

Jocelyn Lim Chua

Department of Anthropology,

University of North Carolina at Chapel Hill (E-mail: jlchua@email.unc.edu)

Pharmaceutical Creep: U.S. Military Power and the Global and Transnational Mobility of Psychopharmaceuticals

In 2006, the United States Department of Defense developed for the first time official criteria for the use of psychopharmaceuticals “in theater”—in the physical and tactical spaces of military operations including active combat. Based on fieldwork with Army soldiers and veterans, this article explores the transnational and global dimensions of military psychopharmaceutical use in the post-9/11 wars. I consider the spatial, material, and symbolic dimensions of what I call “pharmaceutical creep”—the slow drift of psychopharmaceuticals from the civilian world into theater and into the military corporate body. While pharmaceutical creep is managed by the U.S. military as a problem of gatekeeping and of supply and provisioning, medications can appear as the solution to recruitment and performance problems once in theater. Drawing on soldiers’ accounts of medication use, I illuminate the possibilities, but also the frictions, that arise when routine psychopharmaceuticals are remade into technologies of global counterinsurgency. [global pharmaceuticals, psychiatric medications, psychiatry, U.S. military, U.S. empire]

In 2006, the United States Department of Defense (DoD) developed for the first time official criteria for the use of FDA-approved psychiatric medications “in theater”—in the physical and tactical spaces of military operations including active combat (Assistant Secretary of Defense 2006).¹ Conservative estimates suggest that the use of these medications, especially selective serotonin reuptake inhibitors (SSRIs), dramatically increased in the post-9/11 wars in Iraq and Afghanistan, with one in six service members now taking at least one psychiatric medication (Tilghman and McGarry 2010). While authorized and unauthorized psychoactive substances have long been used to enhance performance and to ease injury and boredom among soldiers at war (Bergen-Cico 2012; Kamienski 2016; Kuzmarov 2009), the documented use of medications to treat symptoms associated with psychiatric diagnoses in active combat had been highly contentious and limited within US military psychiatry (Schneider et al. 2011). As recently as the late 1990s, the U.S. Army continued to emphasize nonpharmacologic treatments on the understanding that effective soldiers rely on their own capacities to heal in war. By contrast, psychiatric medications

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now enter theater in bottles and bloodstreams alike: drug formularies have grown to treat symptoms newly diagnosed in deployment, while soldiers may take with them 180-day bulk supplies for previously diagnosed conditions (Assistant Secretary of Defense 2011).

To date, most of the research on psychopharmaceutical use among active duty military personnel has been conducted before or following deployments. Little is known about the use of different therapies for the management of mental and behavioral health conditions in theater in the post-9/11 wars (Schmitz et al. 2012, 380), and even less is known about the authorized and unauthorized use of psychopharmaceuticals for reasons beyond the treatment of these conditions. Data on psychopharmaceutical use are particularly elusive, due in part to the fact that DoD record-keeping on the distribution and use of these medications in combat zones has historically been lacking and likely underreports use of medications. The few published studies on this topic in the post-9/11 wars offer useful insight into official prescription rates. In one large study describing prescribed treatments by mental health providers for over 1,300 treatment-seeking military personnel deployed to Iraq, medication was the most commonly prescribed treatment but was often combined with recommendations for counseling and/or behavioral modifications. Medications were prescribed for 41% of clients diagnosed with a mental health condition, with antidepressants as the drug type most frequently recommended across all diagnostic categories (74% of all diagnosed patients with a medication treatment plan) (Schmitz et al. 2012). Another study of soldiers assigned to a brigade combat team in Iraq suggests that SSRIs came second to sleep aids as the most prescribed medications. Benzodiazepines were prescribed, though rarely, for short-term management of acute anxiety (Applewhite et al. 2012, 504).

Although studies like these provide rare insight into prescription practices in theater, their exclusive focus on mental health treatment contexts and formal clinical encounters fails to capture the diversity of official and unofficial means by which psychopharmaceuticals travel into and are accessed and used in theater. Public debate on psychopharmaceutical use by soldiers likewise operates on presumptions about how and why these medications are accessed and taken in theater. Media accounts of soldier psychopharmaceutical use are often highly moralized: They frame the “drugging of our warriors” as a sign of the biopolitical exploitation of soldiers, the inadequacy of the U.S. military’s response to mental and behavioral health issues, and the failures of the post-9/11 U.S.-led military conflicts more broadly (Baard 2003; see also Chedekel and Kaufman 2006; Friedman 2013; Senior 2011). While such accounts commonly assume that military psychiatric medication use is for the purposes of medicating war and service-related trauma, in fact there are multiple ways in which a single medication comes to matter to the U.S. military and to the soldiers who perform the work of violence while on them. For instance, Zoloft may be prescribed to a high-ranking officer to smooth out the new onset of symptoms and thus to keep her in theater so that she can continue to do the specialized work that few others can. Or it may be supplied in theater to an infantry soldier on his fourth tour in Iraq who, since returning from his second tour, has been on the Zoloft prescribed to him by a military provider for the management of his combat-related PTSD. But it may also be brought without authorization *into* theater by a soldier who was first prescribed Zoloft by a civilian

provider years before he enlisted in the Army for the “routine” management of depressive symptoms. The diverse means by which psychiatric medications travel into theater and are assimilated into the daily work of counterinsurgency thus emerge in relation to war experience, but also in relation to regimes and values of medication use at home. Contending with the movement and uptake of psychiatric medications in contexts of U.S. military power therefore provokes questions concerning the global, but also transnational, dimensions of pharmaceutical use and mobility.

This article concerns itself with the role of empire and U.S. military power as a vector in the global movement of psychopharmaceuticals, both to highlight an understudied aspect of global pharmaceuticals and to provoke a rethinking of the global nature of pharmaceuticals itself. Drawing on ongoing fieldwork based in North Carolina with active-duty U.S. Army, Army National Guard, and Army Reserve enlisted soldiers, officers, and veterans of the post-9/11 wars, I consider different material and symbolic flows and frictions that characterize the mobility of antidepressants, stimulants, and sleep aids into theater, as well as some of the ways these medications are taken up by soldiers in the daily work of counterinsurgency. In the first half of this article I begin by exploring the spatial, material, and symbolic dimensions of what I refer to as “pharmaceutical creep”—the slow drift of psychopharmaceuticals from an overmedicated civilian world into theater and into the military corporate body in the post-9/11 era, a seepage that simultaneously unsettles and reinforces the boundaries that would distinguish homefront from war zone, military from civilian. While pharmaceutical creep is managed by the U.S. military as a problem of gatekeeping and of medication supply and provisioning, in the second half of this article I demonstrate how medications can appear as the solution to a range of recruitment and performance problems once in theater. Experiences of medicated soldiering in theater illuminate the possibilities, but also the frictions, that arise when routine psychopharmaceuticals are remade into technologies of global counterinsurgency (see Chua 2018; Tsing 2005). Holding together the global and the transnational in the study of the mobility of psychopharmaceuticals across the “topography of U.S. power” (Lutz 2006) allows us to see how these medications are harnessed to the ethical regimes and daily work of counterinsurgency soldiering, while also shaped by the social lives and ontologies of these medications at home.

The research that forms the basis of this article includes eight months of completed ethnographic fieldwork based in North Carolina and Washington, DC, as well as six months of preliminary fieldwork I conducted in North Carolina and Virginia. Fieldwork, which is currently ongoing, has thus far included 36 semi-structured interviews with active-duty Army, Army National Guard, and Army Reserve enlisted soldiers, officers, and veterans who have deployed post-9/11 to either Iraq or Afghanistan, and four interviews with military mental and behavioral health providers. Four focus groups have also been conducted. Interview participants have either themselves personally used or witnessed the use of psychopharmaceuticals while deployed. Fieldwork has also included ethnographic observation at national clinical trainings and at military health conferences where military psychiatric medication use was debated and discussed.

U.S. Empire and Global Pharmaceuticals

Pharmaceuticals offer an instructive lens for inquiry into processes of globalization and localization, in addition to questions of personhood, identity, illness, and suffering (Jenkins 2011; Petryna and Kleinman 2006). Anthropologists and other social scientists have tracked the global flow of pharmaceuticals along the entire trajectory from manufacturing and marketing to prescription and consumption (Applbaum 2009; Ecks 2005; Oldani 2004). They have explored the complex effects of global pharmaceuticals on social and biological outcomes in local and national settings (Das and Das 2006; Good 2011; Lakoff 2005), and on subjective experiences and possibilities for human life (Biehl 2013; Pinto 2014). Yet, military use of psychopharmaceuticals in war zones characterizes a form of global pharmaceuticals not typically discussed in studies of offshored clinical trials (Petryna 2005, 2009), competition for regional drug markets (Ecks 2005; Kamat and Nichter 1998), or the politics of pharmaceutical access (Biehl 2007; Farmer 2002). While anthropological studies have emphasized the role of markets, speculative capitalism, and forms of governance in propelling the global mobility of pharmaceuticals, these studies have yet to detail the role of empire as an overlapping but distinct vector in this mobility. Indeed, the use of psychiatric medications by military personnel in deployed environments provokes an expansion of our understanding of *how* pharmaceuticals are global.

Pharmaceuticals that deploy with military personnel are global not only because military medical supplies leach into local markets, which they do (Mahmood et al. 2011); they are also global for the ways they circulate into and sustain projects of empire, projects that are fundamentally global in both scale and field of action. As hopeful panaceas for the recruitment challenges, exhaustion, strain, and traumas of the slow grind of the post-9/11 wars, psychopharmaceuticals are global for the ways they prop up a strained military in America's "forever war" (Filkins 2008), and, in turn, illuminate the embodied dilemmas of U.S. military hegemony. The movement of psychiatric medications into overseas military operations therefore reveals critical entanglements between pharmaceuticals and war making in relation to U.S. empire and capitalism (see Terry 2017). Taking insight from ethnographic studies of the practices, contradictions, and historical particularities of militarization and U.S. empire (Granahan and Collins 2018; Lutz 2006, 2009), I conjoin this line of inquiry with the anthropology of global pharmaceuticals to rethink the global nature of pharmaceuticals in relation to U.S. military power and, in turn, to bring medicine more squarely within the focus of anthropological studies of U.S. empire.

While pharmaceuticals of all kinds have been used to sustain and optimize the performance of soldiers long before the era of modern psychotropics, the use of psychiatric medications in support of global U.S. military operations provokes new questions concerning the movement of pharmaceuticals across space, infrastructures, and regimes of value. In contrast to malaria chemoprophylaxis or treatments for parasitic diseases, whose research and development evolved *in situ* in response to the needs of deployed military forces, FDA-approved anxiolytics, antidepressants, and antipsychotics move *into* deployed environments. Because these medications are widely used in contemporary American life, they travel with—and often within—the soldiers who consume them. What these medications are and do in war are

experienced and understood in relation to what they are and do at home. Thus, they also circulate in ways that are transnational, if not exactly or only global. Moreover, psychopharmaceutical use has arguably generated concerns for medicated soldiering in ways that antibiotics or vaccines, for example, generally have not, raising questions about soldiers' "quality" and fitness for war, as well as concerns about liability for committing violence while medicated (Breggin 2009, 2010; Horgan 2013; Wolfendale 2008). Finally, because psychiatric medications are also authorized by the DoD and prescribed by military providers—even as they are often taken and accessed by soldiers in ways that are not—they introduce some distinct dilemmas when compared to the illicit psychoactive substances that have been widely addressed in histories of military substance use (e.g., Kuzmarov 2009). Psychiatric medications thus open up important new lines of inquiry at the intersections of medicine, empire, and U.S. military power.

Master of His Own Anxiety: The Pre-9/11 Unmedicated Soldier

While certain psychoactive substances like amphetamines have been "standard issue" drugs carried by patrols to enhance vigilance and performance since World War II, prior to the post-9/11 wars the documented use of psychiatric medications to treat symptoms in active combat was rare in U.S. military psychiatry (Schneider et al. 2011). During the Vietnam War, the first major global conflict in the era of modern psychotropy, military psychiatrists became interested in the widespread use of new psychoactive compounds like Compazine (prochlorperazine) and Thiorazine (chlorpromazine) during combat. The use of these compounds in theater was controversial, however, with critics concerned that they could impair soldiers' ability to integrate emotional experiences and thus cause long-term harm. Standard use of psychiatric medications in the military soon fell out of favor after the war and remained uncommon for the treatment of ongoing disorders during combat operations (Sonnenberg et al. 1985, 324).

Sentiment began to shift in the mid-1990s with the development of "cleaner" psychiatric drugs, namely SSRIs. Drawing on her experience in peacekeeping operations in Somalia during the early 1990s, Army psychiatrist Elspeth Ritchie (1994) was the first to propose a "psychiatric sick call chest" for both psychiatric emergencies and for chronic treatment of depression and anxiety. While those like Ritchie advocated for psychiatric medications to avoid damaging military careers with unnecessary removals from operational duty, skeptics warned that the safety of SSRIs in combat had not been proven.

Changes to Army doctrine reveal how policy on psychiatric medication use in theater has shifted over the last 20 years. The initial Army field manual on combat stress control, published in 1994 and updated in 1998, focused on triage and non-pharmacologic interventions aimed at normalizing and minimizing combat stress, interventions based on the principles of forward psychiatry first developed in World War I.² The word "medication" occurs 25 times in the 255-page manual and emerges mainly in reference to stabilizing agitated soldiers in emergency situations, a practice for which the manual provides some guidelines and yet is clear to discourage, particularly for those soldiers expected to resume their duties. "Therefore, the recommendation for most cases is to use no medication unless it is truly necessarily

for management” (United States Department of the Army 1998, 125). Little guidance is otherwise provided on the role and dispensing of psychopharmaceuticals.

The 1998 field manual reflects a highly restrained approach to psychiatric medications, a conservatism that is justified along multiple lines. One concern is that medication use may impact behavioral changes, confusing the clinical picture and making it difficult to determine if a soldier may return to duty. Medication can also impair soldier readiness and pose a risk for others, particularly if “the facility comes under attack or must move” (United States Department of the Army 1998, 134). But medications also interfere with another vital process: that of soldiers “able to participate actively in their own recovery” (United States Department of the Army 1998, 134). The field manual strongly warns that reliance on medication hampers nonpharmacologic treatment methods “based on helping the soldier master his own anxiety himself” (United States Department of the Army 1998, 133). The notion that soldiers must learn to master their own responses by being active and present in that process, positions medication use as problematic dependency and an impediment to effective soldiering. Medication undermines soldiers’ innate restorative capacities, capacities best supported by simple, time-tested treatment methods including a few days’ rest, replenishment, and integration with one’s fellow soldiers.

It is this ideal of the effective soldier as a psychiatrically unmedicated one, and its strong presence in the field manual from 1998, that makes the changes to the subsequent and current Army stress control field manual issued in 2006 so striking. Based on experience in the first year following the 2003 U.S.-led invasion of Iraq, the Army mental health community revised the manual based on changes to Army doctrine and experiences emerging from the U.S.’s first long-term, sustained conflict in over three decades. The 2006 field manual reflects a subtle yet significant shift in the acceptance of psychiatric medication use in combat: for reemerging symptoms of a previously diagnosed mental disorder, to refill a previously prescribed medication, and for those newly diagnosed in theater (United States Department of the Army 2006). Sections 9-8 and 11-1 outline doctrinal changes in the use of medication in treating service members diagnosed with mental disorders while deployed: “Ongoing treatment and/or therapeutic modalities are essential to improving a Soldier’s chance to RTD (return to duty) whether in theater or after evacuation. . . . These modalities include medication, individual psychotherapy, group psychotherapy, and appropriate therapeutic occupations” (United States Department of the Army 2006, 9). Just four months after the release of the 2006 field manual, the DoD released a memorandum detailing initial criteria for psychiatric medication use in deployment, stating that “there are few medications that are inherently disqualifying for deployment for all military occupational specialties, to all potential operational locations, and at all times during the conduct of operations” (Assistant Secretary of Defense 2006, 4).³

How to account for this pendulum swing from the ideal of the soldier as master of his own anxiety in the 1990s, to the seemingly open embrace of psychiatric medications by the 2006 DoD memorandum? I turn now to a consideration of the diverse ways psychopharmaceuticals have traveled into war zones and entered the military corporate body in the post-9/11 era.

Pharmaceutical Creep: The Drift of Civilian Overmedication into the Military

In an article published in *Military Medicine*, the international journal of the Association of Military Surgeons in the United States, military psychiatrists Brett Schneider and colleagues draw on their experiences deployed to Iraq to propose the need for an expanded psychiatric formulary in theater. “Some psychiatrists have recommended a limited formulary of psychotropic medications. Experiences in Iraq, especially with soldiers in the National Guard and Reserve, suggest otherwise,” they write. “If a psychiatrist had to contend only with new-onset disorders, then a limited formulary would suffice. However, soldiers may deploy with a wide range of medications and present in theater only as they are about to run out of medications” (Schneider et al. 2007, 682). Additionally, they add, “many Guardsmen and Reservists deploy with medications prescribed by civilian doctors and report histories of having tried multiple medications before finding the most effective treatment (or treatments).” An expanded and diversified formulary, the authors propose, is therefore needed to maintain continuous medication supplies for an increasing number of reserve force soldiers already on psychopharmaceuticals at the time of deployment. The reason for the U.S. Army’s psychopharmaceutical turn is thus framed as a problem of entry, whose solution rests in the military logic of supply and provisioning.

Schneider and his colleagues illuminate concerns regarding military psychopharmaceutical use that I have found to be common thus far in interviews with medical care providers and soldiers alike, and which reflect aspects of a process that I call pharmaceutical creep. While scholars and anti-psychiatry activists have identified what they refer to as “bracket creep”—the expansion of categories of psychopathology into everyday behaviors—I play off this term to denote the spatial, material, and symbolic dimensions of the transnational flow of psychiatric medications from civilian life into the military’s institutions, its global spaces of operations, and into the bodies of its soldiers. In calling these mobilities a form of creep, I also explicitly draw on the term’s connotations of a colonizing and invasive process to underscore the symbolic anxieties that these pharmaceutical flows produce for the military as an institution, and the permeability it betrays of the boundaries between military and civilian, war zone and homefront.

Pharmaceutical creep highlights with particular clarity the nervous nature of the military as a total institution. In his proposition for a critical ethnography of military institutions, Kenneth MacLeish draws on Erving Goffman’s observation that total institutions do not demand “cultural victory,” but rather “sustain a particular kind of tension between the home world and the institutional world and use this persistent tension as strategic leverage on the management of men” (Goffman 1968, quoted in MacLeish 2015, 17). Total institutions therefore “always exist in relation to their boundaries and their others, and they may not need to be quite as total as they seem” (MacLeish 2015, 16). Interweaving this analysis with Michael Taussig’s (1992) notion of the “nervous system,” MacLeish (2015, 17) describes the total institution in this sense as “always already ‘nervous’—inescapable but deliberately incomplete.” The movement of psychopharmaceuticals from home world to war zone exposes and exploits this nervousness, even as it reproduces the symbolic boundaries dividing “inside” and “outside” by singling out those who would journey between them. That Schneider and colleagues point to National Guard and Reserve soldiers as

the primary vector of entry of medications into theater and the reason for the expansion of psychiatric formularies is significant. Since the events of 9/11, the U.S. Army has relied heavily on the Army National Guard and Reserve soldiers to meet its requirements in Iraq, Afghanistan, and elsewhere. At one point in 2005, Guardsmen and Reservists constituted over half of the combat brigades deployed in Iraq (U.S. Army National Guard 2013).

Unlike active duty soldiers, National Guard and Reserve are part-time personnel who maintain nonsoldiering occupations and reside off military installations, though they may be deputized to active duty and deploy. Reserve military forces are therefore “social and organizational hybrids or amalgams—they are soldiers and civilians, they are outside yet inside the military systems, and are invested in both spheres,” and have thus been likened to transmigrants (Lomsky-Feder et al. 2008). But distinctions between military and civilian spheres are not fixed so much as imagined, policed, and regulated (Hautzinger and Scandlyn 2014; MacLeish 2015, 17; Wool 2015). Consider the ways Guardsmen are disparagingly referred to as “Weekend Warriors,” “No-Gos,” and “Part-time Pukes” by their active duty peers. Just as contact with civilian life “sticks” to reserve force soldiers as a kind of contagion (Ahmed 2004), so, too, do psychopharmaceuticals and their use. If, as Foucault (1979) suggests, modern military institutions render the human body a “docile” object from which the soldier is produced as a highly disciplined, uniform, and instrumentalized subject, the U.S. military sees reserve force soldiers as a significant problem in the management of pharmaceutical creep. They unsettle the spatial and symbolic distinctions that would keep the military a highly regulated corporate body seemingly unadulterated by psychiatric medications and attendant civilian beliefs in pharmaceutical fixes.

From the perspective of the U.S. military, pharmaceutical creep therefore indexes material and spatial, as much as affective and symbolic, transgressions. The seepage of psychopharmaceuticals evokes multiple Others against which the boundaries of the military as institution and the theater of war as space are imagined and policed. The attribution of psychopharmaceutical use to reserve force soldiers is seen as part of a broader invasion of “civilian-ness.” In this sense, it may be read as a variation on a long-standing theme of the military–civilian “culture gap,” and a version of the robust, often comical, military tradition of stigmatizing civilian-ness and broader American society and culture (Hautzinger and Scandlyn 2014, 233). Like rampant consumerism or obesity, psychiatric medication use in contemporary American society was read by “careerists” I interviewed—seasoned military personnel whose time in service spanned decades—as signifying the vices of civilians and civilian culture: mental weakness, intolerance to pain and suffering, self-indulgence, and desires for immediate gratification, among others. Some understood this to be a decidedly generational and cultural issue. At a conference on military health sponsored by the DoD and Department of Veterans Affairs in 2015, a senior Army medical officer described soldier psychiatric medication use as both an “American culture and generational” problem, one he linked to young people’s declining levels of resilience and a broader cultural need for magic bullet cures.

It is against these imaginaries of societal degeneration that the U.S. military positions itself as an enclave of mental toughness, and a rampart against rising cultural tides of feminizing weakness, effete intellectualism, and emotionality.

Pharmaceutical creep raises the specter of military corporate body contamination. But it also stokes more specific concerns for compromised soldier “quality” and gatekeeping at time when the U.S. military, and the Army in particular, have struggled to meet recruitment targets. The issue of newly lowered aptitude standards for Army recruitment that emerged a few years into the post-9/11 wars, as well as the issue of mental health waivers, which were granted with increasing frequency (along with drug use and criminal history waivers), became the object of some public attention. These issues also generated internal critique within the military concerning the declining quality of recruits more generally, while highlighting the disproportionate lack of readiness among Army reserve forces in particular. Thus, while the osmotic movement of psychopharmaceuticals into the space of theater and into the military corporate body is positioned as an inevitability of civilian overmedication, it flags the permeability—and questions the very future—of an institution whose purpose and coherence requires that it be a world set apart.

Gatekeeping and Provisioning

Marked as vectors of pharmaceutical contamination, medicated reserve soldiers are seen to carry with them other polluting effects resulting from their intimacy with civilian life and its institutions. Military psychiatrists Schneider and colleagues (2011, 154) make this explicit, stating that

the increased dependence on National Guard and Reserve soldiers meant that the Army was receiving personnel who were treated according to civilian community standards rather than military readiness standards concerning prescriptions for SSRIs, atypical antidepressants, and anti-anxiety medications. This resulted in an increased requirement for available medications in theater.

Pharmaceutical creep thus takes the form of medicated soldiers, as well as the form of changing expectations for treatment in theater in accordance with civilian provider practices. As psychopharmaceuticals deploy with soldiers, so, too, do competing standards and expectations for mental health treatment.

While military medical standards for enlistment and commission are meant to screen individuals entering the military for disqualifying behavioral and mental health conditions, pressures to regulate the movement of psychopharmaceuticals and the soldiers taking them bear down most centrally on the bureaucratic procedures of soldier readiness processing (SRP). This is the sequence of procedural and documentary activities by which soldiers are evaluated and qualified for deployment, and which includes administrative and medical sections. I spoke with mental and behavioral health care providers involved in preparing and evaluating soldiers for medical processing, part of which includes reconciling soldiers’ current medications. In the case of soldiers on psychopharmaceuticals and who have mental and behavioral health conditions considered deployable, this might include documenting the soldier’s stability on the dosage of their SSRI over the last 90 days, or applying for medical waivers to allow the soldier to remain on their medication during the deployment—something commonly done, I was told, with respect to stimulants like

Adderall prescribed for ADHD diagnoses. Making sure all of this was properly documented and accounted for by the Army would help ensure, I was told, would ensure that the soldier would be adequately supplied with their needed medication while downrange.

James, a substance use counselor for the National Guard, elaborated the challenges of gatekeeping: what he characterized as the highly common use of multiple psychopharmaceuticals among his soldiers. Describing to me the most common medications he sees, he told me: “Anything from Ambien to Trazodone. SSRIs are super common. Stimulants are common from a primary care physician.” Benzodiazepines, which are officially prohibited downrange—a “no-go,” he told me, using deployment-readiness language—pose particular challenges because of how frequently they are prescribed by primary care physicians. Importantly, James noted that the problem of soldiers being prescribed nondeployable medications originated less from civilian providers than from Army primary care physicians themselves: “It’s always interesting to me when I have a soldier who is just going to his primary care physician and they’re prescribing multiple medications, psychiatric medications that I feel would be better suited if it were done by a psychiatrist or psychologist. And that’s pretty common,” he said. “There’s also times where I’ve seen antipsychotics prescribed by a primary care physician, just things that I feel would be better suited by a behavior health clinician.” In James’s experience, even the Army’s own providers regularly prescribe psychopharmaceuticals in ways that are at odds with deployment-readiness standards and are beyond the domain of mental and behavioral health care. Such practices reflect an aspect of what Dumit (2005) calls the “depsychiatrisation of mental illness,” and which James sees as common to current practices of military health care. The problem of pharmaceutical creep, therefore, not only originates from outside, it also emanates from within.

While civilian and military psychopharmaceutical prescription practices could be wildly variable, James conveyed confidence in the gatekeeping process. By and large, he said, regular medication use would be accounted for at medical processing before a soldier deployed. That includes medication use that the Army may not have known about prior to medical processing. While he acknowledged that there could be cases of soldiers on medications not documented within the TRICARE system—e.g., medications prescribed by civilian providers that soldiers might pay for out of pocket to avoid their detection—James described medical processing as both a regulatory process and opportunity for soldiers to ensure that they get the medications they need supplied to them while in theater: “We really encourage the unit to be supportive of soldiers and encourage them to be honest about what medication they’re taking. Because most of the time, it’s gonna be found out in some way, shape, or form.”

In reality, medications forge any number of illicit material paths that extend to theater in ways that defy the bureaucratic and procedural activities of SRP. The practical challenges of regulating how and what psychiatric medications travel into theater suggest in very material terms the diffuse nature of pharmaceutical creep and the nervous nature of military institutions. Consider, for instance, that psychopharmaceuticals (along with alcohol, recreational drugs, and other officially prohibited items) physically travel into theater through all manner of routes and with varying degrees of documentation and regulation (Asst. Secretary of Defense 2011).

Military personnel can bring medications obtained through private sector providers to theater or receive them through undocumented shipments originating outside theater, including medications that may violate deployment-limiting medication guidelines. Family and friends may also mail medications in care packages to service members at their military postal address.

While military mail is subject to monitoring and inspection, I was told by soldiers that it was relatively easy to avoid detection and that, “much like prison,” you could get anything you wanted or needed into theater so long as you had the money and the will. Like the contraband plastic jugs of Captain Morgan rum shipped inside a hollow tube television and the food-dyed vodka smuggled in mouthwash bottles recounted to me by soldiers in awe over the ingenuity of their peers, the mobility of psychiatric medications into theater highlights the porous nature of the space of theater and the corporate military body. Bottles of medication, now transported alongside birthday cards, candy, and magazines in care packages, generate overlapping yet distinct concerns from the deployment of medicated soldiers, even as the two are linked. While the latter evokes anxieties about loosened recruitment screening—of low bars allowing “just about anyone” into the military, as a recently retired senior air force officer put it to me—the former evokes concerns for medications circulating into the curious or idle hands of soldiers for whom these medications were neither prescribed nor intended. Both forms of pharmaceutical creep symbolize threats to the soundness and purity of the military corporate body, one suggesting an external threat of declining soldier quality, and the other a more diffuse and insipid denaturing from the inside, of the military drugging itself.

From the perspective of the U.S. military, pharmaceutical creep is largely a problem of entry, of porous boundaries and contamination. Understood in these terms, pharmaceutical creep has been handled as an issue of gatekeeping, namely, of regulating the transnational movement of soldiers and their medications into theater. Gatekeeping is closely tied with provisioning, since the process of keeping certain mental health conditions and medication needs out of theater is the same process for ensuring authorized medication needs are adequately supplied. Curiously, while the Army has approached psychopharmaceutical use as a problem of gatekeeping, it has evidenced far less concern for the effects of psychopharmaceutical use in theater (Lawver et al. 2010, 951). Because of their relatively low side effect profiles and their routine use by civilians, SSRIs in particular are generally assumed to travel as inert molecules into theater. Thus, to evidence stability on an SSRI at home is taken as evidence of stability in a war zone.

Yet, insights from social studies of technology suggest that technologies do not travel as stable objects, but are rather “assembled and re-assembled in relation to particular ethical regimes and political projects” (Collier and Ong 2005; Redfield 2008, 2012; Von Schnitzler 2013, 672). As psychiatric medications seen as routine in civilian settings travel into theater, they are actively remade in relation to the operational logics, ethical frameworks, and daily labor of counterinsurgency. In entering the biopolitical and disciplinary regimes of power that characterize modern military institutions, they are also harnessed to the regulation of soldiers deputized to carry out state violence, and thus recruited into the “protective, medical, and therapeutic technologies that intervene at the level of biology to marshal soldier bodies as manipulable ‘resources’ that can be kept alive and allowed to die” (MacLeish

2012, 55). In the next section, I explore experiences of medicated soldiering to illuminate some of the ways psychopharmaceuticals are taken up in theater, and the ontological transformations and frictions that occur as medications are remade in defiance of any easy equivalence between use at home and use in theater.

War on Drugs: The Uptake of Psychopharmaceuticals in Theater

Once in theater, psychiatric medications are notoriously hard to track. They also circulate along official and unofficial channels as they are consumed, shared, experimented with, and traded. Luis, who deployed to Iraq from 2008 to 2009, told me about the “steady flow” of Adderall that he was regularly supplied by a sergeant in his unit. This sergeant had been on Adderall for years for the treatment of his ADHD and was able to keep his authorized prescription regularly refilled during their deployment since their smaller base was restocked by weekly convoys to the sprawling Balad Air Base nearby. Luis was a gunner on a gun truck, which meant that he sat up in the turret of an armored vehicle and operated a 50-caliber machine gun—what he lovingly referred to as “my baby, my bread and butter”—and which he was also responsible for maintaining. Luis talked about his time in Iraq as “easy work” in the sense that it was clear what was expected of him: “providing security for the convoy at all cost.” At the same time, he talked about the challenges of irregular sleep and an exhausting schedule—18-hour shifts going out on patrol for multiple days at a time. To remain focused and vigilant on long convoys, he was “hitting up” the sergeant every few days for an Adderall because it “kept my ass awake and alive.” The packs of cigarettes he occasionally gave in exchange were nothing, Luis told me, in light of the fact that this sergeant was “saving my life with these drugs.”

While the use of stimulants to keep soldiers awake on patrols is hardly a new phenomenon, there is something new to how these medications are transformed in their travels and uptake. The manner in which Luis’s weekly Adderall escaped the military’s regulatory mechanisms to transmute into something quite different in the context of counterinsurgency warfare recalls the diversion of high-dose buprenorphine from treatment contexts into informal networks described by Anne Lovell in France (2006). Two global addiction markets—one in which buprenorphine is valued as a pharmaceutical treatment tool and the other an illicit drug economy—merge through the process of what Lovell calls “pharmaceutical leakage.” In this process, “the pharmaceutical object transforms itself from one type of commodity into another one of a radically different rationality and symbolic nature” (Lovell 2006, 138), a process not adequately captured by discussions of the social lives of medicine. Having entered theater as a legitimate therapy for one sergeant’s ADHD, in the global context of U.S. military power—of daily patrols outside Baghdad at the tail end of the so-called surge of troop build-up in Iraq—Adderall becomes incorporated into a very different regime of practice, ethics, and meaning: the “life-saving” drug that enabled Luis to remain alert, alive, and attuned in the application of violence.

In this way, the Adderall that drifts into the space of theater through the mechanism of medical waivers can, in turn, be potently militarized by soldiers like Luis, who, after a few weeks of irregular sleep and endless patrols, quickly learns to rely

on any number of authorized and unauthorized substances to stay awake and vigilant. Yet, psychopharmaceuticals did not always lend themselves to easy uptake in theater. I also spoke with Matt, a former Special Forces engineer with 13 years of service who, when we met, was in the process of being medically boarded out of the military. He was also undergoing a range of experimental treatments for his PTSD, multiple TBIs, and chronic sleep issues. During his five combat tours to Iraq and Afghanistan, Matt worked as part of an Operational Detachment Alpha (ODA), a small, versatile Special Forces team that travels and works closely to execute “sensitive tactical operations.” As Matt described it, “it’s a 12-man, self-sustaining, holistic unit that can go anywhere in the world and conduct operations.” ODAs are designed to be “a highly functional, cross-trained team when they’re working correctly. We all do each other’s jobs.”

It was in this context of mutual reliance and intimate cohabitation—of working, sleeping, eating, and surviving together—that Matt came to learn of and be concerned for the psychopharmaceutical use of guys on his team. Particularly in the later deployments, Matt observed members of his team needing to take prescribed antidepressants: “We had guys who would get overheated. I’ve seen it in two of my team guys where it was like, hey, you have to take this because you’ve gone off the farm, but we still need you here.” Matt understood that in the case of high-value team members who had seen multiple, back-to-back combat tours, psychopharmaceuticals could keep needed skills and bodies downrange. But there was a cost, he explained. Referring to the use of antidepressants by the two teammates in particular, Matt told me:

In both those circumstances, it completely changes the person. Do they get them to calm down? Yes, but now they aren’t as effective as they were before. These guys were only on them for 3, 4, 5 days. In my experience, that’s about how long it takes for those drugs to kick in. Then they started to realize that they didn’t have their edge anymore. So for example, there’s a certain feeling and a sense when you know that things are going to go bad: I could feel IEDs, I could feel firefights before they ever came around. Certain smells. It’s a whole world that changes. And they would lose that. So the answer was to not be on them anymore.

It quickly became clear that the antidepressants were a problem for the two teammates on them. But they were also a problem for the team, and thus the decision to stop the medication use was, Matt made clear, a shared one, illuminating the distinct sociality of pharmaceutical creep in deployment. While antidepressants are commonly prescribed to keep seasoned soldiers downrange, Matt’s account of the loss of a finely tuned set of instincts while medicated suggests the embodied frictions of their use in theater and how the risks of these medications are borne by the team as a whole.

Matt also articulated the problem of antidepressants in relation to the social lives and ontologies of psychiatric medication at home:

I can tell you that when you’re operating at that high level, you can notice a change in someone once they get on an antidepressant. That change is

readily accepted in our society, like hey, you're not being as crazy anymore, so good job. The poles between your mood swings is not as high, that's great. But we didn't need that out there. That was actually a detriment to the system. I needed you to go from smiling and high fiving to, you know, highly amped up, running toward bullets in a split second. And the addition of those drugs into the system keeps you from doing that.

While the leveling of mood swings can make antidepressants an asset for an office administrator, parent, or college student, it compromises the safety of self and others in an integrated team like his, and in the context of counterinsurgency warfare. One of the greatest risks of these medications in theater, said Matt, is that they keep you from running toward bullets.

Conclusions

This article has explored the spatial, material, and symbolic ways that pharmaceuticals have crept into the U.S. military corporate body and its infrastructures and global operations in the post-9/11 era. Psychopharmaceuticals travel into theater through all manner of routes—in bodies, formularies, and care packages alike. But they do not travel as stable objects. Once in theater, they are taken up in diverse ways and toward diverse endpoints. Luis's account of the use of a sergeant's prescribed Adderall elucidated how forms of pharmaceutical leakage can lead to potent militarization, transforming the medication's ontological status, meaning, and value when taken up in the practice of convoy security. In his account of two teammates' use of antidepressants, Matt's story revealed the kinds of embodied friction that can arise when psychopharmaceuticals are assimilated into the ethical regimes and everyday work of counterinsurgency soldiering.

Holding together the frameworks of the global and the transnational in the study of military use of psychopharmaceuticals illuminates the multiplicity of means and vectors by which these medications travel and the different moral arcs these forms of travel imply. Psychopharmaceuticals variably drift, seep, infiltrate, deploy: They are smuggled into theater, flow in from civilian life, leak out of military supply chains, penetrate the military corporate body, and are actively drawn into the tactical logic of urban counterinsurgency. They engender anxieties and concerns for compromised soldier quality and effectiveness, even as they produce tactical opportunities and possibilities. They accrue multiple significations as they move, serving as ciphers of similarity and difference, affinity and disdain: at once the debased markers of civilian invasion, "routine" medication, contraband, and key technologies of global counterinsurgency. From the smuggling of medications in the bodies of soldiers traversing worlds set apart, to the tactical recruitment of medications to stay alive and awake, the creep of psychopharmaceuticals reveals both tension and convergence in the space where global pharmaceuticals and U.S. empire meet.

Notes

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1. By definition, a “theater” of war refers to the entirety of the land, sea, and airspace area that is or that may become involved in operations of war. For the purposes of the arguments in this article, I use theater interchangeably with the colloquialism of war zone to refer to the area involved in operations of war for the U.S. Army, and which includes both combat and noncombat (also known as “support”) operations.

2. Forward psychiatry focused on the treatment of acute combat stress and war-related syndromes by providing troops rest, adequate food, sedation, and a few comforts to see if they improved. As its name implies, key to the strategy of forward psychiatry was keeping troops “forward”—i.e., as close to the front lines and integrated in their units as possible—to expedite rehabilitation and return to duty. The principles of forward psychiatry would become standard practice by World War II.

3. Some of these exclusions involve medications that require infrastructural support that cannot be guaranteed in a deployed setting, such as medications requiring special storage considerations or laboratory monitoring (Assistant Secretary of Defense 2006).

References Cited

- Ahmed, S. 2004. *Cultural Politics of Emotion*. New York: Routledge.
- Applbaum, K. 2009. Getting to Yes: Corporate Power and the Creation of a Psychopharmaceutical Blockbuster. *Culture, Medicine and Psychiatry* 33: 185–215.
- Applewhite, L., N. Keller, and A. Borah. 2012. Mental Health Care Use by Soldiers Conducting Counterinsurgency Operations. *Military Medicine* 177: 501–6.
- Assistant Secretary of Defense. 2006. *Policy Guidance for Deployment Limiting Psychiatric Conditions and Medications*. Washington, DC: Department of the Army.
- Assistant Secretary of Defense. 2011. *Defense Health Board Recommendation Memorandum Pertaining to Psychotropic Medication Prescription Practices and Use and Complementary and Alternative Medicine Use*. Falls Church, VA: Defense Health Board.
- Baard, E. 2003. The Guilt-free Soldier: New Science Raises the Specter of a World without Regret. *The Village Voice*, January 21. <https://www.villagevoice.com/2003/01/21/the-guilt-free-soldier/> (accessed April 18, 2019).

- Bergen-Cico, D. 2012. *War and Drugs: The Role of Military Conflict in the Development of Substance Abuse*. New York: Routledge.
- Biehl, J. 2007. Pharmaceuticalization: AIDS Treatment and Global Health Politics. *Anthropology Quarterly* 80: 1083–126.
- Biehl, J. 2013. *Vita: Life in a Zone of Social Abandonment*. Berkeley: University of California Press.
- Breggin, P. 2009. *Medication Madness: The Role of Psychiatric Drugs in Cases of Violence, Suicide, and Crime*. New York: St. Martin's Griffin.
- Breggin, P. 2010. Antidepressant-Induced Suicide, Violence and Mania: Risks for Military Personnel. *International Journal of Risk and Safety in Medicine* 22: 149–57.
- Chedekel, L., and M. Kaufman. 2006. Mentally Unfit, Forced to Fight. *Hartford Courant*, May 14.
- Chua, J. L. 2018. Fog of War: Psychopharmaceutical “Side Effects” and the United States Military. *Medical Anthropology* 37: 17–31.
- Collier, S., and A. Ong. 2005. Global Assemblages and Anthropological Problems. In *Global Assemblages: Technology, Politics, and Ethics as Anthropological Problems*, edited by S. Collier and A. Ong, 3–21. Malden, MA: Blackwell.
- Das, V., and R. K. Das. 2006. Pharmaceuticals in Urban Ecologies. In *Global Pharmaceuticals: Ethics, Markets, Practices*, edited by A. Petryna, A. Lakoff, and A. Kleinman, 171–205. Durham: Duke University Press.
- Dumit, J. 2005. The Depsychiatrisation of Mental illness. *Journal of Public Mental Health* 4: 8–13.
- Ecks, S. 2005. Pharmaceutical Citizenship: Antidepressant Marketing and the Promise of Demarginalization in India. *Anthropology & Medicine* 12: 239–54.
- Farmer, P. 2002. Can Transnational Research Be Ethical in the Developing World? *The Lancet* 360: 1301–2.
- Filkins, D. 2008. *The Forever War*. New York: Vintage.
- Foucault, M. 1979. *Discipline and Punish: The Birth of the Prison*. New York: Vintage Books.
- Friedman, R. 2013. *War on Drugs*. New York Times, April 6.
- Good, B. 2011. The Complexities of Psychopharmaceutical Hegemonies in Indonesia. In *Pharmaceutical Self: The Global Shaping of Experience in an Age of Psychopharmacology*, edited by J. Jenkins, 117–44. Santa Fe: School for Advanced Research Press.
- Granahan, C., and J. Collins. 2018. *Ethnographies of US Empire*. Durham: Duke University Press.
- Hautzinger, S., and J. Scandlyn. 2014. *Beyond Post-traumatic Stress: Homefront Struggles with the War on Terror*. Walnut Creek, CA: Left Coast Press.
- Horgan, J. 2013. Did Antidepressants Play a Role in the Navy Yard Massacre? *Scientific American*, September 20.
- Jenkins, J. 2011. *Pharmaceutical Self: The Global Shaping of Experience in an Age of Psychopharmacology*. Santa Fe: School for Advanced Research Press.
- Kamat, V., and M. Nichter. 1998. Pharmacies, Self-medication and Pharmaceutical Marketing in Bombay, India. *Social Science & Medicine* 47: 779–94.
- Kamienski, L. 2016. *Shooting up: A Short History of Drugs and War*. New York: Oxford University Press.
- Kuzmarov, J. 2009. *The Myth of the Addicted Army: Vietnam and the Modern War on Drugs*. Amherst: University of Massachusetts Press.
- Lakoff, A. 2005. *Pharmaceutical Reason: Knowledge and Value in Global Psychiatry*. Cambridge: Cambridge University Press.

- Lawver, T., J. Jensen, and R. Welton. 2010. Serotonin Syndrome in the Deployed Setting. *Military Medicine* 175: 950–52.
- Lomsky-Feder, E., N. Gazit, and E. Ben-Ari. 2008. Reserve Soldiers as Transmigrants: Moving between the Civilian and Military Worlds. *Armed Forces and Society* 34: 593–614.
- Lovell, A. 2006. Addiction Markets: The Case of High-dose Buprenorphine in France. In *Global Pharmaceuticals: Ethics, Markets, Practices*, edited by A. Petryna, A. Kleinman, and A. Lakoff, 136–70. Durham: Duke University Press.
- Lutz, C. 2006. Empire Is in the Details. *American Ethnologist* 33: 593–611.
- Lutz, C., ed. 2009. *The Bases of Empire: The Global Struggle against US Military Posts*. New York: NYU Press.
- Mahmood, M, K. Riley, D. Bennett, and W. Anderson. 2011. The Supply of Pharmaceuticals in Humanitarian Assistance Missions: Implications for Military Operations. *Military Medicine* 176: 852–57.
- MacLeish, K. 2012. Armor and Anesthesia: Exposure, Feeling, and the Soldier's Body. *Medical Anthropology Quarterly* 26: 49–68.
- MacLeish, K. 2015. The Ethnography of Good Machines. *Critical Military Studies* 1: 11–22.
- Oldani, M. 2004. Thick Prescriptions: Toward an Interpretation of Pharmaceutical Sales Practices. *Medical Anthropology Quarterly* 18: 325–56.
- Petryna, A. 2005. Ethical Variability: Drug Development and Globalizing Clinical Trials. *American Ethnologist* 32: 183–97.
- Petryna, A. 2009. *When Experiments Travel: Clinical Trials and the Global Search for Human Subjects*. Princeton, NJ: Princeton University Press.
- Petryna, A., and A. Kleinman. 2006. The Pharmaceutical Nexus. In *Global Pharmaceuticals: Ethics, Markets, Practices*, edited by A. Petryna, A. Kleinman, and A. Lakoff, 1–32. Durham: Duke University Press.
- Pinto, S. 2014. Drugs and the Single Woman: Pharmacy, Fashion, Desire, and Destitution in India. *Culture, Medicine, & Psychiatry* 39: 237–54.
- Redfield, P. 2008. Vital Mobility and the Humanitarian Kit. In *Biosecurity Interventions: Global Health and Security in Question*, edited by A. Lakoff and S. Collier, 147–72. New York: Columbia University Press.
- Redfield, P. 2012. Bioexpectations: Life Technologies as Humanitarian Goods. *Public Culture* 24: 157–84.
- Ritchie, E. 1994. Psychiatric Medications for Deployment. *Military Medicine* 159: 647–48.
- Schmitz, K., E. Schmied, J. Webb-Murphy, P. Hammer, G. Larson, T. Conway, M. Galarneau, W. Boucher, N. Edwards, and D. Johnson. 2012. Psychiatric Diagnoses and Treatment of US Military Personnel while Deployed to Iraq. *Military Medicine* 177: 380–89.
- Schneider, B., J. Bradley, and D. Benedek. 2007. Psychiatric Medications for Deployment: An Update. *Military Medicine* 172: 681–85.
- Schneider, B., J. Bradley, C. Warner, and D. Benedek. 2011. Psychiatric Medications in Military Operations. In *Textbook of Combat and Operational Psychiatry*, edited by E. Ritchie, 151–62. Borden Institute Textbooks of Military Medicine. Office of the Surgeon General of the United States Army, Falls Church, VA.
- Senior, J. 2011. The Prozac, Paxil, Zoloft, Wellbutrin, Celexa, Effexor, Valium, Klonopin, Ativan, Restoril, Xanax, Adderall, Ritalin, Haldol, Risperdal, Seroquel, Ambien, Lunesta, Elavil, Trazodone War. *New York Magazine*, February 4.
- Sonnenberg, S., A. Black, and J. Talbott. 1985. *The Trauma of War: Stress and Recovery in Vietnam Veterans*. Washington, DC: American Psychiatric Press.
- Taussig, M. 1992. *The Nervous System*. New York: Routledge.

- Terry, J. 2017. *Attachments to War: Biomedical Logics and Violence in Twenty-first Century America*. Durham: Duke University Press.
- Tilghman, A., and B. McGarry. 2010. Medicating the Military: Use of Psychiatric Drugs Has Spiked, Concerns Surface about Suicide, Other Dangers. *Military Medicine*, March 17.
- Tsing, A. 2005. *Friction: An Ethnography of Global Connection*. Princeton, NJ: Princeton University Press.
- United States Army National Guard. 2013. Army National Guard History. http://www.nationalguard.mil/Portals/31/Features/Resources/Fact%20Sheets/new/General%20Information/arn_g_guard.pdf (accessed March 1, 2017).
- United States Department of the Army. 1998. *Combat Stress Control in a Theater of Operations: Field Manual 8-51*. Washington, DC: Department of the Army.
- United States Department of the Army. 2006. *Combat and Operational Stress Control: Field Manual 4-02.51*. Washington, DC: Department of the Army.
- von Schnitzler, A. 2013. Traveling Technologies: Infrastructure, Ethical Regimes, and the Materiality of Politics in South Africa. *Cultural Anthropology* 28: 670-93.
- Wolfendale, J. 2008. Performance-enhancing Technologies and Moral Responsibility in the Military. *American Journal of Bioethics* 8: 28-38.
- Wool, Z. 2015. *After War: The Weight of Life at Walter Reed*. Durham: Duke University Press.