ARTICLE
Simulated War: Remediating Trauma Narratives in Military Psychotherapy

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Abstract
How have the politics of therapy been reconfigured during the so-called Global War on Terror? What role have the new virtual reality therapies that so resemble other forms of military simulation played in this reconfiguration? In this article, I draw upon feminist science and technology’s (STS) theorization of human-machine interaction into order to interrogate how contemporary therapies for treating post-traumatic stress disorder (PTSD) reconfigure agency in the practice of healing. Analyzing trauma therapy as a site of reconfiguration, I show how new exposure-based therapies for PTSD—both with and without virtual reality—configure aspects of human subjectivity, such as memory, affect, and behavior, as objects for technological intervention. Through comparative analysis of different modalities of PTSD treatment, I show that the politics of therapy is especially enacted through the therapeutic remediation of trauma narratives: the mediational practices through which a traumatic memory is made available for therapeutic reworking. Therapeutic remediation practices configure therapists, patients, and nonhuman actants as subjects and objects with different forms of agency.

http://www.catalystjournal.org I ISSN: 2380-3312
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“It matters what stories make worlds, what worlds make stories.”
–Donna Haraway (2013)

Introduction

The virtual reality (VR) war simulator called Bravemind has been one of the most well publicized military simulations to emerge during the “War on Terror.” It was invented in 2005 at the University of Southern California’s Institute for Creative Technologies (ICT), the military-funded digital media research center developing immersive technologies methods including artificial intelligence, graphics, virtual reality and narrative that has been dubbed the heart of the military-entertainment (or “militainment”) complex for its innovative work in creating and studying video games and training simulations and studying in the service of diverse military ends.¹ Formerly called Virtual Iraq/Afghanistan, Bravemind is distinct from most of the virtual war zones created at ICT in that it was designed as a therapy system to treat psychologically wounded warfighters, and not to train for battle. Though not fully capitalized, the system’s name is in fact an acronym, standing for Battlefield Research Advanced Virtual Environment for Military Individual Neuro-Disorders.² Through a practice called “virtual reality exposure therapy” (VRET), service members and veterans with post-traumatic stress disorder (PTSD) interact with VR interfaces to become immersed in simulations of their traumatic experiences of war, with the goal of amelioration and cure.

In this article, I draw upon feminist science and technology studies’ theorization of human-machine interaction to interrogate Bravemind’s role in reconfiguring agency in the practice of healing the traumatized self. By the term reconfigure, I draw on Lucy Suchman’s and Donna Haraway’s concept of technologies as materialized figurations that stabilize assemblages of things and meanings, and which imply ways of associating humans and machines (Suchman, 2007, p. 227, explaining Haraway 1997, p. 11). I argue that Bravemind is an instrument of governmentality, a technology that aligns post-traumatic care for veterans
with the interests of the state in managing this particular population. Yet this role is not determined by the technology itself; rather, it is contingent upon the technology’s development specifically as a tool for conducting prolonged exposure (PE), a therapy which has recently ascended in popularity as a medicalized regimen of PTSD treatment. I argue that PE’s treatment protocol depoliticizes the production of trauma narratives in PTSD treatment, which I illustrate by contrasting its configuration of therapy against that of an approach oriented to social justice. Further, Bravemind codifies this medicalized configuration at the same time that it reconfigures therapy. Analyzing Bravemind as a site of reconfiguration, I also draw on the work of Karen Barad to reveal its role as an apparatus that makes agential cuts between subjects and objects in therapy (Barad, 2003). These cuts further configure aspects of human subjectivity, such as memory, affect, and behavior, as objects for technological intervention. I characterize these specific practices as ones of therapeutic remediation. Comparative analysis of different modalities of therapeutically remediating trauma narratives demonstrates how the politics of therapy for PTSD are embedded in the ways in which therapists, patients, and nonhuman actants are configured as subjects and objects with different forms of agency.

My argument here is based on a broader project entailing a multisited ethnographic study of VRET’s development and dissemination in the military clinical psychology community since 2009. This includes surveying the scientific literature on exposure therapy for PTSD with and without VR, and analyzing more than 150 popular-media accounts of VRET. I have also interviewed dozens of therapists who treat military veterans, both with and without virtual reality, and attended military and Department of Veterans Affairs (VA)-sponsored workshops, conferences, and seminars on PTSD treatment. These sources provide the basis for my analysis of Bravemind’s politics as both a cultural and clinical object. Here, however, I will focus on the politics of therapeutic remediation to illustrate that, as a material technology, Bravemind’s role in reconfiguring therapy cannot be separated from the practices and protocols that define
the contemporary regime of evidence-based treatment for PTSD in systems of service member and veteran mental health care.

Though this analysis applies to PTSD therapy broadly, it has a special salience in the context of care for military veterans because this population is so inherently politicized in American culture, serving as a kind of avatar of the state due to their unique position of service. Veterans have a special kind of citizenship wherein they can make claims upon the state for their care. The care they receive scales between individual experience and the cultural meaning of warfighting itself.\(^3\)

There are several important processes of figuration through which Bravemind reflects the disarticulation of science and morality in therapy: 1) by figuring efficacious therapy as an impersonal, technical, and empirically supported technique rather than as intimate, personal, and political practice; 2) by figuring PTSD patients’ pathology as avoidance of traumatic memories, rather than as either the original traumatic experience or its effect on the body, and thus situating trauma narratives as behaviorists’ tools for habituating patients to stimuli rather than to sources of historical truth; and 3) subsequently depoliticizing war itself as a source of trauma. Each of these sites configures the relative agency of patients, therapists, and technology by mediating their interactions within the process of therapy.

To illustrate the politics of therapeutic remediation in the case of Bravemind, in the following sections I trace figurations of the relationship between the clinical science of PTSD care and the subjectivity of the service member across several sites. First, I examine the public representations of Bravemind to show how these do political work by producing a new visual culture of therapy that conforms to imaginaries of the cybernetically militarized mind while also performing the military’s dedication to PTSD care. Then, turning to the question of what Bravemind does within the clinical setting, I introduce the concept of therapeutic remediation as a conceptual tool for interrogating the politics of producing trauma narratives. I use this conceptual tool to analyze approaches to the (therapeutic?) production of trauma narratives before Bravemind in PTSD
treatment as an explicitly social-justice-oriented political project. From there, I introduce PE, the technique upon which VRET is based, to illustrate how it creates a depoliticized approach to trauma narratives. Having done this, I revisit Bravemind’s design and use to show how Bravemind, as a tool for remediating PE, extends and reifies depoliticized logics of trauma-narrative production. I conclude by asking how we might imagine different configurations through which VR might be reimagined and reclaimed as a feminist technoscientific therapeutic tool.

**Militarized therapy or medicalized media?**

Though not the most widely practiced PTSD therapy, VRET using Bravemind is the most powerfully evocative and publically visible configuration of the US military’s contemporary efforts to provide post-traumatic care. Bravemind has been the subject of hundreds of news stories, and it has appeared on television crime dramas, in an exhibit in the Museum of Modern Art, and even in a question on the game show *Jeopardy*. In journalism as well as in fiction, Bravemind has been portrayed as a technology that provides access to true experiences of military trauma, allowing the therapist to reach beyond the defenses of a warrior’s traumatized mind to access a horrific memory, bring it to the light of day, and heal the psychological wounds it has left.

For example, Elaine Zimmerman’s 2007 *Salon* article, “Getting Blown Up Again and Again,” performs a collapse of soldier Kevin Smith’s military experience and his immersion in VR in its opening paragraph:

Kevin Smith and his unit have just finished an unsuccessful search for snipers inside a house in Fallujah and are headed back to their base. Smith is behind the wheel of a Humvee, the seat beneath him vibrating from the familiar roaring engine. He makes a left turn and suddenly there is an ear-splitting boom, an explosion right behind him that rocks the vehicle. The sky goes dark and smoky, and Smith senses the piercing pain of shrapnel in his neck and hands. The Humvee’s radio crackles with voices asking for
information, as his mind races. Will there be more explosions or a hail of bullets from unseen snipers? Are his fellow soldiers hurt? Time seems at once to speed up and slow to a crawl. Then, just as suddenly, a voice cuts into the nightmare: “What are you thinking right now?” (Zimmerman, 2007)

Zimmerman further explains that Smith was not actually having a nightmare about his deployment with the US Army in Iraq; rather, he was engaged with “a cutting-edge therapy that uses a high-tech virtual reality system to treat war veterans afflicted by post-traumatic stress disorder” (ibid.). In popular accounts like this, Bravemind is presented as a technology that provides access to the private nightmare of war trauma. Yet what is at stake in VRET is not the ability of warfighters to share their memories of war, but rather their ability to take control of their affective responses to reminders of war, both internal and external, and, though I will not focus on it here, creating a new visual culture for therapy that aligns with ideas of militarized masculinity. In these ways, Bravemind enacts what Emily Cohen (2016) calls a “utopia of the militarized mind”: an aestheticized fantasy of simulations with the capacity to rewire and repair the traumatized self.

This is evident in the visual culture of these stories. Patients shown using the Bravemind system are in most instances men in uniform or sporting a military-style high-and-tight haircut. Fitted in VR stereoscopic goggles, with digital desert images projected on the screen behind them, these men appear to be conducting a kind of military training exercise that will enable them to leave the war behind, rather than a psychotherapy that will help them to make sense of their experience. The therapist is in most cases excluded from these representations, suggesting the autonomy of the system. This exclusion follows the logic of the discourse that surrounds drone systems, in which the pilots who remotely operate these “unmanned” aerial vehicles are similarly rendered invisible (see Chandler, 2016). When therapists are included in representations, they tend to be characterized as technicians, a figuration that reorients viewer attention from the patient-therapist relationship to the relationship between the
patient and the computer terminal (through which the therapist nonetheless controls imagery). These visual tropes lead viewers to understand that the military has created a VR technology that can rewire the minds of troubled warriors, one that any therapist could step into and use. The question of professional identity is further complicated by that fact that the majority of the VA clinical psychotherapy staff is composed of civilians—and of civilian women, therapists with no military experience. Indeed, these stories and accounts about the technology imply that Bravemind’s interfaces are set up so that even civilians with no military experience can readily call up their patients’ traumas “over there,” and though most therapists are female, they may perform their job without themselves invoking any of the “feminized” skills of psychotherapy, such as asking questions, listening, and empathizing, as the program engages the patient through the screen, and not through the therapist. Bravemind’s digital archives already “know” what is traumatic about war and how this needs to be sensorially experienced to be overcome, it would seem.

In this way, as several commentators have noted, Bravemind extends the militarized techno-subjectification performed by programs in which digital representations “prehear” trainees in the experiences of war, bringing the logic of contemporary simulation-based military training into the therapeutic realm (Brady, 2012; Dyer-Witheford & De Peuter, 2009; Power, 2007, 2009). As the other authors in this issue show, the American military has invested great hope in simulations as tools for pre-exposing new service members to the “reality” of war. But what does this mean for the politics of care? Scholarship on military simulation and training often focuses on nonverbal human-computer interaction as form of affective indoctrination through which recruits are trained to become killers (Levidow & Robins, 1995; Protevi, 2008). Extending this critique to VRET, Valiaho (2012) argues that it is a video-game-like biopolitical tool for rewiring the traumatized mind through affective engagement with nonverbal media.

During VRET, however, patients do speak: They tell the narratives of their traumas. But stories are no less political than nonverbal media in
their role of configuring subjects. Since the late 1990s, military simulations have become increasingly narrative as well. This is why both ICT and Fort Irwin (see Rice, 2016) are located so close to Hollywood and employ screenwriters. As both a material spectacle of military power and an interactive procedural technology, the military-industrial-entertainment network is an enactment of a fantasy that through simulation-mediated exposure to virtual war, new service members can be inoculated against the real thing (Ghamari-Tabrizi, 2011). It is predicated on what Suchman calls the “productive elision of the difference between the real and the virtual in technoscientific military discourses” (2016). On the ambiguous battlefields of contemporary counterinsurgency, one’s own morality, and that of the mission, often is provoked into question. For many critics of military simulation, the political problematic of simulations lies in simulations’ erasure of actual death and dismemberment at the same time that they promise inoculation against the fear of what are in fact very real potential outcomes. In other words, military simulations depoliticize war through narratives that attempt to contain the traumatic.

VRET differs from military video gaming and training in a key way: Rather than using simulation to provide users with digitally mediated experiences of war zones—either in anticipation of actual interaction with them or as a space of militarized play—they simulate war for those who are already intimately familiar with its violence. Some scholars therefore see VRET as evidence that even though simulation might not be able to protect against combat trauma, it at least has the power to heal (Blascovich & Bailenson, 2011; Gilsdorf, 2009; Mileham, 2008; Zagalo & Morgado, 2011). Even scholars who are otherwise critical of digital militainment look to VRET as evidence that the same kinds of new media technologies can heal the trauma of war (Mead, 2013).

I argue that Bravemind’s politics is best understood by analyzing its role in both clinical healing and military subjectification. Care-giving itself is biopolitical. What is seen as a wound, how these wounds are treated, and whose wounds receive treatment, are questions that point to sites where care divides the world. The advent of VRET illustrates Jennifer
Terry’s contention that “medical techniques and violent warfare function in a relationship of mutual provocation, provoking one another in a manner that indicates the close ties between hygienic and military logics in modern US empire building” (Terry, 2009, p. 202). Bravemind helps the military not only to meet its need to treat service members with PTSD but, just as importantly, to publicly perform that it is fulfilling this need with the same level of high-tech efficiency with which it strives to conduct all other aspects of its operations.

But in what ways does this logic of techno-efficiency actually affect the practice of therapy? How does it affect the ways that service members and veterans are imagined to heal from traumatic experience and reorient themselves in relation to their traumatic memories? Reading Bravemind as a technology of therapeutic remediation enables us to see how the politics of trauma narratives extend beyond questions of their veracity and into the ways that their agency is configured in care. Despite its frequent framing as cutting-edge and high-tech, VRET actually represents a conservative approach to PTSD treatment. Its primary innovation is to codify a medicalized and depoliticized understanding of the role of the narrativization of traumatic experience in post-traumatic healing. In contemporary clinical psychology, trauma narratives have come to take on an instrumentalized role as a tool for exposure of the past that often precludes a future-oriented ameliorative politics.

Seeing the production of trauma narratives as a mediated practice allows us to ask how other configurations of simulation technology in therapy might produce different kinds of agential cuts with different kinds of politics equally worthy of investigation as modes of post-traumatic healing.

**Therapeutic remediation and reconfigurations of the self**

In analyzing the moral implications of new technologies in therapy, it is important not to lose sight of the fact that therapy itself is a technology. Elizabeth Wilson makes this point eloquently about ELIZA, the artificial intelligence program designed to mimic the conversational patterns of a
Rogerian non-directive psychotherapist (Wilson, 2010; see also Weizenbaum, 1976). Wilson draws attention to two paradoxes that lie at the heart of psychotherapy. First: “The counter-intuitive notion that psychotherapy is an artificial encounter.” It is a “model relationship” structured by “dispassionate rules about how long treatment will take, about what will be said, and about what it will cost, about where it will take place, about what may and may not pass between therapist and patient.” Second: “The paradox that psychotherapy builds autonomy through relatedness” (p 83).

Wilson’s analysis draws attention to the fact that all therapeutic encounters seek to transform aspects of human subjectivity through artificially structured practice. The artifice of therapy is often disregarded because it is conventionally an intimate encounter performed only through the exchange of words during face-to-face interaction. The setting itself and the set of rules that govern it are easily overlooked as central aspects of the program’s material apparatus. ELIZA is a technology, one of the variety that Michel Foucault calls a technology of the self—an apparatus that defines the workings of inner life and makes it available for reworking (Foucault, 1988). Technologies of the self are distinct mediators of configuration because the objects they are designed to act upon—human minds—are also subjects. To use the language of materialist feminist science and technology studies (STS) scholars, such as Karen Barad and Donna Haraway, therapy is a performatively posthumanist reconfiguration that centers on the transformation of human subjectivity (Barad, 2003; Haraway, 1997).

I describe the material-semiotic practice through which the dispassionate rules that structure this model relationship are used to reshape subjectivity as therapeutic remediation. Media theorists Jay David Bolter and Richard Grusin define remediation as the process through which content is transformed in its transfer between material media forms (Bolter & Grusin, 1996). Drawing on this, therapeutic remediation describes processes whereby aspects of the self—especially those defined as disordered—are made accessible and reworkable with
the intent of fixing those defined as dysfunctional. Though therapies treat
the accessed aspects of self as preexisting the processes of mediation, I
take more of an agnostic, symbolic interactionist view on this point: There
is no way of knowing selfhood outside of interaction. In keeping with this
logic, I use the term “remediation” instead of “mediation.” The former term
brings into view the context of therapy itself, and its technologies, as a
primary aspect of mediation, and as a situation that defines the patient’s
affects as mental illness in the first place. This concept I am proposing,
“therapeutic remediation,” provides an alternative framework for
interpreting the activities that take place in therapy and the mechanism of
change than those provided by the clinical theoretical regime of the
therapy’s creators. It draws attention to therapy as an intersubjective
material-semiotic practice through which subjects and objects are
produced and interpreted while acting within broader cultural contexts.

The artificial structure of therapy can vary greatly between different
therapeutic practices. Across the range of psychotherapeutic practices,
the inner world is therapeutically remediated through a variety of media
tools as diverse as language, role-playing, art therapy, and biofeedback to
make emotions, cognitions, and memories available for reworking. Each
provides a meditational structure through which therapeutic power is
enacted. But even within a particular therapeutic medium, its affordances
can be used to configure the processes of therapeutic mediation differently
both materially and discursively. In so doing, each practice makes
different kinds of agential cuts between subjects and objects, including
therapists, patients, affects, behaviors, traumatic memories, and
narratives.

Practices of therapeutic remediation are political because they
enact an understanding of the source of the patient’s lost agency and the
mode through which it can be restored. For example, therapy can be used
as a tool for encouraging patients to see themselves as victims of injustice
or as sick and disordered individuals (Halleck, 1971). Specific therapies,
the psychological theories that justify them, and the ways they are
practiced configure understandings of selfhood and disorder. This is
inherently a site for the enactment of power.

**The politics of remediating trauma narratives**

The politics of therapy is especially salient in the treatment of PTSD because it is among the few diagnoses in the corpus of Western psychology defined not only by symptoms and biology but also experience. To receive a diagnosis of PTSD, a patient must not only exhibit specific symptom clusters but also have experienced or witnessed a traumatic event. The DSM defines a traumatic event as one “that involved actual or threatened death or serious injury, or a threat to the physical integrity of self or others” (American Psychiatric Association, 2000). Numerous efforts have been made to define PTSD biologically and neurologically, but from a psychotherapeutic perspective, PTSD is regarded primarily as a disorder of time (Young, 1995). The symptoms that define it are viewed as originating in a past experience of violence. The politics of therapy for PTSD lie within how such therapy encodes an understanding of the relationship between traumatic experience and long-term dysfunction and how to restore patient autonomy in the wake of trauma.

Many forms of psychotherapy for PTSD posit that to restore agency, the patient’s memory of the trauma must be accessed, reproduced, and reconstructed. These “trauma-focused therapies” (as opposed to “present-centered therapies” that focus on building skills for coping with the present) include various mediational practices such as telling the story of the trauma, writing it down, or role-playing. I consider many of these to entail the production of trauma narratives, by which I mean any mediational practice that aims to organize the fragmented, sensory elements of traumatic memory into a form with coherent structure including a beginning, middle, and end. Yet the ways that agency is imagined to be restored through the production of trauma narratives vary greatly across different PTSD therapies. I have shown elsewhere through comparative analysis of VRET systems, analyzing how therapies distribute
the agency involved in producing the trauma narrative and contextualizing its meaning provides a valuable method for evaluating the politics of PTSD therapy (Brandt, 2013). This matters because trauma narratives themselves have been so deeply politicized. Therefore, to show how Bravemind depoliticizes therapy for military PTSD, it is valuable to examine how trauma narratives became politicized in the first place and then examine how a politicized therapy configures agency in care.

Since the social-justice movements of the late twentieth century, the narration of traumatic experience has been considered a cornerstone of activism, providing the communicative basis upon which to form allegiances between the personal and political. But the political status of trauma narratives is historically contingent on the way that the PTSD diagnosis itself shored up the memory sciences as a resource for the moral status of victimhood (Fassin & Rechtman, 2009, pp. 8-9). That is, scientific research on traumatic memory became a tool for validating claims of psychological injury. Using the history of military psychiatry as a case study, Fassin and Rechtman show how the therapeutic interpretation of psychological war trauma its narration shifted. Early 20th century military medicine saw it as malingering and trauma narratives as evidence of cowardice. Only after WWII did war trauma come to be seen as a normal response to an abnormal situation, with trauma narratives as tools for making sense of senseless violence (see Fassin & Rechtman, 2009, pp. 40-93). The authors argue that the therapies developed by caregivers working with combat veterans have reflected attitudes towards the waged war more broadly, as the mythical heroism of the Great War gave way to the tragedy of the Vietnam War (see also Danziger, 2008).

At the culmination of these processes during the late 1970s, antiwar activist veterans formed a coalition with antiwar psychiatrists (including, most visibly, Robert J. Lifton and Chaim Shatan) to petition the American Psychiatric Association (APA) to recognize war trauma—which they called “post-Vietnam syndrome”—as a legitimate diagnosis. These activists saw the creation of this diagnosis as a political act, one that would hold the
government accountable to treating the invisible psychological wounds of war (Nicosia, 2004; Scott, 2007). The official recognition of war trauma proposed not only a political diagnosis but a political therapy: Lifton argued that the only way that veterans who had experienced the atrocity of war could heal would be to commit to a life of activism, which itself entailed sharing the stories of what they had witnessed to counter the war propaganda and dismantle nationalist myths about war’s glory. Though Lifton was adamant that veterans were not victims, they nevertheless were situated as victims of a corrupt government that had drafted them into an unjust war (Dean, 1997; Lifton, 1973).

To gain legitimacy in their effort to have the APA recognize a mental illness with an etiology of catastrophe, the veterans formed a coalition with feminist therapists and others working with populations such as victims of rape, child abuse, terrible accidents, and disasters. The medicalization and moralization of trauma culminated in 1980, when the APA included PTSD in the third edition of the DSM in 1980. The feminist and social justice-oriented psychotherapists involved in this movement often developed their therapies based on political reinterpretations of psychoanalytic trauma theory (Fassin & Rechtman, 2009).

Though a wide variety of therapies emerged from this work that use different practices for therapeutically remediating trauma memories as narratives, they share a similar understanding of why this restores agency for patients with PTSD. In what I generically refer to as “social justice-oriented therapy,” PTSD is seen as a literal registration of an atrocity onto the patient (Kaplan, 2005; Leys, 2000). The traumatic event is figured as an agential actor that causes symptoms by acting upon the mind and body of the victim. Crucially, from this perspective, trauma is prediscursive: violent experience overwhelms the viewer such that “the most direct seeing of a violent event may occur as an absolute inability to know it” (Caruth, 1996, pp. 91-92). These symptoms semiotically index traumatic experience; they are seen as evidence that atrocity has taken place. Traumatic experience is figured as an agent in this view. It takes agency away from subjects, decentering and objectifying them while writing itself
upon them. For some thinkers, traumatic experience is actually a proxy for social injustice itself: Only those forms of violence that are socially disavowed can be so overwhelming as to produce trauma in the first place (Edkins, 2003).

According to this approach, before traumatic memory can be remembered—before it can be known to the mind as part of the story of the teller's life—it must be narrated. The process of constructing narratives restores agency by transforming the inarticulate, vividly felt, structureless collection of sensations imprinted on the body into a story. In this view, therapeutically remediating traumas as stories is healing because it turns them into culturally meaningful objects. In producing the trauma narrative—in media including stories, art, and role-playing—the patient acts as a creative agent, transforming the traces of trauma’s agency over the self into objects that they themselves can control.

In this view, therapeutic healing through the production of trauma narratives must be social. Therapists empower their patients by facilitating their ability to remediate the trauma and provide structure to it. They are competent subjects who teach decentered ones how to regain autonomy by scaffolding their agency against trauma’s overwhelming incoherence. This role has a second, specifically relational function because the therapist also acts as a witness to the telling. Feminist psychotherapist Judith Herman thus views the therapy relationship as inherently political: “To study psychological trauma means bearing witness to horrible events…when traumatic events are of human design, those who bear witness are caught in the conflict between victim and perpetrator. It is morally impossible to remain neutral in this conflict” (Herman, 1997, p. 7). To facilitate the patient’s healing, the therapist must identify trauma as evidence of collectively structured atrocity and not individual pathology.

Producing trauma narratives thus entails a second form of patient empowerment: By speaking the truth about the conditions that had caused the trauma—whether it be sexual violence, child abuse, or the atrocities of war—victims’ trauma narratives are seen as a kind of political
witnessing against the violence in society that might otherwise remain invisible. A patient heals by telling this story, which itself is a kind of activism. Herman explains, “Remembering and telling the truth about terrible events are prerequisites both for the restoration of the social order and for the healing of individual victims” (Herman, 1997, p 1). Patients who learn to tell their stories through therapy can then use this skill to share those stories broadly. In this way, therapeutic remediation of trauma as narrative is figured as a prerequisite for the kinds of self-narrativation that has long been considered a cornerstone of feminist praxis, and was also central to Lifton and other antiwar activists’ understanding of the role of narrative in treating war trauma.

Analyzing the configuration of agency in the social-justice-oriented approach to therapy provides a valuable point of comparison through which to support the claim that VRET is part of a regime of PTSD therapy that depoliticizes trauma narratives. But I do not intend to present the social-justice orientation uncritically. Several important issues arise from this configuration of PTSD therapy. For one, it does not require recognition of the victimhood of the enemy Other: those human beings who consistently die at much higher rates than American service members during US military interventions. Another key issue is that in helping patients to produce stories, then, therapists working from a social justice perspective see themselves as producing documentation of atrocity. It is taken for granted in this perspective that these narratives are true; the processes through which they are mediated and the ways power might be enacted between therapist and patient must be disavowed, lest the therapist admit that the atrocity being narrated may have been adulterated in the process of producing the narrative. As Marita Sturken explains, "It is narrative integration that produces the memory of the traumatic event. It is when they become full-blown narratives that these memories tell stories of blame and guilt" (Sturken, 1999, p. 235). But as Ian Hacking has shown in his work on false memory, suggestion is all too common among therapists who see themselves as doing good (Hacking, 1998). This can actually serve to politicize certain sites while depoliticizing others. In his
ethnographic study of one of the first veterans’ PTSD treatment centers in the US, Allan Young (1995) describes how group therapy taught Vietnam veterans to describe their current suffering—including problems with homelessness, unemployment, and substance abuse—as stemming from their combat experience rather than from societal problems in the United States.

Though widely influential in the humanities, activism, and feminism more broadly, social-justice approaches represent only a subsection of clinical care for PTSD. For many researchers working to develop therapies within a medical model of mental illness, the moral status of representing the trauma is not considered as important as demonstrating measurable symptom reduction. In this paradigm, which serves as the basis for VRET, the only moral good in treating PTSD is the capacity to reduce individual suffering. In the following section, I analyze how the configuration of agency in PE therapy—for which Bravemind was designed and marketed as a tool—evacuates the politics of producing trauma narratives. These therapies, especially for veterans, produce therapeutic healing in ways that subsume and efface issues of political activism, empowerment, and social justice.

**Evidence-based therapy and depoliticized trauma**

PTSD was medicalized in order to hold the military accountable for treating the psychological wounds of veterans, but doing so reopened the production of knowledge about post-traumatic care to medicalized rationality with an intensity not seen since the First World War. (Danziger, 2008; Shephard, 2001). For academic clinical researchers working outside of the activist milieu, the newly defined mental illness PTSD became an object of disinterested study. In 1980, when PTSD became officially recognized as a legitimate diagnosis, clinical psychologists pushed to develop new kinds of therapy based on medical models of mental illness that could serve to replace the creaking edifice of psychoanalysis. These clinical researchers—foremost among them the
cognitive behaviorists—sought to develop standardized therapies that could be systematically studied as treatments for specific diagnoses defined through quantifiable diagnostic questionnaires and validated through clinical trials with statistically significant treatment populations defined by a shared illness category.⁶

In the mid-1980s, a team of researchers led by Dr. Edna Foa and colleagues at the University of Pennsylvania began to develop prolonged exposure as a technique for treating female sexual-assault victims. PE is a category of clinical behavioral interventions used in the treatment of anxiety disorders. During the mid-20th century, behavioral psychologists developed a range of exposure techniques, such as systematic desensitization and flooding (a form of respondent conditioning), as treatments for anxiety disorders, especially phobias. These practices were premised on the behaviorist view that in conditions of irrational anxiety, an organism becomes overwhelmed by fear of stimuli in the world in excess of their capacity to be harmed by them. Through repeated, controlled exposure to anxiety-provoking stimuli, the organism—be it a mouse or a veteran—learns that it will not be harmed and eventually come to fear the stimuli less. Foa and her colleagues hypothesized that PTSD is similar to a phobia, with the key difference that PTSD originates not from an “irrational” fear but from a specific, often life-threatening experience (Foa, Steketee, & Rothbaum, 1989). Foa and Kozak proposed an “emotional processing theory of trauma,” a behaviorist model of trauma as a learned fear response (Foa & Kozak, 1986). According to this model, during a traumatic event where someone is in great physical danger or sees another person in danger, they will become hyper-attuned to the situation. Their mind will create a “fear structure,” a set of associations between all the stimuli present in the situation, including not only those that it is rational to fear but also ones that were previously neutral. Invoking the cognitivist language of the mind as information-processing apparatus, Foa and her disciples refer to the fear structure as a “program’ for escaping danger” (Foa, Hembree, & Rothbaum, 2007, p. 12).⁷ Based on this model, the researchers developed a protocol for an exposure
therapy, one of the primary components of which is using the patient’s trauma narrative as a source of stimulation in order to rewrite the escape program. In essence, the patient is treated as if they have a “trauma phobia.”

Protocols are technologies that standardize the therapeutic intervention so that it can be studied. They describe what the therapist should be doing with the patient throughout the course of treatment, as well as how long the treatment should last and what measures should be taken to produce evidence of effectiveness. Since the 1990s, Foa and her colleagues have become among the foremost researchers in the United States developing treatment protocols for PTSD and running clinical trials to study their efficacy. Based on this work they published a manual in Oxford University Press’s “Treatments That Work” series titled *Prolonged Exposure Therapy for PTSD: Emotional Processing of Traumatic Experiences*. The manual objectifies therapy in the form of a Latourian “immutable mobile”; as a “manualized” therapy, PE can serve not only as a mediator of affects and memories, but also as a social actant that diverse groups can recognize as a “treatment that works” independent of the specific therapist doing the treating.

PE was the first therapy for PTSD to be systematically studied using clinical trials, which has had important policy repercussions. During the War on Terror and the revelation of high rates of PTSD, the VA has become the largest funder of PTSD treatment research in the world (Morris, 2015). Even though veterans are not the largest population of PTSD sufferers—a greater number of individuals are diagnosed with PTSD after sexual assault and motor-vehicle accidents—the military’s responsibility to provide care for PTSD as a wound of war has positioned the illness as an important biopolitical issue in the operations of the War on Terror. The social toll of PTSD extends beyond individual suffering, as high rates of suicide, homelessness, substance abuse, domestic violence, and unemployment have been linked to the illness, creating not only social strife but also terrible public relations for the military. Subsequently, the goal of military-funded PTSD research has been to support the
development and dissemination of efficient, evidence-based, and highly scalable treatments. In this milieu, prolonged exposure has thrived, receiving more research funding and dissemination efforts than any other therapy for treating PTSD in military populations. Since 2008, VA regulations require all therapists to be trained in empirically supported treatments and all veterans seeking PTSD care to be offered the option of PE.

Thus, when accused of using a “war game” as therapy, VRET advocates have been quick to defuse this criticism by drawing attention to the fact that systems like Bravemind are based on PE (Hanafin, 2010). They recognize that while the media is attracted to the narrative of Bravemind as a modification (or “mod”) of a military video game, its legitimacy within military funding agencies and therapeutic community has been contingent upon that of PE more generally. In the contemporary milieu of Department of Defense and VA funding for clinical research on PTSD treatment, technology is legitimized largely by its capacity to deliver treatments that are already evidence-based through novel formats believed to increase their dissemination or efficacy.

PE entails four main components, which are introduced throughout the course of the protocol: psychoeducation, breathing retraining, in vivo exposure exercises, and prolonged imaginal exposure exercises. Each of these steps is a site where the subjectivity of the patient in relation to the experience of trauma, its memory, and the meaning of remembering is potentially reconfigured. The standard protocol lasts for roughly 12 sessions, usually with one or two sessions per week. Success is formally defined as when the patient’s subjective units of distress on a 100-point scale are lower, when they say they feel better, and/or when they have a sub-threshold score on a diagnostic questionnaire used to assess PTSD symptom severity. Bravemind uses almost exactly the same therapy protocol as traditional PE. Indeed, Barbara Rothbaum, Foa’s former student and coauthor of the standard PE manual, helped develop the first VRET system for PTSD—called Virtual Vietnam—and is a co-author of the manual for conducting VRET with Bravemind. The only difference
between the protocols is that during the imaginals, the patient narrates their index trauma while they are interacting with the interfaces of the VR system, which is partially controlled by the therapist. Practices of therapeutic remediation in PE are no less influential on the political configuration of agency than they would be if Bravemind was, in fact, a war game. But it is only by taking it and other VRETs seriously as therapeutic technologies that this becomes apparent. While patients produce trauma narratives, the theoretical framework and practices through which these narratives are mediated—those of PE—serve to technicize the process and pathologize the patient’s behavior instead of the event. At the same time, the PE framework elevates the agency of the therapy itself as an actant that produces healing and diminishes both the patient’s agency and the importance of the therapeutic relationship in tandem.

At the beginning of the therapy, the therapist provides what is called “psychoeducation.” During this phase, the therapist explains the emotional processing theory of trauma, which provides the theoretical underpinning of PE as an intervention. This step serves as a primary mediation through which the patient’s past experiences are interpreted as traumatological and their affects and behaviors are interpreted as symptoms of PTSD. In training seminars I have attended, therapists usually use examples from nonmilitary contexts to explain fear structures in psychoeducation, which serves to make trauma into a non-gendered, universal experience. During one PE clinical-training session I attended, for example, the trainer explained that if we are in a bank at the time of an armed robbery by a bald man, we may develop a fear of not only guns but also of banks and bald men for some time after. The therapist will explain that this situation is “normal” and “evolutionarily advantageous.”

Like the humanistic view, the evolutionary view of PTSD figures traumatic events as agents that act upon the subjectivity of the patient. Yet, crucially, this influence is not seen as the source of pathology in PTSD. In psychoeducation, the patient learns that it is not the traumatic event that caused their PTSD, but rather the strength of their will in
avoiding triggers. Continuing our previous example, everyone in the bank robbery may be traumatized, but over time, those who go back to the bank and other places where they see other bald men will unlearn their association between these elements and the terrifying experience of armed robbery. These neutral elements, in other words, will disarticulate from the fear structure, while elements that are rational to fear, such as a person with a gun, will remain. Experiencing this habituation entails being willing to experience the distress of these triggers and re-learn the safety of the everyday. For those who choose not to allow themselves to experience this loss of control in relation to the material force of the trigger, the fear structure remains intact and may even become stronger. In working with military populations, therapists may highlight that veterans’ combat training makes them especially good at suppressing feelings of distress. To heal, they must let down their guard and bravely face the event again in a “safe” context to “learn” that the event itself is not to be feared.

At the end of the first PE session, the therapist introduces breathing retraining. This is the only skill that the protocol directs the therapist to teach the patient as a way to control feelings of distress consciously. Breath control is a tool for ensuring that the patient remains calm and does not hyperventilate or pass out while narrating the trauma, which would offer them an effective means of avoidance. As a tool, it originates in the PE protocol, which is mediated by the therapist to the patient, who then uses it to overcome the body’s defenses against the agency of triggers. It configures the patient as an agent over their own autonomic responses, but only to the extent that breathing enables the body to feel, control, and regulate the affective intensities generated by the story. 8

After the patient has received psychoeducation and breathing retraining, they decide on what trauma they will repeatedly narrate during imaginal exposures. This is called the “index trauma.” During imaginals, as some therapists call them, patients repeatedly narrate their selected index trauma. They narrate in the first person, in the present tense, with their eyes closed. While they are doing this, the therapist directs them to
give more detail, asking questions like, “What happened next?” “What are you seeing?” and “What are you hearing?” The therapist tries to get the patient to produce a full narrative of the event with a beginning, middle, and end, in as much detail as possible. Rather than see this work of structuring the narratives as a way of empowering the patient by stabilizing the story as a cultural object, in PE the purpose of this work is to create the most complete representation of the trauma possible to maximize its power as a stimulus. In PE, narrative is not a tool for speaking truth to power or uncovering repressed memories that need to be witnessed and shared. It is not seen as a source of meaning, a representation of true events, or even a representation of the patient’s interpretation of the event. Instead, it is figured as a collection of stimuli, a tool for activating the fear structure by re-exposing the patient to the situation of the trauma. Its “truth” is performed only through its effectiveness in producing affect.

This configuration erases the social and cultural role of trauma narratives. Rather than serving as a political witness, the therapist’s role is figured as that of a fear technician who makes sure the patient stays affectively engaged as they produce the narrative. By performing the task, the stated goal is to help the patient “habituate,” or decouple their fear response from the stimuli. While social-justice-oriented therapy sees value in having patients share the emotional intensity of their stories as a way to produce collective recognition and condemnation, for PE therapists the ultimate goal is to erase the affective charge of the story. Repetition reprograms the patient’s fear structure so that the trauma narrative becomes “just” a story, a series of words. Indeed, sessions are audio-recorded and the patient is assigned the “homework” of repeatedly listening to the narrative. Though some patients may choose to share this recording with others, the possible social role of the narrative is not something taken into consideration by the emotional processing theory. In one clinical training I attended, a trainer instructed therapists to discourage their patients from sharing this recording with loved ones as it would be irresponsible to expose others to trauma narratives who do not themselves have access to therapy. This framing of the purpose and therapeutic
action of constructing a trauma narrative also figures the meaning of being a patient: Rather than being seen as a victim of politicized social violence who must speak against it to heal, the patient is seen as exhibiting a normal behavioral response to fear-inducing stimuli which they must overcome through exposure. Instead of emphasizing the importance of sharing stories with others, the emphasis is on facing fears.\(^9\)

While the selection of an index trauma may seem to be a moment of agency for the patient, it can also be a site where the material agency of narrative as a formal structure may constrict what is said. For example, David Morris describes the decision to focus on the experience of riding in a Marine helicopter while it was under fire over Fallujah rather than the “moments of moral chaos” that haunted him because it was easy to narrate (Morris, 2015, p. 170). If a patient decides partway through therapy that they would rather work on a different index trauma, the therapist may interpret this as a sign of avoidance and insist they stick with the original trauma. Of course, the patient may want to switch index traumas for other reasons, such as building trust with the therapist and becoming willing to discuss past actions that they may feel too ashamed to describe at first. This is especially salient for military patients who worry about being judged by civilian therapists for traumas like the discovery of their own pleasure in killing. This difficulty of locating the “true” index trauma, that which the patient is avoiding and which can be seen as both the source of pathology and key to dismantling it, is one of the greatest challenges in configuring PE therapy for military populations.

However, PE’s characterization as an empirically supported therapy, an agent that works in treating PTSD, can serve to stabilize and contain this challenge to PE’s legitimacy. Some PE therapists will suggest to patients who do not comply with the protocol—including sticking with the index trauma—that they are not ready to get better. As one PE therapist explained to me, she tells such patients that by failing to comply with the therapy protocol, they are setting themselves up for failure. Rather than have the patient blame the therapy—which she believes in—for their lack of improvement, she prefers to stop therapy altogether. Of
course, a therapist could do this with any therapy, but the definition of PE as an empirically supported therapy lends gravity to this decision, which makes it more difficult for the patient to insist that another therapy would serve them better.10

In his autobiographical account of PTSD, David Morris describes his interaction with a clinical researcher at the VA in San Diego as he was about to enter a study on PE as a way to get off of a therapy waitlist. The study coordinator, Mark, tells Morris that “the cool thing about prolonged exposure” is that, “this is a treatment that we know absolutely works for PTSD. I know it sounds arrogant but if you get into this kind of treatment and do the work that your therapist tells you to do, you’ll have a huge improvement in your symptoms. If you don’t, you won’t” (Morris 2015, p 169). Among PE’s true believers, like Mark, there is strong skepticism towards patient agency in directing the treatment, even when it exacerbates patient symptoms. Similar to Mark’s warning, I have often heard training PE therapists advise each other to tell patients that therapy is like working with a personal trainer at the gym, because if patients do the exercises incorrectly, they may think the program is working but will not see the same benefit or may even hurt themselves. “Feeling the burn” is a good thing. A few weeks into his treatment with PE, when Morris finds himself increasingly agitated and suicidal, his therapist assures him that the problem is not the therapy: If he will only stick to the protocol, he will eventually get better. Fearing for his life, Morris opts to terminate treatment instead.

Perhaps the greatest opportunity for patient agency within PE is the step called in vivo exposure. This step occurs between meetings, when the patient is not with the therapist. These are activities from patients’ day-to-day life that they have stopped doing since they have had PTSD because they cause so much anxiety. Common examples include many aspects of American consumerist and leisure culture, including shopping at the grocery store, going to sporting events, and watching movies in the theater. Though framed as exposure—an inherently passive and objectifying process—in vivos can be the most agential component of PE
for patients, since they are able to choose activities that help them to regain a sense of autonomy in their lived worlds.

**Bravemind as augmented PE and political agent**

If PE is already empirically supported, why augment it with virtual reality? For one thing, PE has not proved as effective in combat trauma populations as it has in other PTSD populations. Many reasons have been hypothesized, including the complex nature of war traumas, gendered norms around masculinity and personal confession, and lack of trust between military patients and civilian therapists, among others. VRET advocates often frame this problem of ineffective therapy as both stigmatic and signaling inadequate engagement on the part of the patient. They suggest that VR can help overcome the stigma of therapy and make it more effective by making it more engaging via its remediating qualities: The advantage of using VR in PE is to give the therapist even more agency in the therapeutic process. Bravemind’s inventor Skip Rizzo explained this ethos to me during our first conversation in 2008:

> VR provides a tool that's an equalizer so that somebody's who a good therapist who understands exposure can do exposure therapy more effectively with the VR application than if they have to be real creative and artistic in how they help guide a person through the treatment, never knowing if the person's really imagining or engaging in that imagery or if they're even relevant. At least we know what the person is seeing there on the outside. We don't know what they're seeing in their minds, but we know what they're seeing, what they're hearing, what they're smelling, [and] the vibrations that we’ve pumped in through the floor system. In other words, the objective properties of the simulation system give the therapist more control over patient experience, minimizing the mystery of the subjective.
Bravemind is designed to simulate scenarios and experiences that have been reported in military research on PTSD to be common experiences of deployed combat service members (McLay et al., 2012). Sitting at a computer control panel with a variety of settings controlled by buttons on a display, the therapist-user customizes the simulation during therapy (Figure 1). In human-computer interaction, this is called a “Wizard of Oz” set-up, because what appears autonomous to the end-user (the patient) is being manipulated by the therapist-user. The current version of the system has 14 different scenarios, including an Iraqi village, a city, a checkpoint, and a strip of land resembling Kandahar Province in Afghanistan. These are each independent, unlinked virtual environments. In order for the patient to enter one of these environments, the therapist must use her control panel to select one—this should be the environment that she and the patient have decided best approximates the site of the index trauma. Within each environment are about half a dozen potentially
meaningful locations, such as city blocks with markets and checkpoints along sections of highway (Figure 2). Once an environment is selected, she can “teleport” the patient to these specific locations and then customize the lighting to settings like morning light, dusk, and green night vision. Finally, she can add individual animations and sound files, like a person shouting “Go home cowboy,” a helicopter passing by, sniper fire, or an exploding improvised exploding device (IED). The person in the patient position wears stereoscopic VR goggles while sitting or standing on a base-shaker. They can do very little in the environment except press buttons on the gamepad to virtually “walk” through it.

Figure 2. A screenshot of a marketplace inside the Bravermind system, Virtual Iraq. Photo credit: Skip Rizzo, University of Southern California - Institute for Creative Technologies.

Though Bravemind is often compared to a video game, its dynamics of interaction are very different, precisely because the therapist is positioned as the “wizard” in a machine that structures the patient’s interaction with the virtual environment. Most video games are at least partially governed by algorithms that allow the user to interact with them autonomously; interaction is scripted, and the player has varying degrees of agency according to the script. An individual can sit down and initiate
actions in the virtual environment by interacting with the interface—such as pressing buttons on a gamepad or making specific behaviors in front of a motion-tracking sensor. The game itself will produce additional actions to which the player can respond. In Bravemind, however, very little takes place autonomously. Throughout the interaction with the virtual environment, the therapist has primary control over what happens to the patient.

Bravemind is designed to extend the logic of control endemic to the emotional processing theory of PTSD and PE. It is a behaviorist tool that materializes common features of military trauma narratives as controllable digital objects. Indeed, harkening to behavioral psychology’s efforts to develop physical tools for reshaping subjectivity, Rizzo frequently calls VR “the ultimate Skinner box.” This colloquialism refers to midcentury American behavioral psychologist BF Skinner’s “operant conditioning chamber,” an artificial environment into which researchers could place an organism—often a small animal—to observe its response to stimuli they administered. It offered experimental psychology a tool for literally black-boxing the mind. Like the operant conditioning chamber, Bravemind is a technology of control; its interfaces immerse the patient’s sensorium in controllable, computer-generated information with the purpose of altering the fear structure. Bravemind creates two loops of computer-mediated action during the imaginal exposure portion of VRET. The first is between the system and the patient, and appears typical of interactions with immersive VR; the second is that of the therapist and the cyborg unit of patient plus VR system. Contrary to many analyses, VRET is a form of talk therapy, though it is an augmented one. The VRET protocol instructs the patient to narrate traumatic experience, just as someone would in traditional PE. The difference is that the therapist uses the Wizard of Oz display to try to match what the patient is describing, to create affective intensity through the use of nonverbal, computer-generated triggers, beyond what the patient either can or chooses to remember through narrative. Simulation intensifies stimulation.
Jennifer Terry (2009) argues that the kinds of wounds left on warrior’s bodies are the semiotics of war. Drawing on Tanielan and Jaycox (2008), she calls these “signature wounds.” Terry argues that the medical technologies that are created to treat these signature wounds are therefore a complementary semiotics: They treat those traces. PTSD is one of the signature wounds of the War on Terror on the bodies of warriors. Therefore, the virtual scenarios, animations, and other controllable elements that make up the Bravemind software-interface suite can be read as a digital materialization of developers’ understanding of places and stimuli that are associated with trauma, as well as what their military funders will permit them to simulate. It is an effort to archive traumatic experiences, but only those that take place from the perspective of American war veterans. While the patient-user navigates the system using a gamepad mounted on a realistically weighted plastic rifle, the system does not allow its users to kill within the virtual environment. Even though characters representing Iraqi or Afghan women and children may walk the virtual streets, only male civilians can be injured and, even then, only by IED explosions (Figure 3). In the driving scenarios, the other
service members in the Humvee or MRAP can be hurt, too, but only by IEDs or by shots fired by a Middle Eastern sniper (Figure 4). At no point does the system allow the user to embody the subject position of a perpetrator of violence that results in the death of a civilian. In this way, Bravemind codifies a specific perspective on PTSD. Though Rizzo and his collaborators have discussed the possibility of developing a version of Bravemind from an Iraqi or Afghan perspective as part of a humanitarian effort to help the traumatized civilian populations created through US military occupation, finding funding for such projects has proven less of a priority than expanding the system’s scenarios to additional American military populations, including Vietnam veterans and survivors of military sexual trauma (Rizzo et al., 2015).

Figure 4. Inside Virtual Iraq: this screenshot depicts the view of a passenger inside a MRAP vehicle. Photo credit: Skip Rizzo, University of Southern California - Institute for Creative Technologies.

Bravemind augments PE by transforming it from a universal tool for treating a generically conceived response to trauma to one that specifically targets military PTSD. Bravemind “matters” both politically and materially because it aims to objectify military patients’ subjective experiences of
war. This serves a function beyond structuring who can be treated by the system. As a kind of artificial memory prosthetic, Bravemind’s design temporarily encodes and standardizes specific conceptualizations of what “counts” as a traumatic experience of war. It implicitly normalizes and validates specific kinds of experiences—especially the actions of the enemy Other—as being traumatic. This could be destigmatizing for patients who see their traumas represented, since they would know they are not the only ones to have been traumatized by these events. The system materially suggests that their traumas can be cured with high tech.

Bravemind is performatively biopolitical because it promotes a vision of any trauma it represents as one that the machine can cure and, by omission, that any trauma the system does not represent is not worthy of investing in treating. In this medicalized configuration of care, the material component of the therapeutic apparatus—the protocol, the manual, or the machine—is figured as the primary agent of post-traumatic healing. By making this agential cut, trauma narratives become generic and impersonal tools and therapy itself a technological fix to the complex problems that service members and veterans face when they struggle to reconcile past experiences of war with their present condition.

Bravemind’s inventor, Skip Rizzo, once told the digital media scholar Elizabeth Losh that he felt the system could be read as a form of political resistance because it raises public awareness about PTSD as an invisible wound of war (Losh, 2006, p. 83). But this elides the essential biopolitics of care. Bravemind promises both the public and traumatized warfighters that there is nothing permanently wrong with them or the war they have participated in, but rather that they are suffering from a temporary ailment, one that can be fixed using advanced technologies. The digital-generation warfighter in the minds of technocrats, then, is one who chooses to be made and does not want to question or reflect on wartime experiences, but rather is committed to using virtual technologies to shape and reshape himself or herself into an instrument of state projects. Studying how technocrats imagine how warfighters should be healed if they do become traumatized helps us see how therapy can serve
to depoliticize warfighters’ subjectivity, while at the same time legitimizing this depoliticized view in the name of healing. As a technology for therapeutically remediating trauma narratives, Bravemind and similar technologies provide a material object through which these meanings are both codified and disseminated.

Conclusion

Some might argue that this analysis as a whole is tangential to the central problem of lack of access to care faced by many warfighters, especially veterans, with PTSD. My goal here has been to show that it matters not only that wounded warriors receive care, but also what kinds of selves and what knowledge about the war trauma are produced through that care.

Of course, it is an important caveat to this article that therapists have a large degree of flexibility in their practice. Unless they are participating in a research study, most therapists work without direct supervision of their practice. There is nothing stopping a therapist who has a patient describe their trauma through a social-justice configuration from saying that they are using PE or a variant thereof, provided that the patient is indeed constructing their trauma narrative. The scientistic discourse of PE can thus serve as a way to create legitimacy for otherwise overtly political therapy. I like to imagine that Bravemind, too, could be enrolled into a variety of political configurations. In her analysis of VRET, Losh has suggested that the openness of virtual environments allows for tactical counter-reading and modes of engagement that are only limited by the presence of monitoring spectators, like therapists and military funders (2006, p. 84). What if these limitations did not exist? What other therapeutic worlds could we imagine for virtual technologies? What stories could they be used to tell and to whom? Could they be sites of feminist praxis? What communication and healing might take place if the patient were at the helm of the Wizard of Oz display and the therapist in the stereoscopic goggles?

Jacquelyn Ford Morie, feminist game developer and former head of
the ICT’s Virtual Worlds research group, has explored similar questions about therapeutic remediation of war trauma through her work in the online virtual world Second Life. For example, she created a virtual Iraqi village in which a warrior-patient could walk with their therapist—or anyone else they chose—telepresent together as avatars, with neither in control of the other. The warrior could use the space as a method of walking to remind them of their experiences and share these with others. In a portion of this village Morie created a memorial space, where warriors could post their own photos. She also developed a tool for warfighters to leave a customized avatar-bot, a kind of digital mannequin that, when prompted, plays an audio file of a story they have recorded in their own voice (Morie, Haynes, & Chance, 2010). As a persistent world, each of these projects is inherently social, creating a palimpsest through which each visitor can see traces of others.

Morie’s projects do not simply remediate existing therapies but ask how the affordances of new media might lead to fundamentally new ways of therapeutically remediating trauma narratives. In her work, the technology is not a medicalized tool but a platform through which to explore the healing potential of storytelling. Her projects help me to imagine how military simulations— with their rhetorically powerful aesthetics—could create new configurations of post-traumatic healing.

Notes

1 For accounts of the development of ICT and its various military-funded digital media research projects see Der Derian (2001), Ghamari-Tabrizi (2004), Lenoir and Lowood (2005), Mead (2013), and Suchman, this issue.

2 Several military VRET systems have been developed, bearing names like Virtual Fallujah and IraqWorld, but among them Bravemind has been the best funded, researched, and widely disseminated.
Zoë Wool’s ethnography of soldiers recovering at Walter Reed, *After War: The Weight of Life at Walter Reed* (2015) illustrates the ways that everyday experiences of their recovery intersect with the myth-laden status of being seen as war heroes.

Bravemind provides a structural counterpoint to drone warfare, as described by both Ali and Chandler in this issue. As a cyborg assemblage that distributes the labor of warfighting between human and machine, drone warfare enables women to participate in combat operations in ways traditionally restricted due to physical limitation. These new “boy’s toys” allow women to perform historically masculine roles. As a “boy’s toy” Bravemind, however, transforms the feminized practice of psychotherapy into a masculinized military cyborg assemblage.

Contemporary versions of both the International Classification of Diseases (ICD) and Diagnostic and Statistical Manual of Mental Health Disorders (DSM) are purely descriptive and therefore agnostic with regards to the origins of mental health disorders, offering neither biological nor psychodynamic explanations of their underlying causes.

For PTSD, this is usually either the PCL or the CAPS, or both.

Fear structures are similar to the “affect systems” described by Sylvan Tompkins (see Rice, this volume) but are structured around the affect of fear instead of shame. As a model for action, they do not assume an effort to avoid the interruption of pleasure as a motivating force, as Tompkins does, but rather simply the avoidance of fear.

In order to monitor the level of fear, the therapist and patient develop a SUDS scale, which stands for subjective units of distress. The patient will describe what feels like a 100, which would be totally overwhelming, and what would be their minimum. Then they create a scale of other activities to facilitate communication with the therapist about how they are feeling during the exposure components of the therapy.
9 This is in keeping with behavioral therapy more broadly. As an effort to develop a reproducible science of behavior, behavioral therapists have historically seen their work as primarily technical and subsequently politically neutral.

10 Recently, challenges to PE are surfacing, as in Morris’ own work.

References


recall in the present (pp. 231-248). Hanover, NH: University Press of New England.


Bio

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