a spiritual animal (Cather 85). Although Native Americans were still living in the area among Mexicans and some Europeans, they were still being persecuted. Rarely were they welcomed, or had their ideals and religious beliefs respected. They were almost never taken seriously, and yet, here was a priest who devoted his time to raising parrots on their behalf. Those with mental illness are also underrepresented and at times, can be mistreated, whether that is in a clinical or social sense. Hospitals built for those with mental illnesses have given society a bad representation of what mental illness was, and how it should be treated. Lobotomies were seen as miracles because they essentially destroyed a person’s brain, causing them to become silent, or even vegetative. Compassion is necessary to treat an individual who is struggling. That is why treatment focused around speaking to a therapist is found to be helpful, because individuals who are struggling have someone to rely on, someone who they know will support them in their endeavors to recover.

Jesus de Baca and Father Latour possess qualities that ensure the wellbeing of those in their community, and qualities like that is what drives VRET forward. Without the attention and desire to help service members and veterans who are in a constant struggle with PTSD, VRET would not be as welcome or as successful as it is today in a clinical setting. VRET technology has grown immensely since its humble beginnings in the 1990s, so much so that it is impossible to imagine what might come next in the near future. Society and the individuals that live within it constantly strive to make life better for themselves and others, and using technology to a medical advantage is one of the greatest ways to do so.

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