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Behind the Curtain:

Fetishism and the Production of Virtual Reality Treatment for PTSD

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Abstract

Virtual Iraq/Afghanistan, a virtual reality (VR) exposure therapy designed for the treatment of combat-related PTSD, has generated wide public interest in the wake of growing concerns over mental health problems among service members. Enlisting concepts from the fields of cultural studies and psychoanalytic film criticism, the paper interprets the VR therapy program as a form of technology fetishism within the expanding apparatus of military mental health operations. Even as the program seeks to expose the “invisible wounds of war,” the stories produced through this use of visual culture conform closely to hegemonic military accounts of the psychological effects of combat.

**KEY WORDS:** virtual reality therapy, technology fetishism, Virtual Iraq, Virtual Afghanistan, exposure therapy, posttraumatic stress disorder

**LENGTH:** 7638 words

## Behind the Curtain:

### Fetishism and the Production of Virtual Reality Treatment for PTSD

In *The Wizard of Oz*, an old man stranded in unfamiliar territory proceeds to assemble gadgets to create a projection of himself as a larger than life figure. Concealed by a curtain and enveloped by smoke and lights, the wizard uses this technological spectacle to dazzle the citizens of Oz while orchestrating the effects from behind the scenes. The creators of Virtual Iraq/Afghanistan, an exposure treatment for Posttraumatic Stress Disorder (PTSD), invoke this literary text to describe the workings of their technology. Adopted widely in the virtual reality (VR) literature, the term “Wizard of Oz interface” describes the role of the operator in creating and monitoring the user’s experience of the computer generated environment. In Virtual Iraq/Afghanistan, the “wizard” sets into motion a range of sensory effects to promote therapeutic outcomes. In extending this metaphor for the purpose of our critical analysis, we introduce concepts from the fields of cultural studies and psychoanalytic film criticism, particularly the concept of fetishism, to unpack the psychology embedded in this clinical application of VR technology.

Developed in the wake of the U.S. invasion of Iraq, Virtual Iraq was followed by a modified platform titled Virtual Afghanistan. After the rollout of Virtual Iraq in 2007, major television and cable networks seized on the story of a breakthrough in the treatment of military related PTSD. Psychologist Skip Rizzo (2010) at the Institute for Creative Technologies at the University of Southern California claimed the mantle of pioneering researcher in advancing this new VR application. Rizzo and his colleagues announced that this technology signaled “a virtual revolution...in the use of Virtual Reality (VR) simulation technology for clinical purposes”

(Rizzo *et al*, 2011, p. 177). The vision extends beyond treatment for PTSD to include an impressive array of future applications, from job training in the military and assessment of new recruits to clinical applications in the civilian sector. As the authors rightfully point out, “innovations that emerge in military healthcare, driven by the urgency of war, typically have a lasting influence on civilian clinical practice long after the last shot is fired” (p. 177).

In producing a documentary film on mental health practices in the United States military, we were introduced to the VR technology and became interested in the principles behind its clinical implementation, as well as the social psychological process through which it had acquired this status of revolutionary treatment for PTSD. The critique presented here draws on interviews we carried out with lead researchers, demonstrations of VR Iraq/Afghanistan, and historical research on military applications of visual technologies in the management of the emotional toll of warfare. While findings concerning the effectiveness of the VR treatment for combat-related PTSD are inconclusive (Motraghi *et al*, 2013), we were less interested in measurable therapeutic outcomes, a perennially contested area of clinical research, than in the theory behind the technology—what developers *believe* about why it works—and its narrative and visual structure as a cultural artifact. As field researchers routinely using visual methods in our own projects, we approached Virtual Iraq/Afghanistan as a film text, enlisting the critical tools of psychoanalysis for understanding its demonstrably dramatic effects.

While the clinical settings of Virtual Iraq/Afghanistan pointedly differ from the world of the movie house, understanding virtual therapeutic tools does require some interpretive framework that explains the medium itself. In her theory of spectatorship, Teresa de Lauretis (1999) describes dynamics that may be as readily applied to VR treatment as to the cinematic apparatus: “By engaging the spectator’s desire and identification in the scenarios and the

movement of its narrative, the film *moves* us (in both senses of the word) along with it, binding fantasy to images; placing, shifting, and re-positioning the spectator as a figure in that imaginary, imagined world, as one present or emotionally participating in it” (p. 307). In the VR setting, these processes of identification and spectator positioning become critical for any assessment of the technology and how it functions clinically.

Psychoanalytic theory informs a range of critiques of visual culture, from studies of spectatorship, audience reception, to analyses of the production apparatus (see Erens, 1990; Gabbard, 2001; McGowan, 2003). Through this theoretical lens, moving pictures acquire psychological force—and ideological power—through their capacity to evoke unconscious fantasies and to structure them within a social symbolic register. One of the recurring criticisms of psychoanalytic film theory, however, is that the reach of its conceptual claims exceeds its grasp in the domain of cultural applications (Bordwell and Carroll, 1996). The prototypical spectators that emerge from the pages of cine-psychoanalysis, critics suggest, do not represent actual moviegoers. In our analysis of VR therapy, we address this potential for over-reach by staying close to the clinical phenomena and bringing into our critique points of view that have gained currency in the VR field. Our aim is to demonstrate the contribution of a psychoanalytic framework to a broader discourse on the psychology of the VR technology.

### Navigating the Virtual Reality Environment

Christian Metz (1982) is credited with extending the concept of fetishism to the cinematic setting and its hypnotic effects—how the darkness of the theater and the vaulting screen, with its larger than life images, stir fantasies associated with the imaginary. Like the sexual fetish object, the cinematic apparatus permits entry into a world of images that evoke pleasure and anxiety, and where, like the unconscious itself, time, space, the body, and death defy the reality principle.

As part of the left tradition of film criticism, Metz enlisted psychoanalysis to show how cinema operates as a dream machine, manufacturing forms of desire that conceal its methods of production. Metz was more concerned with the technology of film and its power as an industry than with how bourgeois ideology shapes its content—an area of critical analysis pursued by other early film theorists. Whereas European colonial thought framed fetishism as the practice of primitive peoples, possessed by child-like beliefs in the magical power of objects, Metz frames fetishism as a problem at the very center of modernity: “The cinema fetishist is the person who is enchanted at what the machine is capable of, at the *theater of shadows* as such” (1982, p. 74). This theater of shadows evokes the allegory of Plato’s Cave, the recognition that humans are image-producing beings, and that the mechanisms for producing images are often invested with a kind of surplus symbolic power.

Virtual Iraq/Afghanistan makes use of this same human tendency for hypnotic engagement in moving images under the rationale that the apparatus facilitates the accessing of traumatic memories and their disturbing affective states. Proponents claim that Virtual Iraq/Afghanistan helps warriors who present with avoidance and emotional numbing by immersing them in stimuli that break through defensive barriers (Reger and Gahm, 2008; Sanchez-Vives and Slater, 2005). On the one hand, the VR program may be interpreted as anti-fetishistic in its psycho-educational mission. The program aims to bring the unconscious processes elicited by the hyper-sensory environment into conscious awareness. Even as the patient experiences the scenes with palpable sensory immediacy, the process includes periodic interruption of psychic immersion in the stimulus field to critically reflect on the scenes. On the other hand, the psycho-educational edifice of VR therapy goes only so deep. We explain here

how the apparatus operates as a form of technology fetishism in disguising the symbolic system that structures the imaginary processes elicited by the virtual world.

Much of the enthusiasm for the VR technology centers on what developers claim to be its enormous appeal for tech-savvy young warriors (Reger, Gahm, Rizzo, Swanson, and Duma, 2009). However, the set-up seems more evocative of a mental colonoscopy than a video game arcade. Clinician and patient peer into an unfolding drama pictured as a descent into the mental refuse of the horrific business of war. The clinician has the task of customizing the programmed option in order to “match” the index trauma that is introduced during the assessment phase of treatment by the patient. Their aim is to introduce sufficient intensity and realism to promote a sensory experience of immersion. As the authors repeatedly insist, the VR set-up is no mere mental conditioning apparatus, nor is it a “Clockwork Orange device” for re-programming the person (Rushkoff and Dretzin, 2010)—a reference that itself registers some anxiety on the part of developers.

In both the research protocols and clinical applications, patients must meet diagnostic criteria for combat-related PTSD and present “an identifiable traumatic event” that they can “work on in therapy” (McLay, et al, 2012, p. 636). Clinicians then create an individualized program from a set of preprogrammed options. From the pre-treatment assessment through the series of sessions, the patient is asked to tell the index trauma story repeatedly until habituation to the arousing stimuli is achieved. The set-up includes a computer where the therapist sits alongside the patient as he peers into a head-mounted display while often holding a fake firearm. The apparatus includes at least two network-connected computers and monitors, one running the virtual environment experienced by the patient and the second holding a control panel with baseline data on patient arousal levels and a menu for the clinician to select and regulate intensity

levels of various stimuli introduced into the Virtual Reality environment (e.g., explosions, smoke and other combat events, background sounds, weather, time of day). The therapist uses the repertoire of pre-programmed 3-D animated scenes, along with the choices for added visual effects and auditory stimuli, to stage the trauma story in the VR environment. The therapeutic progression follows a narrative arc from “safe” scenes, such as simply driving a Humvee along a generic desert road, to more threatening landscapes that are thought to correspond to the trauma memory.

The scenarios typically start with the patient either walking in a Middle Eastern town, as though on patrol, or driving a Humvee on a desert road with another soldier in the passenger seat. The movement of the images progresses from relative calm to war-like horror set in combat zone landscapes, from a marketplace, cityscape, desert road, to hospital with injured people and a helicopter medivacing patients. The clinician operator can modify the scenes to include other soldiers or civilians—men in Middle Eastern garb, women in burkas, and children. Among the Middle Eastern cultural themes, mosques and minarets are prominent features of the architectural *mise-en-scène*. Prayer calls often accompany these scenes. One sequence option centers on a soldier on patrol who is searching a house, with a man kneeling on a prayer rug with his hands tied behind his back.

Skip Rizzo describes one prototypical sequence and the technology available to the clinician in working with the trauma story.

So you're in a Humvee, going through the desert or a mountainous environment, or you're in a city. From that base, then we have hot zones throughout where we can introduce stimulus elements, an IED a vehicle blowing up, an insurgent coming out of the palm grove and shooting at you. Getting attacked while you're going under a bridge. At a



checkpoint. So we're able to add these things in on the fly, or take them away. (Rushkoff and Detzin, 2010)

The stimuli gradually intensify with the addition of explosions, sounds of military vehicles and helicopters, along with IED and rocket blasts. This escalation is described as matching the hierarchy of events associated with the trauma memory established by the service member. Much like action films that revolve around heart-pounding mortal threats to the hero, whether car crashes, gunfire, or blown up buildings and bodies, the Virtual Iraq/Afghanistan drama centers on a similarly escalating sequence of lethal threats. Other soldiers or civilians can be introduced into the scenes, and one option includes a voice yelling, "Yankee, go home." Other menacing sounds include shouting in Arabic and dogs barking. The clinician monitors specific "hot spots" in the story where the patient's arousal is high, and gauges when to retreat to "safe zones." Rizzo emphasizes the crucial role of the clinician in monitoring the hot spots.

And the therapist encourages you to stay with it. Stay with the thought. Tell me more. Tell me a little bit more about this, about that. And eventually you see that anxiety level begin to diminish. The patients will tell us on scale of 1-100, we call it a SUDs rating, Subjective Units of Discomfort. "I'm at a 40." "OK, stay with it," "Oh, I'm at an 80 now." "OK, let's back it down." And you want to keep that moderate level of anxiety there, because only by experiencing that, and having nothing really bad happen, can that anxiety response extinguish, and the person start to habituate. Then you add more elements into the scene. (Rushkoff and Detzin, 2010)

The escalation of arousing stimuli is calibrated according to what the patient finds subjectively tolerable. The aim is to increase intensity as the story is repeatedly told and advances in dramatic vividness over the course of a number of sessions. Therapeutic effects are

measured by physiological and subjective responses suggesting that habituation has been achieved. The VR session is followed by “processing the experience, reinforcing the courage to complete the exposure, identifying unhelpful interpretations of events or views of oneself, generating alternative ways to understand the event...and processing unrealistic guilt or responsibility taking.” (Reger and Holloway, 2011, pp. 90-106). The explicit aim of these interventions is to alleviate the service member of neurotic guilt or anxiety. But the question of who is redeemed or relieved of guilt over warfare, and how military identifications are mobilized in the drama, remains outside of the frame of the VR procedures.

### Fetishism and Film

The concept of fetishism, a term bridging Marxist and psychoanalytic traditions of critical inquiry, carries us some distance in interpreting the processes embedded in the virtual reality program. While differing in their material grounding of the problem of fetishism, Marxist and psychoanalytic formulations share an emphasis on fetishism as a form of misrecognition, an operation that alienates the subject from some aspect of the subject’s own existential being. And in both traditions, the fetish object serves as a disguise, substituting for a disavowed aspect of psychic or social reality (see Zizek, 1989).

Marxist cultural theorists have enlisted the concept to describe tendencies in capitalist systems of production to conceal the mental and physical labor embedded in goods created to meet human needs (Edgar and Sedgwick, 2008; Strinati, 2004). As fetishized products of labor, commodities acquire the appearance of autonomous objects within an impersonal realm of exchange, dissociated from the human activity that produced them (Billig, 1999). Virtual Iraq/Afghanistan operates within this system of capitalist exchange as a product that generates a surplus (profit) for producers. Creators of the VR treatment argue that its success is predicated on

its cultural affinity with a generation motivated by technology and “enamored with games” (Rushkoff and Detzin, 2010). Service members routinely play video games in combat zones, fortifying the technology as a gateway into treatment. In the late 1990s, the Army created a \$45-million research program to tap into the entertainment industry's high-tech expertise, establishing the Institute for Creative Technologies at the University of Southern California to develop military video programs. The Virtual Iraq program was developed from a platform for the Army's *Full Spectrum Warrior*, a Department of Defense-funded video game that, while unsuccessful as a training tool, was commercially successful for THQ, the company that developed the product (Mead, 2013). In the process of converting a video game to a treatment for combat, the VR program both acknowledges and disavows its dependence on the suffering of war. In describing the product on their website, UCT promoters explain how the VR program leverages “virtual art assets that were originally built for the commercially successful X-Box game and combat tactical simulation scenario, *Full Spectrum Warrior*” (“Virtual Reality Exposure Therapy,” 2014).

The tech-savvy warriors described by VR developers have been acculturated into conventions in Hollywood films as well as war games—conventions that mobilize masculine anxieties and structure them within a symbolic social register. Caroline Bainbridge and Candida Yates (2005) describe the preoccupation in Hollywood films with a male protagonist in crisis, and how contemporary cinema both acknowledges the fantastical illusions of hegemonic masculinity while offering phallic imagery to shore up these same illusions, particularly in high-velocity action films. The authors argue that mainstream films create “empty fetishistic spaces for identification rather than transitional ones which imply movement and creativity” (p. 305).

From a classical psychoanalytic perspective, the fetishist attaches to an object at the site of a psychic conflict—a defensive operation that permits a transfer of values from a scene of threat to a proximal object invested with the power to contain that threat. For Freud, fetishism develops as a masculine defense in response to infantile anxiety over sexual difference. In discovering that his mother does not have a penis, the male child disavows this fact by imagining that the maternal body is the same as his own. The child then fixates on an object (the fetish), which serves as both a substitute for and a denial of the imagined phallus. The fetish object, Freud argues, is located in some proximal way to the site of disturbing absence, often the genital area, and allows the boy or man to enter the woman's body without threat of being overtaken by the sexual difference.

From a Winnicottian perspective, the distinction between transitional and fetishistic objects centers on the degree of psychological flexibility in the use of the object—much along the lines of the transitional space described by Bainbridge and Yates. Fetishism operates as defensive disavowal of a perceived threat, whereas the transitional object facilitates entering and exploring some realm of the feared unknown. But it is important to recognize the dynamic interplay of these two uses of objects, as well as the popular tendency to equate fetishism with sexual pathology (Kaplan, 2006). As Henry Kripps (1999) argues, fetishism functions quite variably within cultural registers. The fetish object “substitutes for that which is and must remain repressed” (p.7). From a Lacanian perspective, repression involves the structuring of psychic experience within a rule-governed symbolic system that excludes aspects of subjectivity even as it grants entry into the discourse of the master. The sexual difference emerges as a site of exclusion in patriarchal societies, with the phallus (and castration anxiety) serving as signifier of both this exclusion and the lack against which it defends. A key political question centers on

what (and who) is excluded in this entry into the master discourse—the Law of the Father—and the precariousness of various defenses in play.

Virtual Iraq/Afghanistan aims to represent what developers describe as the “moral hot spots of war,” even as the technology forecloses on analysis of the soldier’s relationship to the big Other of the military. These hot spots—the images at the periphery of explosive action—correspond to what Lacanians describe as *objet petit a*, the site in the visual field where the image speaks back to the subject and reveals something of the Real—the traumatic scene, formulated as the gaze, that eludes any process of representation. The clinical preoccupation with managing stimulus properties of the field and physiological indicators of stress carry a palpably manic quality as well. The clinical focus on managing the action may be a defense, what Louise Kaplan (2006) describes as a *fetishizing strategy*, in managing the depressive side of the picture.

The VR technology also enlists both clinician and patient in processes of identification that restore the warrior to the system of signifiers that have been destabilized by reactions to combat. Through diverse theoretical moves, Lacanian film theorists explain how spectator positions are organized around identifications with the point of view of the camera, and in ways that disguise operations of power (see McGowan, 2003). The dynamic of identification presupposes a readiness on the part of audiences to fetishize—to fixate on visual objects as a defense against unsettling images on the periphery of the scene—images that evoke unconscious anxiety because they evoke awareness of the gaps—the lack—at the center of the illusion.

Military clinicians experience these gaps as acutely as do soldiers seeking treatment. Robert McLay (2012), one of the lead researchers on the early team at the Naval Medical Center in San Diego, describes this history in a narrative account of his conversion to the VR method. Aptly titled *At War with PTSD: Battling Post Traumatic Stress Disorder with Virtual Reality*, the

book unfolds as a story of a profession at war with an aggressive mental condition. In this staging of mental health problems associated with warfare, clinicians emerge as the heroes. Enlisting the trope of “the invisible wounds of war” in describing PTSD, the story unfolds as counter-insurgency psychiatry in a valiant fight against a hidden and elusive psychic enemy. Yet the soldiers—as well as their emotional wounds—are eclipsed by the bravado of clinicians in combatting PTSD.

McLay (2012) departs from conventional scientific reports and industry promotional materials in revealing some of the behind-the-scenes struggles over control of the VR research and business investments in the technology. He describes the early scene when he came on board to head one of the academic partnerships assembled to move the project through the institutional research review process. Recruited by several researchers working on the VR program, McLay confesses, “I was hooked.” The VR method gathered up a mix of ideas from psychology and packaged them as a hefty high-tech commodity.

#### Ideology and Virtual Reality Fetishism

In her classic paper, “Visual Pleasure and Narrative Cinema,” Laura Mulvey (1975) argues that classical cinema enlists masculine identifications whereby the “lack” that constitutes entry into the symbolic order produces pleasure by projecting that lack onto screen images of the woman as object of the camera’s gaze. Early feminist critics drew on this line of analysis in deconstructing cinematic codes, particularly prevalent in Hollywood films, which fetishize representations of woman—her face, legs, breasts, or entire body. Mulvey introduced the concept of scopophilia and the phallic gaze as constitutive of the male subject position, organized around disavowal of the “lack” at the center of the phallus as a fantasy object. Mulvey’s work gave rise to a series of critiques in the 1980s, both as the theory seemed to reproduce a dualistic model of

sex differences and as it foreclosed on possibilities for pleasurable forms of female spectatorship (Flisfeder, 2012; Manlove 2007).

Yet Mulvey (1975) does identify a dynamic in modern cinematic culture that mediates socially available modes of defending against the experience of vulnerability and loss. Even as the fetishistic gaze registers the failure of the subject to hold onto an imaginary unity with that first love object, as the desire of the Other, classic cinema ushers the masculine subject into a symbolic order that sutures over that lack. While no one actually “possesses” the phallus as fantasy object and promise of plenitude, the male subject is authorized to lay claim to its social symbolic currency. Feminist theorists argue that fetishism operates as a prototypical masculine defense in that it is organized around ways of making use of images to protect against feelings of helplessness and traumatic loss (Silverman, 1988; Roderick, 2010).

A key difference between going to the cinema and entering treatment for PTSD, however, centers on the indexical correspondence between the projected images and their referent experiences. Yet the preprogrammed options of Virtual Iraq/Afghanistan register Hollywood tropes for storytelling as much as they do the specificity of the service member’s combat memories. Silverman (1988) suggests that the work of cinema is itself a form of collective response to divisions and splits in the male subject—attempts at reparation by projecting the sense of loss onto the woman who is positioned as symbol of lack and serves as fetish object that protects against awareness of loss. Yet gender codes circulate within a complex signifying system not reducible to images of woman as Other. The patient position is itself feminized (e.g., associated with weakness and dependency)—a problem that the military openly acknowledges and attempts to correct through the development of more masculinized treatments. Silverman’s analysis applies as readily to the VR method as it does to cinema: “when a film

covers over the absent real with a simulated or constructed reality, it also makes good the spectating subject's lack, restoring him or her to an imaginary wholeness.” (p. 10) But the imaginary wholeness can never be attained, so each image of fulfillment generates more desire.

This approach to fetishism—as organized around ritualized structuring of the experience of lack and loss—widens the space for extending psychoanalytic film theory to the clinical apparatus of VR treatment for war-related PTSD. Virtual Iraq, as a representation of a trauma experience that relies on a technology produced by the Department of Defense and its entertainment industry partners, calls for an exploration of fetishism as an ideological operation. The treatment—much like classic cinema—employs conventions that disguise their ideological operations. Balsamo (2010) describes the VR user experience as a “disembodied gaze—a floating, moving ‘perspective’—that mimes the movement of a disembodied camera ‘eye’” (p. 625).

Enlisting the work of Roland Barthes and Lacan, Jennifer Friedlander (2008) distinguishes between two conceptually distinct modes of ideological disguise. One mode, introduced by Lacan, centers on *objet petit a*—the subject’s fascination with an object in the field of vision that evokes an unsettling curiosity. The gaze emerges as a perceived property of the object, a location for the projection of unconscious anxiety. There is an obsessive aspect to this gaze, even as it serves to ward off the experience of psychic instability. But Friedlander explains how the social contexts of disturbing images—the cultural scaffolding of *objet a*—shape the psychological strategies available for containing their disturbing effects. The more effectively the image is integrated into a rational and normative system of signifiers, she argues, the more likely the image operates ideologically (and repressively). But there is a perpetual tendency in this field of vision for a return of the repressed, and for the disguise work of the fetish to break down. The



key analytical question for Friedlander centers on the framework available for bringing cracks and contradictions in the social order into a rationalizing system of signifiers.

### The Mental Health/Military Complex

As Žižek (1989) argues in his analysis of ideology, “the function of ideology is not to offer us a point of escape from our reality but to offer us the social reality itself as an escape from some traumatic, real kernel” (p 45). In the decade of warfare since the invasion of Afghanistan following the attacks on 9/11, the United States military has promoted greater openness in acknowledging and “normalizing” the mental health consequence of warfare. And as mental health services have become an integral component of war planning, clinicians, whether in the active component, reserve or guard units, must reconcile military and therapeutic objectives. Whether as deployed clinicians or working in the Veterans Administration system, therapists are on the front lines of a growing mental health crisis related to over a decade of ongoing and open-ended warfare (Kennedy, 2009; J. Sardo, personal communication, June 8, 2011; D. Rabb, personal communication, July 4, 2011). Treatments often center on getting soldiers with post-trauma reactions back to duty or ready to redeploy. The therapeutic space to reflect on past experience is typically narrow, both as a result of the sheer magnitude of cases and the recognition that many service members treated at the VA are transitioning back into service. As Cors et al. (2013) argue in their call for rethinking treatments for combat-related PTSD, veterans and service members carry idealized images of a warrior identity cultivated by the military to advance the mission. In returning home, however, many confront the destructive aspects of the warrior imago: “He is told to celebrate his aggression and his strength, but military training necessitates the repression of the individual warrior” (p. 428).

As part of a broader campaign to overcome the stigma associated with mental health services, Virtual Iraq/Afghanistan is advanced as consonant with the “gear” associated with military culture (Gerardi *et al*, 2008; Rizzo, *et al*, 2011). While VR therapy seeks to emotionally involve service members, a key promotional selling point centers on its potential appeal to service members who are averse to what psychologist Skip Rizzo terms “touchy-feely tell-me-about-your-mother type of therapy” (Maynard, 2007, p. 60). Indeed, the challenges involved in finding this therapeutic space between disarming and fortifying the defenses of veterans requires an array of clinical tactics, particularly as clinicians feel the pressure to fulfill demands for stretching military “assets” (i.e., personnel).

In describing the appeal of Virtual Iraq/Afghanistan, Ken Graap, former President and CEO of Virtually Better Inc., a pioneer in virtual reality exposure therapy, similarly stresses its masculine ethos:

I think that intensity fits with a warrior's ethos. You're taught to attack and take control and dominate. And here's a problem that's really the opposite: it's dominating you. So we can use the training and the experiences soldiers have and turn it against the anxiety. (“Therapeutic War Game,” 2010)

If military therapists are haunted by the tradition of the Freudian couch, therapists operating VR machines leave such uncomfortably intimate associations behind. Clinicians deploying the VR gear simulate a world where the warriors they treat are thought to be most at ease: holding a weapon and playing war video games. And this gear provides the fetishized armor necessary to probe the dangerous “feminine” emotional terrain of PTSD—feelings of helplessness, dependency, and vulnerability.

Psychoanalytic psychologist and cultural theorist Sherry Turkle (2011) describes the Western tendency to enlist technology in the management of social problems as a form of misguided optimism: “As other things go wrong, science will go right” (p. 11). Her critique of “technological optimism” emphasizes the aura of fetishistic magic surrounding devices that arouse both panic and fantasies of quasi-magical powers (Turkle, 1999). Turkle (2011) takes as a premise the human tendency to develop emotional investments in objects as a defense against existential threats, as well as feelings of helplessness, loss, and powerlessness.

The pathological side of the equation unfolds as dominant institutions exploit this human fetishizing tendency, deploying technology to project an illusory sense of mastery and to disguise operations of power. In his analysis of interface computer technology as fetish objects, Jeremy Huggett (2004) takes up its “origins in the earliest media representations of computers as vast machines served by stereotypical little men in white coats” (p. 85). The Wizard of Oz interface registers what Huggett describes as “the mystification of the computer and the mediation of the expert” (p. 85). Ian Roderick (2010) concurs in this emphasis on obfuscation in fetishistic uses of technology. Based on a content analysis of press materials related to military roll-out of robotics to protect soldiers from IED blasts, Roderick identifies technology fetishism by its system of cultural signifiers. “For an object to acquire the status of fetish,” he suggests, “it must be transformed into a sign of cultural value and this transformation is derived from its appropriation into social relations” (p. 244).

### Producing the Trauma Story

Initial clinical applications of Virtual Reality therapy emerged in the early 1990s to address phobias but failed to generate sufficient medical interest or capital for further development of prototypes. Early applications of VR to anxiety conditions were based on

classical conditioning principles in the treatment of agoraphobia (North *et al*, 1996) and acrophobia (Rothbaum *et al*, 1995). Therapists found that patients were able to enter a virtual world of anxiogenic scenes long enough to undergo a form of desensitization. In the 1990s, Barbara Rothbaum and her colleagues developed an early prototype of a virtual combat environment based on these same behavioral principles, integrating images of clearings in “jungle” terrain and helicopter sounds (Rothbaum *et al*, 1999). Their single-case study of treatment with a Vietnam veteran led Rothbaum and her colleagues to prognosticate on the benefits of VR treatment for combat-related PTSD—a conclusion that, while meager in empirical support, proved prescient in forecasting trends in the field. Interest in therapeutic applications of VR lagged until the early 2000s, when U.S. Department of Defense funds powered a new wave of partnerships between technology companies and universities. Virtual Iraq/Afghanistan was one of the most viable and visible offspring of those partnerships.

The VR Iraq/Afghanistan protocols describe the treatment as a variation of Prolonged Exposure Therapy (PET), one of the leading treatments available through the VA system. Founded on the work of Edna Foa and Michael Kozak (1986), PET brings more of a theory of mind to understanding mental links between unconditioned and conditioned responses than the earlier models. Consistent with the general cognitive turn in psychology during this same era, prolonged exposure therapy focuses on beliefs mediating systems of emotional arousal. But just as cognitive behaviorists tend to think of the mind as the locale of discrete mental events, PET tends to adopt a narrow conception of mental life. The therapist focuses on cognitive distortions, for example, the tendency to over-estimate the frequency of threatening events. In convincing the patient that exposure to trauma has produced an over-reactive nervous system, where a mere whistle sets off a four-alarm alert, the patient gradually learns to inhibit the conditioned fear.

Virtual Iraq/Afghanistan also is a product of a long history of debate over psychological representations of war-related trauma—debate that tends to be repressed in the technological optimism of the VR discourse. One approach emphasizes conflict over participation in the violence of war and existential uncertainty over how to distribute moral responsibility for its destructiveness (see Grossman, 1996). The other approach focuses on psychophysiological effects of combat, from exhaustion, mental shock, to over-excitation of the nervous system. While based primarily on a psychophysiological model, Virtual Iraq/Afghanistan does integrate psychodynamic principles in its focus on accessing fragmented unconscious imagery and disturbing affective states.

In his critique of PET oriented therapies for PTSD, Richard McNally (2007) focuses on the gap between the relatively crude neuropsychological models that predominate in the field and the lived experience of trauma: “Because the world is not a text decomposable into propositions, it is very difficult to design a session that “matches” the content of the fear network in any precise kind of way” (p.752). Yet it is the fetishized apparatus of the VR treatment machine that permits the bridging of this gap. On an unconscious level, the site of the match is where the traumatic loss is both recognized and disavowed—the *objet petit a* of the VR field. As Ben Singer (1988) suggests, fetishism is a response to the disturbing “unveiling of a lack” and its mechanism lies in its capacity to suture over that lack (p. 7).

The narrative structuring of Virtual Iraq/Afghanistan also re-boots World War I psychology with its application of an impact model of shell-shock. The disturbing experiences associated with warfare are framed through the VR lens as threats emanating from the enemy—as external events, much as psychiatrists during the First World War initially framed shell shock as a physical impact produced by enemy forces. In one case report, Greg Reger and Gregory

Gahm (2008) echo this impact model in describing how “ambushes can be triggered at multiple different locations in the environment, which allowed the clinician to recreate a simulation that resembled that of the index trauma” (p. 943). Camouflaged in this blast of military technology are the lived experiences of patients themselves. Much as Virtual Iraq/Afghanistan has been represented by developers and the media through stereotypical storylines, the signs and symbols that constitute the VR therapeutic landscape tell a story that foregrounds some experiences while repressing others.

A TEDx presentation of the VR program (TEDxUSC, 2010), performed by Rizzo at the University of Southern California, illustrates this displacement of the gaze from sites of unsettling vulnerability and ambiguity—the *objet a*—to the phallic imagery dominating the scene. The demonstration features a man in army fatigues standing to the side of the stage. A technical assistant introduced as Brad plays the role of patient in the demonstration. As the patient moves his head to take in the view, the large screen shows an outdoor marketplace and a woman wearing a Burqa. “As Brad walks through the environment,” Rizzo explains, “we can make things happen like we can introduce a dog barking... or an RPG.” The barking and booming sounds erupt into the display, muting the ambient city sounds. As the patient approaches a group of Iraqi civilians, Rizzo remarks, “We can make something very dramatic happen.” Sounds of blasts, gunfire, and screaming erupt, followed by helicopters and sirens at the “high end” denouement. The civilians dissolve in the blast of imagery.

In his book on the VR method of treating war-related PTSD, psychologist Robert McLay (2012) describes the procedures that follow identification of the index trauma, introducing a case example: “We have you tell the story of what happened that day and use the virtual-reality simulator to illustrate the things you were talking about” (p. 165). The soldier contests this

prompt to describe a traumatic episode: “Doc, but I’m telling you, there is no particular story to tell. I’m willing to admit that I changed after my first deployment but there wasn’t anything that stood out” (p. 165). In this clinical search for the index scene, traumatic memory itself is fetishized.

### Conclusions

In approaching Virtual Iraq/Afghanistan as cultural artifact and form of technology fetishism, we offer a critical reading of this program as a medium for treating military-related trauma. In the fields of cultural studies and film theory, fetishism refers to emotional investment in an object or apparatus as defense against what the whole of the larger field of perception might evoke. Technology fetishism holds a particular affinity with the male gaze, where the presence of gear protects against “feminized” feelings of helplessness and vulnerability. As Roland Barthes (1981) argues, the fetish object does not simply distract; it takes the subject away from the threatening (castrating) scene. Our analysis enlists this line of film theory to suggest that the Wizard of Oz interface operates as a defensive apparatus for clinicians, and as an illusory form of control over combat reactions among veterans. Indeed, the promotional rhetoric of Virtual Iraq/Afghanistan may be most appealing to military clinicians themselves in its adoption of war imagery and casting of providers as valiantly engaged in battle with the “hidden enemy” of PTSD.

The field of psychology carries a long history of serving the military through methods for controlling human behavior. Since World War I, film and visual images have been deployed to dramatize the power of psychological science to restore emotionally broken soldiers, and to fortify the masculinist ethos of the military itself. After a decade of war and mounting concern over mental health impacts of repeated deployments on service members, Virtual Reality

treatment may be interpreted as a stage act for a war-weary public—a spectacular display of the powers of psychology to bring about a cure. Concealed in this Wizard of Oz performance are the structuring effects of the technology on memory and on how the story of war gets told. The sensory immersion of VR technology produces a picture of the combat environment where all of the threats emanate from an externally placed enemy, visually repressing moral conflicts over the war and struggles within military culture. Despite claims of clinical objectivity, the VR narrative is directed, much like any Hollywood production, by the scriptwriters. And like Hollywood films, the seeming realism of the story enlists service members in an emotionally significant scene, but not one of their own making.

While Virtual Iraq/Afghanistan is not intended to replace “traditional” treatments, its adoption as a cost effective technology represents one of many Department of Defense campaigns to manage the escalating psychological toll of warfare. Much as the Wizard of Oz character projects an image that depends on human readiness to believe in the act, the purchase of contemporary treatments for military-related trauma requires a “buy-in” from the broader public. The price of the ticket may be more costly than it appears, however, particularly as the illusions of showmanship become increasingly visible.



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