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UNIVERSITY OF CALIFORNIA
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Bodies of War:
The Embodiment of Force in Theaters of War

A Dissertation submitted in partial satisfaction
of the requirements for the degree of

Doctor of Philosophy

in

Dance History and Theory

by

Jessica Jayne Behm

December 2014

Dissertation Committee:
Dr. Linda Tomko, Chairperson
Dr. Derek Burrill
Dr. Anthea Kraut

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The Dissertation of Jessica Jayne Behm is approved:

Committee Chairperson

University of California, Riverside

ACKNOWLEDGEMENTS

My deepest gratitude in completing my PhD work at UCR begins with my thanks to Professor Linda Tomko. Her course instruction offered historic windows into studying Renaissance and Baroque dances that enlivened the period and its embodied politics through both her enthusiasm and expertise. Her support of my scholarly interests in the convergences of military and movement arts, as they applied to 17th- as well as 21st-century soldiers and dancers, meant I crossed back over the Atlantic and four centuries, into the cavernous libraries of the Bibliothèque nationale de France (BnF) in Paris and criss-crossed the city in search of rare books and documents that might offer up 17th-century archival evidence of military and performing bodies—with great delight. Thank you for your meticulous editing and attention to details of composition, theory, ethical and scholarly dilemmas, and research methodologies. Each and every error is most certainly mine.

To Professor Anthea Kraut, committee member, who not only offered insight into the choreographic dilemmas my dissertation presented, but provided tireless and invaluable support in her capacity as graduate advisor—an ever gracious and warm ambassador for the UCR Dance Department.

To Derek Burrill, committee member, who presumed dance and technology shared many convergences and thus lead the way in lively, rigorous discussion, in his teaching and critical engagement with this project, from the unique vantage that his disciplinary commitments to both fields enabled.

I was fortunate to receive support and kindness from UCR faculty who collaborated and conspired with the Dance Department and supported this dissertation project, including Toby Miller and Charles Whitney who served as examination committee members.

To Toby Miller, UCR Emeritus Professor of Culture and Media Studies, an official ally of dance scholars. For his magnanimous contribution of time, critical reading, relentlessly wry humor, and for modeling that scholarship can be rigorous and unruly, critical and compassionate, and always

generous. An excerpt found here appears in “Silhouettes of War: Technologies of U.S. Solidering and Surveillance” in *Culture Unbound* (2010, Vol. 2), to which Toby kindly suggested I submit an article.

To Charles Whitney, UCR Professor of Creative Writing at the time of my coursework, who offered writerly and journalistic gravitas in the courses I completed with him and in his advisory capacity on my committee for qualifying exams, and was entirely undaunted by a project examining military technologies brought to his door in the Creative Writing Department by a dance scholar.

To Paulo Chagas, UCR Professor of Music, with whom I had the pleasure of designing and teaching a multimedia course in performance and engineering for the UCR College of Engineering, and who provided support, guidance, and ever-ready humor in Portuguese in his office just a small jeté away from the UCR Dance Department.

I would also like to thank the UCR Dance Department and Graduate Division support staff; in particular, Katrina Oskie, Kara Oswood, and Karen Smith are truly administrative divas.

This dissertation would not have been possible without the generous dialogue and time that U.S. Military service members offered in interviews, transforming my own understanding of the complexities of military service, performed on behalf of the U.S. but with the genuine wish to protect all civilians.

My warmest appreciation to Vartan, who began this project by my side in the California sunlight and traveled with me to the decidedly less sunny streets of New York City. For your humor, love, and tireless editing, for all that has been said and all that remains unspoken.

This dissertation is dedicated with love to my parents, my mothers Mary, the teacher, Susan, the dancer, and my father, Richard, the poet. From grammar to graduate school, from researching biology in the Brazilian Amazon to choreographing in New York City, from a Master’s in technology to a PhD in dance, they never once suggested that I must choose between personal and professional passions in the singular discipline of “Arts and Sciences.” Thank you for defining parenting as passing along the DNA of curiosity—for Pina Bausch arguing with Francis Bacon at the same table.

ABSTRACT OF THE DISSERTATION

Bodies of War:
The Embodiment of Force in Theaters of War

by

Jessica Jayne Behm

Doctor of Philosophy, Graduate Program in Dance History and Theory
University of California, Riverside, December 2014
Dr. Linda Tomko, Chairperson

Dance and military arts, though seemingly divergent as disciplines, both have traditions of theorizing and training individual bodies, as well as corps of bodies, to respond to, resist, and interpret instructional tactics and techniques and to express meaning through practiced, choreographed, and improvised motion. This dissertation proposes that a history of U.S. warfare—often focused on the study of strategies, technologies, and geopolitics—may be considered as a history of the use of force by and against *bodies of war*. By reorienting attention towards embodiment it is possible to consider how training for, engineering, employing, and enduring the force of war primarily, not incidentally, impacts bodies in theaters of war.

This dissertation considers the historic use of embodied force by 17th-century French militaries, from which the American military derived a set of 18th- and 19th-century tactical and training methodologies, and proceeds to examine the deployment of embodied force by the 21st-century U.S. Military as applied through the use of corporeal

technologies—those that are physically, physiologically, or prosthetically integrated into soldiers’ defense and weapons systems. In 17th-century France, historical convergences in instructional pedagogies and performance strategies meant that both dance and military arts designated moving bodies as performative agents to display individual, state, and sovereign force. Dance studies’ theorization of performance, choreography, and performativity is thus mobilized in this dissertation to theorize the training and techniques of soldiering bodies during this period.

The embodiment of soldiering in late 20th- and early 21st-century theaters of war, particularly for the world’s largest military force, the U.S. Military, has been transfigured as military practices have shifted from deploying choreographed infantry to deploying technologies that augment or even augur the replacement of human soldiers. Dance studies, concerned as a discipline for the subjectivity and agency of bodies, generally in motion, may thus also be mobilized to theorize how 21st-century U.S. Military training, bodily techniques, and corporeal technologies perform individual and state representations of force. War, across centuries that differ remarkably in geopolitical, territorial, sovereign, and technological milieus, maintains one irrefutable, ontological characteristic: war remains, even amidst tenuous claims that 21st-century technologies have “anesthetized” killing, resolutely embodied. This dissertation thus proposes that bodies of war should not only be counted, but also *accounted for* in analyses of U.S. Military operations in the early 21st century.

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List of Acronyms and Abbreviated References

ACU: U.S. Army Combat Uniform
ALARACT: U.S. All Army Activities
AR 670- I: U.S. Army Regulation Wear and Appearance of Uniforms and Insignia
BDU: U.S. Army Battle Dress Uniform
CENTCOM: United States Central Command of the U.S. Department of Defense
DoD or DOD: U.S. Department of Defense
FRACU: U.S. Army Flame Resistant Army Combat Uniform
FSI: U.S. Army Future Soldier Initiative
GAO: U.S. Government Accountability Office
GPS: Global Positioning System
IED: Improvisational Explosive Device
MIT ISN: Massachusetts Institute of Technology Institute for Soldier Nanotechnologies
MOS: U.S. Military Occupational Specialty
MP: U.S. Military Police
NSRDEC: U.S. Army Natick Soldier Research, Development and Engineering Center
OCP: U.S. Army Operational Camouflage Pattern
OEF: Operation Enduring Freedom
OIF: Operation Iraqi Freedom
OND: Operation New Dawn
PEO: U.S. Army Program Executive Office
RDECOM: U.S. Army Research, Development, and Engineering Command
ROTC: Reserve Officers' Training Corps
SAPI: Small Arms Protective Insert
TATRC: Telemedicine and Advanced Technology Research Center
UCMJ: U.S. Uniform Code of Military Justice
UCP: U.S. Army Universal Camouflage Pattern
USAMRMC: U.S. Army Medical Research and Material Command
USMC: U.S. Marine Corps
USSOCOM: U.S. Special Operations Command
TALOS: Tactical Assault Light Operator Suit
TRADOC: U.S. Army Training and Doctrine Command

Bodies of War:

Now if you are going to win any battle, you have to do one thing. You have to make the mind run the body. Never let the body tell the mind what to do.

—U.S. General George S. Patton

To define force—it is that x that turns anybody who is subjected to it into a thing. Exercised to the limit, it turns man into a thing in the most literal sense: it makes a corpse out of him. Somebody was here, and the next minute there is nobody here at all.

—Simone Weil, *The Iliad, or The Poem of Force*

My rifle is human, even as I, because it is my life. Thus, I will learn it as a brother. I will learn its weaknesses, its strength, its parts, its accessories, its sights and its barrel. I will ever guard it against the ravages of weather and damage as I will ever guard my legs, my arms, my eyes and my heart against damage. I will keep my rifle clean and ready. We will become part of each other. We will.

—My Rifle Marines Creed, U.S. Marines.

Introduction: Bodies of War

The history of war is a history of the body. Bodies at war are relentlessly trained, disciplined, punished, sacrificed, honored, idolized, and memorialized. They are pressed into service in the name of defense, liberation, ideology, religion, geopolitical stability, resource acquisition, and nation-state building. Soldiers are tasked to endure and inflict seemingly inconceivable acts of state-sanctioned violence, while civilians and non-combatants suffer imprisonment, displacement, bereavement, and torture. In the early 21st century, technological innovation has changed the tactics and strategies of bodies at war, but *war has not yet succeeded in sundering bodies from the violent force of battle.*

In the introduction to a collection of memoirs by Iraq veterans titled *What Was Asked of Us* (2006) Bobby Muller, the founder of *Vietnam Veterans of America Foundation*, writes: “While Vietnam and Iraq are different wars, in a fundamental sense all wars are the same. We go to war for one purpose—to kill other human beings” (xv). General Rupert Smith, the first UK Assistant Chief of Defense and former NATO Commander, affirms this characterization of war in *The Utility of Force: The Art of War in the Modern World* (2005). Smith suggests that modern militaries persist in applying new technologies within an aging, if not obsolete, paradigm of war because they misunderstand the *utility of force*, confusing the threat of force (deployment) with the instantiation of force (employment).¹ Smith asserts:

Force is the basis of any military activity, whether in a theater of operations or in a skirmish between two soldiers. It is both the physical means of destruction—the bullet, the bayonet—and the body that applies it. It has been so since the beginning of time. Military force when employed has only two immediate effects: it kills people and destroys things. Whether or not this death and destruction serve to achieve the overarching or political purpose the force was intended to achieve depends on the choice of targets or objects, all within the broader context of the operation. That is the true measure of its utility. (8)

Smith affirms here the requisite role of bodies at war as both the primary applicants and recipients of force. The U.S. Military’s operational publication, the *U.S. Army/Marine Counterinsurgency Field Manual* (2007), defines war in analogous terms of violent force:

Warfare in the 21st century retains many of the characteristics it has exhibited since ancient times. Warfare remains a violent clash of interests between organized groups characterized by the use of force. Achieving victory still depends on a group’s ability to mobilize support for its political interests (often religiously or ethnically based) and to generate enough violence to achieve political consequences. Means to achieve these goals are not limited to conventional forces employed by nation-states. (13)

¹ Smith’s distinction between these two terms will be followed throughout this dissertation. However, as a military

While the U.S. manual forwards the political efficacy of war, all three assessments of war are united in their characterization of warfare as the threat or employment of force, generally violently directed at individuals. Yet the three definitions of war above all yoke the use of force to both purpose and effect—Muller concludes they are the same: directed killing; Smith argues that the effects of war are often not properly correlated to the purpose; and the U.S. Military suggests that the purpose of war is irrevocably bound to deliberative political outcomes. Broadly, the three principles appear to be in provisional agreement: in the 21st century the use of force in war is guided by explicit purpose—the *jus ad bellum* of its initiation—and its proportionate success is measured by its specific actions and effects—the *jus in bello* that guides war conduct and influences how civilian and soldiering bodies experience war.²

And yet it is precisely the purpose of war and its effect(s) that are most often legally and ethically contested in 21st-century applications of military force:³ When is it appropriate to use force against other nations' soldiers and citizens? What degree of force is permissible to effect specific outcomes? What are the decision-making powers of individuals during wartime who use force to threaten or torture perceived enemies? Must force be agreed upon by international governing bodies and conventions, and what is the consequence if these agencies disagree? Can the full force of weaponry and standing armies be deployed when war has not been declared? Can war be conducted

² For an overview of the legal and juridical use of *jus in bello* and *jus ad bellum* (rationale for a “just war”), see: Gregory M. Reichberg. “Jus ad Bellum.” *War: Essays in Political Philosophy*. Ed. Larry May. Cambridge: Cambridge UP, 2008.

³ For examples in the 2000s of juridical and ethical debates regarding the purpose and effects of 21st-century warfare see: Noah Feldman. *What We Owe Iraq: War and the Ethics of Nation Building*. Princeton: Princeton UP, 2006.; Douglas V. Porpora, et al. *Post-Ethical Society: The Iraq War, Abu Ghraib, and the Moral Failure of the Secular*. Chicago: U of Chicago P, 2013.; Albert L. Weeks. *The Choice of War: The Iraq War and the Just War Tradition-The Ethics of American Foreign Policy*. New York: Praeger, 2009.

against organized, non-state agents? If the United States is not at war, but nonetheless exercises the entire force of our military defense, has the definition of war changed or is war itself, in its former guise, obsolete?

The U.S. has officially declared war with congressional authorization eleven times in relation to five discrete wars. In chronological order these are: War of 1812 (United Kingdom), Mexican American War in 1846 (Mexico), Spanish-American War in 1898 (Spain), World War I in 1917 (Germany and Austria-Hungary), and World War II in 1941 (Major Axis: Japan, Germany, Italy) and 1942 (Minor Axis: Bulgaria, Hungary, and Romania). In addition to these formal declarations of war, American engagement in congressionally approved U.S. Military operations in international theaters has been nearly continuous since 1945.⁴ While the sociopolitical climate of these engagements differed, during all operations that authorize the use of force, deliberate human violence is generally employed with an explicit rationale—a cause that is, at least temporarily and temporally, considered to be just. Whether the stated purpose for an individual war is publicly contested, morally misguided, asymmetrically conducted, enacted in response to an imminent threat, or justified as a preemptive tactic—war differs from other types of violence precisely because it requires a purpose. And in having a premeditated purpose, war must also have premeditated targets that are generally human beings, or the support, supplies, and infrastructure for human beings. And these latter strategic targets are identified precisely because of the impact they will have on human welfare and

⁴ For a recent analysis of the U.S. Declarations of War and authorized U.S. Military Operations see the Congressional Research Service report prepared for U.S. Congress: Jennifer K. Elsea and Matthew C. Weed, eds. "Declarations of War and Authorizations for the Use of Military Force: Historical Background and Legal Implications." *Congressional Research Service*. 18 Apr. 2014.

defensive and offensive tactics—in other words, they are also used to ensure or deter killing with greater acumen. Therefore, *warfare is entirely designed to protect or deliberately compromise the safety and security of bodies*. In *An Intimate History of Killing* (1999), historian Joanna Bourke examines memoirs of veterans of World War I, World War II, and the Vietnam War and states this claim explicitly: “The characteristic act of men at war is not dying, it is killing. For politicians, military strategists, and many historians, war may be about the conquest of territory or the struggle to recover a sense of national honour but for the man on active service warfare is concerned with the lawful killing of other people” (xiii). Bourke emphasizes here the consequence for bodies—rather than, for example, the impact on territorial expansion, infrastructure, or national ideology—as the most critical outcome of war.

Inarguably, war is defined by the use of generally violent force against bodies. The thesis regarding the singular force of war that Prussian war strategist Carl von Clausewitz set forth in the canonical treatise, *On War* (1832), yet applies in the 21st century: “Force—that is, physical force, for moral force has no existence save as expressed in the state and the law—is thus the *means* of war; to impose our will on the enemy is its *object*” (75, original emphasis). Here, Clausewitz delineates the means of war as directed, physical force maneuvered by (political) will, which may or may not be guided by corollary forces of philosophical, spiritual, and moral concern. The physical force of war that Clausewitz describes, as delivered by both soldiers and soldier-operated weapons, has a debilitating impact on places that are geographically, politically, and economically significant; however, it is the physical force of war and its

consequences for bodies of war that this dissertation primarily examines. Despite significant changes to war tactics and technology, the impact on bodies remains the most critical consequence of war. At its simplest, this dissertation is thus concerned with the calculated use of force by and against bodies of war. It specifically examines the historic use of force by 17th-century French militaries, from which the American military derived many of its 18th- and 19th-century tactical and training methodologies, and proceeds to examine the deployment of force by the U.S. Military as applied through the use of specific technologies and experienced by both combatants and civilians in the 21st century. Early 21st-century warfare, defined here as the deliberate use of force by state or aggregated non-state actors to achieve specific, generally political, outcomes, cannot exist without the bodies of decision-makers who initiate it, the soldiers called upon to perpetuate it, and the civilians and citizens who variously support, endure, and resist its inevitable consequences.

Although it seems axiomatic to suggest that explicit attention to bodies of war in scholarly or military analyses, particularly as it relates to the threat or use of violent force, should be paramount, this focus is often trumped by vigorous discussion of the historical tactics, strategy, technology, and sociopolitical catalysts for war in military studies.⁵ Some works from military history that do specifically examine soldiering bodies include American historian's John McManus' *Grunts: Inside the American Infantry*

⁵ Texts that examine U.S. Military strategy and tactics predominate in 21st-century military studies. For examples in the 2010s concerning Iraq and Afghanistan see: Daniel Bolger. *Why We Lost: A General's Inside Account of the Iraq and Afghanistan Wars*. New York: Eamon Dolan, 2014.; Sir Hew Strachan. *The Direction of War: Contemporary Strategy in Historical Perspective*. Cambridge: Cambridge UP, 2013.; Spencer D. Bakich. *Success and Failure in Limited War: Information and Strategy in the Korean, Vietnam, Persian Gulf, and Iraq Wars*. Chicago: U of Chicago P, 2014.; Nuno P. Monteiro. *Theory of Unipolar Politics (Cambridge Series in International Relations)*. Cambridge: Cambridge UP, 2014.

Combat Experience, World War II Through Iraq (2011) and British historian Joanna Bourke's *An Intimate History of Killing: Face to Face Killing in 20th Century Warfare* (1999). Scholarship that emphasizes the subjective experience of soldiering bodies often originates from non-military fields such as cultural studies, feminist studies, and journalism. Texts that analyze the U.S. Military through a lens that focuses on soldiering bodies rather than strategic or tactical advances include: American Studies Professor Christina S. Jarvis' *The Male Body at War: American Masculinity during World War II* (2004), Women's Studies Professor Cynthia Enloe's *Maneuvers: The International Politics of Militarizing Women's Lives* (2000), and Journalism Professor Helen Benedict's *The Lonely Soldier: The Private War of Women Serving in Iraq* (2009).⁶ Military memoirs and compilations of letters and correspondence from service members provide one of the most productive windows into the bodily experiences of individual U.S. service members, particularly those of women whose voices have emerged prominently in memoirs that detail women's changing roles in the U.S. Military throughout the occupations of Iraq and Afghanistan. The scope of these memoirs is diverse and comprises its own meaningful oeuvre. U.S. Soldiers reflect on their physical experience of individual combat engagements, mortuary affair operations, medic duties, IED bomb-detection, special operation missions, post-traumatic stress disorder (PTSD), multiple tours of duty, being an ethnic minority, woman, or openly gay service member,

⁶ Scholars based outside of the U.S. writing about non-American soldiering bodies are also often associated with fields outside of military history. Professor of Gender and Conflict Studies at The Hague, Dubravka Zarkov, writes of female soldiers in the wars in Yugoslavia in *The Body of War: Media, Ethnicity, and Gender in the Break-Up of Yugoslavia*. Durham: Duke UP, 2007. Sri Lankan Professor of English, Neloufer de Mel, writes on female militant actors in "Agent or Victim? The Sri Lankan Woman Militant in the Interregnum." *Women and the Nation's Narrative: Gender and Nationalism in Twentieth-Century Sri Lanka*. New Delhi: Rowman & Littlefield, 2001.

relationships with Iraqi and Afghani civilian communities, and the challenges of reintegration into U.S. society.⁷ In her 2006 memoir, *Love My Rifle More Than You: Young and Female in the U.S. Army*, former U.S. Army Sergeant Kayla Williams offers suggestions for mental and corporeal preparation for deployment, recommended with the hindsight of her active-duty service in Iraq. In the chapter “How to Prepare for Deployment to Iraq,” Williams observes:

1. Every night until you deploy, sleep in your vehicle. Or sleep on a cot next to your vehicle. 3. Get your semiautomatic rifle and empty a round into the side of your house. And spread gravel throughout the house and yard. For atmosphere. 8. Ask two hundred people you don't know and don't necessarily like to live with you for a month. Make sure there are at least five times as many men as women. 9. When it rains, go dig a hole in your backyard. Fill a pail with dirt and stir in the rainwater. Slowly pour this mixture over your entire body. 11. Handwash some clothes in dusty water only. Mix and match them with sweat-stained and torn clothes. Wear the combined outfits proudly when you meet your boss or go to a dinner party. 12. Never clean your toilet and be sure to always urinate on the bathroom floor. Remove the toilet paper entirely. 19. Before you use the telephone, have a family member unplug the phone from the wall so there is no chance it can get through. Attempt to make phone calls anyway. Don't let this affect your morale. 21. Carry your weapon with you at all times. Point it at anyone suspicious. 23. Detonate unexploded ordinance in your neighborhood in the middle of the night. If residents are upset, tell them not to worry, things are going according to plan. 25. Just when you think you're ready to resume a normal life, do everything on this list again in order to prepare yourself for the unexpected extension of your deployment. (64-67, selected points)

William's darkly humored remarks capture the physically and psychologically bleak experience of deployment during Occupation Iraqi Freedom and provide insight into an intimate experience of soldiering. William's authority is, in fact, derived from her bodily experience of war rather than, for example, her position as a remote strategist.

⁷ For examples of 21st-century soldier memoirs from Occupation Iraqi Freedom, Operation New Dawn, and Occupation Enduring Freedom that address these concerns see: Benjamin Busch. *Dust to Dust: A Memoir*. New York: Harper Collins, 2012.; Brian Castner. *The Long Walk: A Story of War and the Life that Follows*. New York: Random House, 2012.; Eric Greitens. *The Heart and the Fist: The Education of a Humanitarian, The Making of a Navy Seal*. New York: Houghton Mifflin, 2011.

Former Lieutenant Colonel Dave Grossman has commented on the dearth of scholarly literature in military studies that specifically examines the role of soldiering bodies in the primary act of war: killing. He observes in *On Killing: The Psychological Cost of Learning to Kill in War and Society* (2009), “Previous authors have examined the general mechanics and nature of war, but even with all this scholarship, no one has looked into the specific nature of the act of killing. [...] Every society has a blind spot, an area into which it has great difficulty looking. Today that blind spot is killing” (xxvi). Professor of Aesthetics Elaine Scarry provides a similar analysis of this societal lacuna, or aversion, in her work *The Body in Pain: The Making and Unmaking of the World* (1985), wherein she reflects on earlier wars and suggests that the difficulty of translating individual pain to others facilitates a political and philosophical willingness to engage in both war and torture. Scarry asserts of the relationship between the body and war:

The main purpose and outcome of war is injuring. Though this fact is too self-evident and massive ever to be directly contested, it can be indirectly contested by many means and disappear from view along many separate paths. It may disappear from view simply by being omitted: one can read many pages of a historic or strategic account of a particular military campaign, or listen to many successive installments in a newscast narrative of events in a contemporary war, without encountering the acknowledgement that the purpose of the event described is to alter (to burn, to blast, to shell, to cut) human tissue. (64)

The literal omission of the body in pain that Scarry describes and Grossman’s assessment that U.S. society has a cultural “blind spot” to the study of killing are both facilitated because a concern for embodiment—the inclusion of the body in human sentience and individual subjectivity—has been minimized. While the term embodiment will be examined at length, it is defined in this dissertation as the primacy of the body as an individual, interactive agent in processes of cognition, self-awareness, identity-

formation, and decision-making. The term embodiment is used to direct attention to how the body participates in creating subjectivity, whether this results in embodying violent force (a potentially negative outcome) or protesting the use of violent force (a potentially positive outcome). As corollaries, the terms “embodiment of force” and “embodiment of war” acknowledge how war and its primary instrument of deployment—physical force—are resolutely bound to an individual’s embodied experiences, which cannot be ignored when evaluating the total impact of war.⁸ It is possible to engage in the embodiment of force and war through direct action such as combat, through enacted responses to war such as civilian protest, or through discourse that prioritizes the experience of bodies of war such as military memoirs. In all three examples, turning towards soldiers’ embodied experiences of war and away from analyses of strategies, tactics, and geopolitical conditions of war redirects attention and authority to individual soldiering bodies. By explicitly dismissing soldiers’ embodiment during war (in discourse) or effectively disregarding it (in deployment), it becomes more likely that soldiers’ experiences and reflections as bodies of war will also be elided. Kayla Williams articulates the need to specifically focus on soldiers’ individual embodiment of force when she describes her own catalyst for writing a memoir:

I wanted to write a book to let people know what it *feels* like to be a woman soldier in peace and in war. I wanted to capture the terror, the mind-numbing tedium; and the joy and the honor. Not overlooking the suicidal periods, the anorexic impulses, the promiscuity; and the comradeship and the bravery. In Iraq, I cleaned blood from soldiers’ gear after a roadside bomb hit a convoy. I saw the bloodied bodies of locals—civilians caught in the wrong place at the wrong time. I saw death. I speak Arabic, so I

⁸ It may be argued that embodiment is self-evident, particularly in the field of Dance Studies, as a theoretical conceit that preconfigures both discourse and movement practices. However, this dissertation argues that theorizing embodiment, particularly if Dance Studies seeks to engage productively with other disciplinary fields that may not attend to its immediacy, remains not only a viable, but an urgent, term to deploy and analyze.

participated in interrogations. I had to deal with the tension between wanting to help the locals and having to do battle with them. I pointed my weapon at a child. I've understood things and seen things I need to forget: Humiliation. Torture. It was not just Abu Ghraib—it happened elsewhere, too. (16, original emphasis)

Williams' narrative forwards the consequences for individual bodies of war and the irreversible outcomes of embodying force in service of the U.S. State. In contrast, rhetoric that diminishes or elides embodiment in historical studies, military tracts, industrial publications, and governmental press releases may refer to the body as material in service of the mind, as an inert or inanimate object such as a "machine" or "weapon," as a conditioned subject whose experiences must be ignored in the interest of professional compliance, or, particularly in the case of enemy non-combatants and civilians, as unavoidable collateral damage.

Collateral damage is defined by the U.S. Military for all branches in the *JP 3-60: Joint Targeting Publication* glossary as "Unintentional or incidental injury or damage to persons or objects that would not be lawful military targets in the circumstances ruling at the time. Such damage is not unlawful so long as it is not excessive in light of the overall military advantage anticipated from the attack" (*JP 3-60* 125). In this characterization, neither a determination of "excessive" nor a limit to the "incidental damage" is quantified—How much damage to a body is excessive?—and both are lawful insofar as they confer an unspecified strategic advantage. Of note, damage to a person is also interchangeable in the definition with damage to an object, perpetuating the idea that people are of equal (or potentially less) value than material targets. The institutional definition of collateral damage affirms why a preoccupation with embodiment matters: a disregard for the embodied lives of civilians and soldiers projects the idea that bodies

really are “collateral” material in service of ideology or military advantage. In response to the general rhetoric used to refer to collateral bodies of war, civil liberties lawyer and legal scholar Alan Dershowitz similarly observed in a 2002 interview with *Salon* online magazine, “Asymmetrical warfare is a euphemism for terrorism, just like collateral damage is a euphemism for killing innocent civilians” (Dershowitz 1). Dershowitz reinserts here a concern for bodies of war into institutional language that otherwise not only facilitates, but justifies, their erasure in the name of strategic expediency.

The U.S. Army/Marine Counterinsurgency Field Manual provides one example of a U.S. Military publication that emphasizes the need to avoid collateral damage (Sections 1-45, 7-22), but also suggests that harm to “non-combatants” may be necessary and frames this harm within an equation of strategy and intentionality similar to that in *JP 3-60: Joint Targeting Publication*. Collateral damage is justified if it is “proportional to the gain” for the U.S. Military and not “intentional.” In the section titled “Ethics” the manual states:

7-23. Limiting the misery caused by war requires combatants to consider certain rules, principles, and consequences that restrain the amount of force they may apply. At the same time, combatants are not required to take so much risk that they fail in their mission or forfeit their lives. As long as their use of force is proportional to the gain to be achieved and discriminates in distinguishing between combatants and non-combatants. Soldiers and Marines may take actions where they knowingly risk, but do not intend, harm to non-combatants. (161)

The challenge with doctrine is that it is far more complicated to implement during active combat. U.S. Soldiers’ personal accounts of their embodied experiences are of particular value here as they reveal the discrepancies between doctrinal policy and the uncertainties of combat, particularly in Operation Iraqi Freedom (OIF), Operation

Enduring Freedom (OEF), and Operation New Dawn (OND) during which, for example, wearing civilian attire or using civilians as shields was a deliberate oppositional strategy employed by enemy-combatants that made following the official “Rules of Engagement” more difficult. In 2008, U.S. Military veterans provided congressional testimony reflecting on their active-duty service in Iraq, later compiled as essays in *Winter Soldier-Iraq and Afghanistan: Eyewitness Accounts of the Occupations* (2008) by the U.S.-based organization, Iraq Veterans Against the War (IVAW). Former U.S. Marine Sergeant Adam Kokesh⁹ observes of his 2004 tour in Iraq, “During the siege of Fallujah, we changed Rules of Engagement more often than we changed our underwear. At first it was, ‘You follow the Rules of Engagement. You do what you’re supposed to do.’ Then there were times when it was, ‘You can shoot at any suspicious observer.’ So someone with binoculars and a cell phone was fair game, and that opened things up to a lot of subjectivity” (Kokesh 43). Kokesh’s remarks are echoed by other soldiers in the essay series. Former U.S. Marine Corps Corporal Sergio Kochergin observes of his service in Iraq in 2003:

The Rules of Engagement were very flexible. After our casualties mounted the Rules changed. We were allowed to engage anyone with a weapon without calling in and asking permission from the higher command. Two months into the deployment our Rules were to engage any personnel with a heavy bag and a shovel at the intersections or on the roads. This gave us a bigger window on who we could engage. Looking at the situation from this point of view, a lot of the enemy combatants that we shot were really civilians in the wrong place at the wrong time. (Kochergin 50)

Kochergin concludes his testimony by offering, “I want to apologize to all the people in Iraq. I’m sorry, and I hope this is going to be over as soon as possible.” The testimonies

⁹ This dissertation also contains excerpts from my personal interview with Adam Kokesh in 2009. However, this particular remark was published a year prior in: *Winter Soldier-Iraq and Afghanistan: Eyewitness Accounts of the Occupations*. Eds. Iraq Veterans Against the War and Aaron Glantz. Chicago: Haymarket Books, 2008.

in *Winter Soldier* provide a horizon of personal experiences wherein soldiers suggest they not only engaged (fired on and killed) Iraqi soldiers disguised as civilians, but felt moral uncertainty about the apparent flexibility of U.S. Military policies that placed them in untenable tactical positions. Soldiers' embodied experiences here as "boots on the ground" are of great potential value in guiding not only a more productive military policy, but in shaping how a U.S. public understands warfare from the perspective of those tasked with the moral and physical labor of war: embodying violent force.

Concealed within language is cultural epistemology that is neither neutral nor inert: how we discuss bodies of war avers how we treat bodies of war. Language that implies bodies of war are secondary to ideology, strategy, or policy ought to be examined because it obscures the primary task of war—the task that Grossman argues is often deliberately eschewed in discussion—killing or harming bodies through the threat or employment of force. In comparison, imagine if the language for training and deploying soldiers included explicit instructions that emphasized the grim realities of war: "Use Any Means Necessary to Kill!"; "There Are No Rules to Killing!"; "Kill or be Killed!" During World War II, a number of American military training videos used this precise language, reminding soldiers that the "law of the jungle" reigned during battle, despite America's cultural predilection to "play fair" and never "hit below the belt." The 1943 U.S. War Department training film (T.F. 21-1024) titled "Fighting Men: Kill or Be Killed"¹⁰ provides graphic reenactments of the use of authorized (and unauthorized) weapons and their techniques. The film instructs: "You have two purposes: one is to kill,

¹⁰ U.S. War Department Official Training Film (T.F. 21-1024). Produced by the Signal Corps for the Commanding General Army Ground Forces, 1943. "Fighting Men: Kill or Be Killed" Web. 10 Apr. 2013. <https://www.youtube.com/watch?v=C4_VqgqBk7E>

and the other is to avoid being killed. To that end, use every method and every weapon you can. But place this in your memory: use the one that fits the job. With a rifle, you can tattoo a German at 500 yards. And you can drill a Jap at a quarter of a mile” (“T.F. 21-1024” 4:06-4:36min). The film opens with a dozen iconic sports clips, including a halfback dashing for a touchdown, followed by a southpaw throwing a strike, and suggests that sporting rules may define America, but they do *not* apply at war. With emotional pitch, the narrator tells the soldiers in training:

You get the idea? [...] You’re looking at the spirit of America. This is the way we like it: fast and hard-hitting and clean. Instinctively Americans love fair play. It’s built up from childhood. Give the other guy an even break! Play the game on the level! Don’t hit a man when he’s down! [...] When you step from the gridiron to No Man’s Land, the rule book is buried and forgotten. Here there are no penalties, except the one for losing. And it’s not measured in yards. It’s measured in life and death. War is the law of the jungle: *kill or be killed*. There are no half-measures, no alibi runs. You’ve got to twist your instincts inside out to play this game. Because it’s played to win. Any way. The goal is destruction, pure and simple. Your mind must be tuned to a new pitch. To go after your enemy all out. No holds barred! To hurt, to cripple, to kill! *This is war.* (.44sec-2:02min)

In this particular training video, the cost to bodies of war *is* acknowledged: war, with its grisly combat and a devaluation of life brought on by both the defenders and aggressors, is presented with transparency. However, the film accomplishes this task by equating soldiers to the weapons they employ and eliding the subjectivity of soldiers (and their enemies) by suggesting they must throw away the “rule book” of sporting to become killing machines that hurt and cripple with “no holds barred.” Minimizing the consequences for bodies of war, as in the definition of collateral damage, or encouraging soldiers to be invariant killers, as in the war department training film, are both significant acts because they disregard the effects of war on embodiment, which suggests it is impossible to separate the body from the creation of individual subjectivity and

therefore from the more complex experiences of using the body to deploy violent force. As a concrete counterpoint to the two examples above, the documentary film *Body of War* (2007) follows the life of Tomas Young, a U.S. Army veteran paralyzed in Iraq after only one week of active-duty service. As Young adapts to the limitations of his injuries and finds voice as an anti-war protestor, his story is juxtaposed narratively with the 2002 U.S. Congressional deliberations on the Iraq invasion, focusing on the passionately dissenting voice of Senator Robert Byrd (D-West Virginia). The film provides an example of a project that is decidedly concerned with the *embodiment of war*—how war transforms the specific, individual subjectivity of soldiers and civilians who endure the inevitable consequences of employing deadly force. In the 2000s there are numerous non-profit projects,¹¹ veteran programs,¹² and medical organizations,¹³ as well as films,¹⁴ live performances,¹⁵ memoirs and oral histories¹⁶ that embrace the significance of bodies at war and address what is termed here the *embodiment of force* as a pressing concern. For example, published memoirs by female U.S. soldiers serving in Iraq and Afghanistan contributed to the debate and ultimate reversal of the official military position to exclude women from combat positions based on physical capacity and perceived competency. In addition to *Love My Rifle More Than You: Young and Female*

¹¹ See: *Coming Home Project* (www.cominghomeproject.net), Farmer Coalition (<http://www.farmvetco.org>).

¹² See the veteran's organization: *Iraq Veterans Against the War* (www.ivaw.org) and *Iraq and Afghanistan Veterans of America* (www.iava.org) and The Veteran Homestead. (www.veteranhomestead.org).

¹³ See: Paralyzed Veteran's of America. (<http://www.pva.org/>).

¹⁴ See Brave New Films (www.bravenewfilms.org).

¹⁵ See: U.S. Army Entertainment program; it provides music, dance, and theater shows (<http://www.armymwr.com>) and the U.S. MWR (Family and Morale, Welfare, and Recreational Programs) (<http://www.armymwr.com/soldier-show.aspx>). Roman Baca, a U.S. Marine and professional ballet dancer uses dance to support veteran recovery: "Dancing After Deployment: Marine Aims to Mend Veteran Minds with Motion." 8 Nov. 2013. Web. 3 Jan. 2014. <<http://www.cbsnews.com/news/dancing-after-deployment-marine-aims-to-mend-veterans-minds-with-motion/>>

¹⁶ See: Trish Wood. *What Was Asked of Us: An Oral History of the Iraq War by the Soldiers Who Fought It*. New York: Back Bay Books, 2006; *Winter Soldier-Iraq and Afghanistan: Eyewitness Accounts of the Occupations*. Eds. Iraq Veterans Against the War and Aaron Glantz. Chicago: Haymarket Books, 2008.

in the U.S. Army (2005) by Kayla Williams, these include *Death and After in Iraq* (2011) by Jess Goodell, a U.S. Marine's reflection on "processing" deceased soldiers' remains in the Mortuary Affairs (MA) platoon in Iraq, and *Hesitation Kills: A Female Marine Officer's Combat Experience in Iraq* by Jane Blair (2011), a U.S. Marine Lieutenant's analysis of her job as a woman in an aerial reconnaissance unit for unmanned aerial vehicles (UAVs) or "drones" in Iraq.

In the 21st century, descriptive language in training manuals, official publications, promotional and recruiting materials, and public presentations that disregard soldiers' embodiment, even while simultaneously forwarding the distinctly bodily nature of soldiering, abound. Consider the Future Soldier Initiative (FSI) project developed by U.S. Army Research, Development, and Engineering Command (RDECOM), one of the research and development agencies tasked with engineering the 21st-century soldier for combat. FSI affirms that in the next two decades the American soldier will be entirely physically and prosthetically altered through nanotechnology and bioengineering. The 2009 "Future Soldier Initiative White Paper" suggests:

The basic needs of the Soldier will be provided by the Soldier *ensemble*. The ensemble will feel like a second skin, instilling confidence in the system without inhibiting physical activity. Bio-inspired artificial vascular systems in materials will provide active multifunctionality for chemical/biological protection, climate control, and autonomic trauma care. The power and data network will be integrated into the textile as a self-forming network across the body without bulky cables and connectors. Power generation, energy storage and signal transduction will be provided by textile-integrated batteries, piezo-electrics, fuel cells, photovoltaics, bionic energy harvesters and electrically conductive fibers. Biometrics will be employed within the Soldier ensemble, ensuring that it is matched with a known friendly Soldier. If a Soldier expires, the system will provide a security-based zeroize function so that the enemy cannot exploit the ensemble's technology. (6)

Endowed with secondary vascular systems, an electrochemical skin, and posthumous “zeroization” (self-destruct) functions, the body of this reconfigured, electromagnetically networked 21st-century soldier is seemingly prioritized, and yet the body exists primarily as a material substrate to be technologically and biochemically augmented. To this end, the white paper assures the reader that the soldier’s innate, physical capabilities will be further broadened through digital enhancement of the *entire* theater of war, which the soldier will be jacked into:

The future Soldier weapon system will provide unequalled lethality and versatility on the future battlefield. The weapon system will permit direct and indirect target engagements, while effecting decisively violent and suppressive target effects at extended ranges and against defilade targets. Wireless connectivity to the digital battlefield will extend the lethality dimension by creating a “virtual trigger” capability for each Soldier. (10)

If the primary task of war is the threat and deployment of force, or more bluntly “killing,” the vision of the Future Soldier Initiative suggests that bodies will remain, for a while, valuable as long as they are technologically reengineered for more efficacious lethality. In the near future, might it be possible for war to be conducted without “boots on the ground” for the most violent tasks? How might this influence the embodiment of force for remote operators, such as current American drone technicians who kill remotely and yet report increasingly high rates of post traumatic stress syndrome (PTSD), potentially the result of watching a target for extended periods of time *without* the pressure and uncertainty of combat to justify the killing?¹⁷ Journalist Matthew Power, in his 2013 profile of U.S. Airman Brandon Bryant “Confessions of a

¹⁷ See: Matthew Power. “Confessions of a Drone Warrior.” *GQ Magazine*. 23 Oct. 2013. Web. 10 Nov. 2013. <<http://www.gq.com/news-politics/big-issues/2013/11/drone-uav-pilot-assassination#ixzz2jlkqr9mj>>
Editorial Board. “Distance From Carnage Doesn’t Prevent PTSD for Drone Pilots.” *NYT*. 25 Feb. 2013. Web. 4 Mar. 2013. <http://atwar.blogs.nytimes.com/2013/02/25/distance-from-carnage-doesnt-prevent-ptsd-for-drone-pilots/?_php=true&_type=blogs&_r=0>

Drone Warrior,” describes this newly hybridized embodiment of force for U.S. drone operators:

He was an experiment, really. One of the first recruits for a new kind of warfare in which men and machines merge. He flew multiple missions, but he never left his computer. He hunted top terrorists, saved lives, but always from afar. He stalked and killed countless people, but could not always tell you precisely what he was hitting. Meet the 21st-century American killing machine. Who's still utterly, terrifyingly human. (1)

While drone operators foreshadow a time when robots will deploy robots to kill enemy combatants, in 2014, U.S. warfare cannot be waged and force cannot be enacted without bodies: drawn from communities of architects who engineer the killing, soldiers who employ the force, civilians who endure the violence, and nation-state citizens who actively or tacitly approve the warfare. Stating this explicitly is important as it reorients an analysis of war towards the experiences of individual people and away from policy and politics. However, it is not yet sufficient to arrive at an understanding of how and why the embodiment of force is central to waging and responding to war. Concern for the embodiment of force moves beyond acknowledging the role of the body at war, and emphasizes how violent force is realized by bodies of war and cannot be disregarded without denying the existence, or the significance, of soldiering and civilian bodies. The elision of the body from scholarly analyses of war portends an unsettling outcome that is now historically repetitive: while not inevitable, dismissing the *matter* of an individual's body may facilitate the idea or ideology that individuals' bodies *do not matter*. The explicit dismissal of the importance of bodies of war in 21st-century U.S. warfare was neatly summarized by former U.S. Army General Tommy Franks at a press conference in March 2002 at Bagram Air Base in Afghanistan. In regards to the uncertain number of

Afghani deaths, Franks quipped: “We don’t do body counts.”¹⁸ Franks’ remark was not rhetorical, but rather a terse policy statement. In November 2003, Donald Rumsfeld echoed Franks’ assertion in an interview on *Fox News Sunday* in reply to reporter Tony Snow’s question, “People say ‘We hear about our death counts. We never hear about theirs. Why?’” Rumsfeld replied: “Well, we don’t do body counts on other people.”¹⁹ Fatalities for U.S. Military and U.S. Department of Defense (DoD) civilian casualties are updated daily and published online by the U.S. DoD for Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and Operation New Dawn (OND).²⁰ Since the U.S. Vietnam War, the Pentagon has not publically reported body counts for enemy combatants or foreign civilians in U.S. military engagements (including those killed, wounded, or missing), and this policy continued through the first months of Operation Iraqi Freedom. However, in late 2003 and early 2004, various U.S. Military officials appeared to temporarily reverse this policy. Without an official change to Pentagon policy, individual DoD and Pentagon officials reported intermittent numbers, often in regards to specific encounters or battles in Iraq. Press coverage of this shift suggested it was in response to pressure from U.S. reporters, or a public relations tactic to boost morale for the U.S. public and soldiers.²¹ However, providing estimates of the deaths of all “others,” as Rumsfeld describes non-Americans killed in U.S. Military operations, did not continue as an official Pentagon policy. Articulating an aversion to quantification that

¹⁸ Tommy Franks qtd. in: Edward Epstein. “Success in Afghan War Hard to Gauge: U.S. Reluctance To Produce Body Counts Makes Proving Enemy’s Destruction Difficult.” *San Francisco Chronicle*. 23 Mar. 2002.

¹⁹ Tony Snow. “Transcript: Donald Rumsfeld on Fox News Sunday.” *Fox News*. 2 Nov. 2003. Web. 5 Dec. 2004. <<http://www.foxnews.com/story/2003/11/02/transcript-donald-rumsfeld-on-fox-news-sunday/>>

²⁰ U.S. Department of Defense. “U.S. Casualty Report: OIF, OND, and OEF.” Report is updated daily by the DoD, Monday-Friday, since 2003. Web. 10 Oct. 2014. <<http://www.defense.gov/news/casualty.pdf>>

²¹ See: Mark Benjamin. “Return of the Body Counts.” *Salon*. 11 Jun. 2005. Web. 12 Jul. 2005. <http://www.salon.com/2005/06/11/body_counts/>

has persisted through 2014, *The Washington Post* reported in October 2005 that Brigadier General Donald Alston, U.S. Military Communications Director in Baghdad, had declared "Specific numbers are used to periodically provide context and help frame particular engagements" and "[there is no plan] to issue such numbers on a regular basis to score progress."²² Other organizations such as the Iraq Body Count Project²³ and the World Health Organization²⁴ have intervened to provide quantitative reporting, but the dearth of quantitative reports by the U.S. Military signifies a wider dismissal of bodies of war that extends to foreign combatants and civilians as well as the embodied experience, if not the death toll, of U.S. soldiers.

This dissertation presents a counterpoint to the idea that "We don't do body counts." It suggests that soldiering and civilian bodies should not only be counted, but *accounted* for as primary subjects, including in scholarly analyses of war wherein embodied experience is often preempted by studies of tactics and geopolitics, and performance, where soldiering bodies are rarely studied. What is at stake in prioritizing the embodied experience of soldiering and considering soldiers as subjective agents rather than "instruments" of war? Why does it matter if soldiers are referred to as inanimate objects, machines, or operators? And why express dismay over institutional language or targeted technologies that designate civilians as collateral damage or don't account for their deaths at all? Are there historical antecedents for how bodies of war have been theorized, trained, and deployed that inform the current orientation of the

²² Bradley Graham. "Enemy Body Counts Revived." *Washington Post*. 24 Mar. 2005. Web. 22 May 2007. <<http://www.washingtonpost.com/wp-dyn/content/article/2005/10/23/AR2005102301273.html>>

²³ Iraq Body Count Project. Web. 1 Nov. 2014. <<https://www.iraqbodycount.org>>

²⁴ World Health Organization. "Republic of Iraq: Iraq Family Health Survey 2006/2007." Web. 1 Nov. 2014. <http://www.who.int/mediacentre/news/releases/2008/pr02/2008_iraq_family_health_survey_report.pdf>

U.S. Military regarding the embodiment of force? Moving into the 21st century, why deliberate how soldiers embody modern force or question what is augured for future bodies of war as U.S. military technologies increasingly engineer the body as a remote extension of globally networked, prosthetic, robotic, and virtual systems? In other words, why elaborate on how bodies of war matter? And why do so through a lens of dance studies, a scholarly field that appears decidedly distant from military studies?

Methodology of Chapters: Bodies at War

Dance studies, concerned as a discipline for the subjectivity and agency of bodies, generally in motion, provides two critical valences to consider soldiering activities. The first valence is historical—as is well-known to military scholars, the development of American military tactics in the late 18th and early 19th centuries was greatly influenced by French theorists and tacticians, who were in turn guided by earlier 16th- and 17th-century conceits of training, coordinating, and choreographing bodies in theaters of war *and* theaters of performance. In France, the possibility that dance and military arts might share pedagogical or theoretical strategies for training and choreographing bodies to represent individual, collective, or sovereign force was facilitated by the organization of the French military.²⁵ The French nobility—dominant participants in military leadership, organization, and the profession at large—were generally required to alternate military service with time at various courts wherein a common activity required of all nobility was dance. In her study, *Music, Discipline, and Arms in Early Modern France* (2005), music

²⁵ The composition of the French military by profession, social standing, and economic class, among other divisive demographics, should not be understood as “one” monolithic military institution and its composition changed under French sovereigns. Some of these distinctions will be addressed in Chapter I.

historian Kate Van Orden examines the intersections of French music, dancing, and martial arts from the 16th to mid 17th centuries, and argues that dance performance was requisite for military professionals during this period: “For noblemen, dance was not in conflict with the military career but was, rather, a standard complement to arms. Indeed, military men typically passed the seasons of each year on shifting terrain, with summer military campaigns followed by winter stations at court culminating in balls and *ballet de cour* mounted for Carnival” (103-104). While Van Orden’s text explores the relationship between individual dances, musical scores, and principles of military discipline, military historian Sydney Anglo examines training manuals of military art forms such as fencing, jousting, and dressage and suggests that Renaissance dance and martial arts manuals shared theoretical principles for notating and teaching movement practices. In *The Martial Arts of Renaissance Europe*, Anglo compares similarities between the dancing theory tract of Thoinot Arbeau (1588) and 16th-century fencing manuals:

Of the principal sources for renaissance dance theory, only two have anything like a symbolic notation and both of these remained in manuscript until modern times, but, from our point of view, it is a printed book of 1588, Arbeau’s *Orchésographie*, which is especially noteworthy because the principles underlying its method (that is, the definition, naming, and illustrating of certain key postures which may then be grouped in various sequences and at different tempi) are very similar to what had already evolved, more than fifty years earlier, for fencing. (44)

As Anglo recognizes, dance shared a repertoire of physical principles with other embodied activities for military training. Displays of fencing, drill, and dressage were featured occurrences at French courts and opportunities for dance training would have occurred alongside military training for nobles and courtiers. Early Modern (1600-1750)

dance, drill, and military manuals offer a glimpse into different kinds of movement training that may have informed and pressed upon dance and military arts.

The first chapter of this dissertation, “Performances of War,” draws on primary documents, including 17th-century published texts, images, letters, and manuals, as well as contemporary scholarship, to examine the historical syncretism of performance and military practices in Early Modern France. The intent is to assess how working theoretical and pedagogical models in both theaters reciprocally influenced one another and contributed to an evolving conception of the embodiment of force. To kill an enemy in hand-to-hand combat is a clear embodiment of war, but so is a theatrical performance wherein a dancer depicts killing an enemy on stage. In both instances, the body acts as the primary agent to physically deliver or theatrically display the force of war. While the French influence on the formation and evolution of the U.S. Military is well known to military scholars, the convergence of Early Modern French philosophies of the body, training, and patterned choreography in theaters of combat is less examined by military and dance scholars. The role of French courts as centers of power, politics, and performance enabled military strategies and battle tactics to be exercised and perfected through intricate court performances, including processions, pageants, *ballet de cour*, and equestrian dressage, the legacy of which continued to differentially inform the training and battle tactics of Western Europe’s globally expanding militaries, including in America, for at least two centuries. The first chapter, “Performances of War,” thus examines shared pedagogical and choreographic tactics between dance and military arts that would later influence Early American conceits regarding the embodiment of force.

The historical circumstances that unfurled to ensure modern U.S. drill, cadence, and military training philosophies owe an historical debt to 17th-century French training methodologies involve a convergence of particular historical events. They include 18th-century American military leaders' rejection of British training and tactics in favor of Prussian and French methods, the physical restrictions imposed by loading and firing available artillery en masse during the Revolutionary and Civil Wars, and the U.S. military's institutional culture itself, which would continue to proudly rely on tradition and historical precedent for implementing training methodologies. For example, the narrative introduction to the 2010 U.S. Army *Soldier's Blue Book: The Guide for Initial Entry Infantry Training (TRADOC Pam 600-4)*, attributes American independence to the training of Prussian military officer Baron von Steuben, who was under the employ of the French Minister of War when he began work with the Continental Army in 1777. Von Steuben advocated for choreographed military training and worked to ensure a nascent American army effectively embodied force through coordinated drill and maneuvers.

In the harsh Pennsylvania winter, Baron von Steuben instructed a company of future leaders in basic military movements and tactical skills; those individuals were the predecessors of our Drill Sergeants! He developed a cadre until they could—in turn—train the entire Revolutionary Army in the art of basic military movements. [...] These dedicated troops practiced to the highest standards. As a result, Washington's men fought skillfully in battle and embodied a professional army. By 1783, America had won its independence. (1)

While the U.S. Army *Soldier's Blue Book* presents one historical version of military triumph that emphasizes von Steuben's influence,²⁶ other U.S. Military publications and military scholars also underscore the exhaustive French influence on early American

²⁶ For a discussion of systems of Prussian and French military tactics in relation to Early Modern Europe warfare see: Clifford J. Rogers, Ed. *The Military Revolution Debate: Readings on the Military Transformation of Early Modern Europe*. Boulder: Westview Press, 1995.

tactics and military traditions. For example, historian Michael Bonura presents a comprehensive analysis of France's sweeping theoretical and tactical contributions to the American military in *Under the Shadow of Napoleon: French Influence on the American Way of Warfare from the War of 1812 to the Outbreak of World War II*. Bonura argues:

The American intellectual framework of the battlefield, based on the fundamental elements of the French combat method, became institutionalized by a number of American officers educated in France who subsequently taught it to future generations of officers and soldiers. This intellectual framework dominated the American way of warfare throughout the Mexican-American War, the American Civil War, the Spanish-American War, and World War I. It was not until the rise of the German army in the 1930s and the fall of France in 1940 that General George C. Marshall replaced the army's 126-year-old framework, influenced by the French combat method, with a new intellectual framework of the battlefield. (9)

Bonura presents French influence not simply as a fleeting military dalliance, but rather as a comprehensive "framework" that informs what Bonura terms a "way of warfare," a designation that encompasses a nation's shifting cultural proclivities and philosophies regarding how wars should be conducted, and by and upon whom war is waged.²⁷

While 17th-century French military engagements actively relied on training in embodied military arts such as fencing, dressage, and drill, the military theaters and requirements of 18th- and 19th-century U.S. domestic wars, and later 20th-century international wars, radically changed military infantry formation and arms and their relationship to one another. The embodiment of soldiering in 20th- and 21st-century theaters of war, particularly for the world's largest military force, the U.S. Military, has been transfigured as military practices have shifted from infantry drill to digital combat. U.S. soldiers engage in globally networked theaters of war with highly engineered

²⁷ Bonura's analysis is explicitly applied to European and American warfare and his discussion is confined to Western forms of warfare (as opposed to, for example, 21st-century guerilla or insurgent warfare).

weaponry that, even in asymmetrical warfare, increasingly relies on digital calculation rather than analog choreography for effective delivery.²⁸ And yet war remains, even amidst tenuous claims that 21st-century technologies have “anesthetized” killing, *resolutely embodied*. War, across centuries that differ remarkably in geopolitical, territorial, sovereign, and technological milieus, maintains one irrefutable, ontological characteristic: war is defined by the use of generally brutal force against those who are invariably traumatized, injured, or killed by its impact.

The second chapter, “Counting Bodies of War,” considers how theory, training, and technology have reconfigured U.S. soldiering bodies of war from the late 18th to early 21st century, theorizing the body as the site of change. All wars of force are wars waged on bodies, and yet the theory and praxis of how bodies are conceived has changed as war marches—and drones—into the 21st century. “Counting Bodies of War” examines the tactical and technical strategies inherited from a French “way of warfare,” specifically as they relate to the embodiment of war, and explores how ideas of military embodiment changed moving towards early 21st-century engagements. Methodologically, the chapter draws on primary documents from early American history, including letters, drill manuals, and military tracts to establish how French methods “marched” across the Atlantic from France to America, necessarily being adapted to an emerging American philosophy and praxis of conducting war. In examining how military bodies are “counted” in the 21st-century, the chapter brings to bear contemporary sources and

²⁸ For a study of the technological changes to 21st-century warfare see: Peter W. Singer. *Wired for War: The Robotics Revolution and Conflict in the 21st Century*. New York: Penguin Press, 2009. Bruce Berkowitz. *The New Face of War: How War Will be Fought in the 21st Century*. New York: Free Press, 2003. Thomas X. Hammes. *The Sling and the Stone: On War in the 21st Century*. Minneapolis: Zenith Press, 2006.

scholarship that theorizes embodiment in the context of performance and performativity. The chapter incorporates personal narratives from first-person interviews I conducted from 2008 to 2014 with U.S. Military personnel who served in Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF) and Operation New Dawn (OND). Selections from these interviews are presented with accompanying analysis to link soldiers' observations and experiences to specific concerns of this dissertation regarding embodiment and the subjectivity of soldiering. Critically, the emphasis of Chapter 2 is not on the historical and political catalysts that shaped why America went to war in international and domestic engagements from the 18th to the early 21st centuries—this work is expertly examined elsewhere.²⁹ Rather, the focus is oriented towards the thesis of this dissertation: how is force embodied during warfare, particularly when the labor requires harming bodies.

The second chapter suggests that bodies should be counted—as in accounted for and considered—in scholarly analyses of war. The second valence that enables dance studies to productively contribute to an analysis of the embodiment of soldiering is theoretical—the history of war is simultaneously a history of trained and choreographed bodies, thus the theoretical heft of dance scholarship is well poised to consider how dilemmas raised for other types of movers and movement systems applies to military training, movement drill, and choreographed deployment on the battlefield—How do bodies demonstrate political efficacy or protest through movement? How do codified

²⁹ See: Beatrice Heuser. *The Evolution of Strategy: Thinking War from Antiquity to the Present*. Cambridge: Cambridge UP, 2010. John Keegan. *The American Civil War: A Military History*. New York: Alfred A. Knopf, 2009. Thomas G. Mahnken. *Technology and the American Way of War since 1945*. New York: Columbia UP, 2008. John Ferling. *Almost a Miracle: The American Victory in the War of Independence*. Oxford: Oxford UP, 2009.

movement systems embody cultural assumptions or renderings of class, gender, and race? How does choreographed drill courier circulations of power within social systems? What are the consequences for soldiers' subjectivity as their bodies become increasingly integrated within physiologically and prosthetically networked defense systems? "Counting Bodies of War" is informed by dance scholarship of the last two decades that has continued to reorient academic and political attention to the contested claims and identities of performing bodies, and has engendered unique disciplinary theory regarding the body, corporeality, and performativity. This project deliberately emerges out of dance studies rather than another field, for example, engineering or military history, because the questions that are epistemologically (or intentionally) eschewed in these fields— How does wearing a uniform/costume enable performers to transform strategies for embodying force? Do virtual movement training systems facilitate disembodiment? What are the consequences of networking individual bodies to perform as a collective in war?—are precisely the set of questions that emerge from the sociokinetic concerns the field of dance studies has theorized for decades.

Acknowledging the influence of dance studies in this work also presents an opportunity to state more precisely the origin and agenda of this dissertation. In World War II, approximately 12% of the U.S. population was employed in active-duty service,³⁰ not including nationwide war efforts evidenced across diverse socioeconomic sectors (industry, government, entertainment, private households, etc.). In comparison,

³⁰ Statistic from two sources: "By the Numbers: Today's Military" NPR. 3 Jun. 2011. Web. 4 Dec. 2012. <<http://www.npr.org/2011/07/03/137536111/by-the-numbers-todays-military>> Karl W. Eikenberry and David M. Kennedy. "Americans and Their Military, Drifting Apart." 26 May 2013. Web. 12 Jun. 2013. <<http://www.nytimes.com/2013/05/27/opinion/americans-and-their-military-drifting-apart.html?pagewanted=all>>

less than .5% of the current U.S. population serves as active-duty military in the 2010s.³¹ In addition, general public participation and support of U.S. military engagements and functions has dwindled in the last decade. A *New York Times*/CBS News poll in 2011 showed that 67% of Americans did not think the “Iraq War was worth the costs”³² and by 2014, 75% of Americans responding to the same question felt it was not worthwhile.³³ In 2012, a similar *New York Times*/CBS News poll regarding the war in Afghanistan found that 69% of Americans were against military involvement.³⁴ And yet after a decade of military engagement in the Middle East, when U.S. civilians were polled by the Pew Research Center in 2011 regarding their knowledge of the U.S. Military, 71% responded they knew “little or nothing” about the operation, duties, and culture of the U.S. Military, and 84% of U.S. Military veterans responded that they felt the U.S. civilian public did not understand the duties or challenges of U.S. Military service members.³⁵ Thus, while a majority of Americans state they are against U.S. warfare in Iraq and Afghanistan in the 2010s, they also appear to be less informed or directly engaged with U.S. Military culture than in previous generations.³⁶ Unusually, this apparent disconnect

³¹ Statistic from: Pew Research. “The Military Civilian Gap: Fewer Family Connections.” 23 Nov. 2011. Web. 1 Nov. 2014

<<http://www.pewsocialtrends.org/2011/11/23/the-military-civilian-gap-fewer-family-connections/>>

³² Pew Research. “More Americans Say U.S. Failed to Achieve its Goals.” 12 Jun. 2014. Web. 10 Jul. 2014. <<http://www.pewresearch.org/fact-tank/2014/06/12/more-americans-say-us-failed-to-achieve-its-goals-in-iraq/>>

³³ New York Times/CBS News Poll. “Most Americans Say Iraq War Wasn’t Worth Costs: Poll.” CBS News. 23 Jun. 2014. Web. 19 Jul. 2014. <<http://www.cbsnews.com/news/most-americans-say-iraq-war-wasnt-worth-the-costs-poll/>>

³⁴ Elisabeth Bulmiller. “Support in U.S. for Afghan War Drops Sharply, Poll Finds.” *The New York Times*. 26 Mar. 2012. Web. 25 Dec. 2013. <<http://www.nytimes.com/2012/03/27/world/asia/support-for-afghan-war-falls-in-us-poll-finds.html?pagewanted=all>>

³⁵ Pew Research Center. “War and Sacrifice in the Post 9/11 Era—The Military Civilian Gap.” 5 Oct. 2011. Web. 2 Nov. 2012. <<http://www.pewsocialtrends.org/2011/10/05/war-and-sacrifice-in-the-post-9-11-era/6/#chapter-5-the-public-and-the-military>>

³⁶ For statistics related to the U.S. Military in relation to the U.S. civilian population and demographics see: Donna Miles. “Survey Shows Growing Gap Between Civilians and U.S. Military.” Department of Defense News. 28 Nov. 2011. Web. 25 Feb. 2012. <<http://www.defense.gov/News/NewsArticle.aspx?ID=66253>> Andrew Bacevich.

appears at a time when access to both published and online declassified information is also overwhelmingly ubiquitous, and even previously classified information has been widely distributed as a result of information-sharing technologies and an ethos of democratic information distribution. Document leaks in the 2010s by Wikileaks and Eric Snowden provide two recent public sources for U.S. Military information. Americans have access to information about the U.S. government and the auxiliary agencies that direct defense operations that is historically unprecedented, and yet, the studies referenced above suggest that by a variety of indices U.S. civilians appear to be neither particularly knowledgeable nor overwhelmingly engaged with the experience of U.S. soldiering. While the central concern of this dissertation is how bodies of war endure, inflict, and negotiate the consequences of force, this inquiry is guided by a rather simple civic question: how does Americans' treatment of military and civilian bodies, at home and abroad, initiate or require responsibility towards these same bodies?

As an academic in the humanities trained previously as an engineer in the sciences, the role of the U.S. Military first began to press on my present and future when I was recruited as an undergraduate, and subsequently after graduate school, by military contractors interested in hiring female scientists. Curious about the design and technical responsibilities of this work, in the early 2000s I participated in interviews with military engineering recruiters and asked questions that were likely unusual and certainly ill-advised: "Would I be able to interview the end-users of the technology to determine if it was successful during operation? How would I incorporate feedback from personnel

Breach of Trust: How Americans Failed Their Soldiers and Their Country (American Empire Project). New York: Metropolitan Books, 2013.

to improve the design? Would I receive clearance to know what technology (weapon) a microcontroller circuit was ultimately being used for? Did the company provide forums or task groups for engineers to discuss the ethical dilemmas of their technology designs?" This last question I would have assumed was *de rigueur* after the Manhattan Project, but it generally concluded the interview. I had an afternoon interview scheduled with a robotics contractor on the morning of 9/11, my second year of graduate school and also my second scheduled class teaching in the Expository Writing Department at New York University. Per my drafted syllabus, "Falling into Writing," I had intended to discuss the choreography of Italo Calvino's language in *Six Memos for the New Millennium* and the luminary possibilities for his theories of quickness and lightness to shape our "fall" into literature.³⁷ During our first class on September 6th, we had discussed the "gravity" of the 2001 economic crisis—the U.S. economy had been described by the Chairman of the Federal Reserve as being in "free fall,"—and the peculiar impossibility of the many idiomatic expressions of falling: what does it mean to "fall freely" and why do we fall short, fall apart, fall in love, fall to pieces, or fall delightedly into reading and writing essays? We did not discuss Calvino. I did not attend my interview with the military contractor. Teaching colleagues and I gathered at NYU, weeks later, wondering what and how we would teach?³⁸ How we would read and critique student writing, their loss and fear unprocessed by time or distance. How we would stand up in front of our students and speak—teach writing—when we had no words. Our pact was unspoken

³⁷ Italo Calvino. *Six Memos for the New Millennium*. New York: Vintage, 1993.

³⁸ In 2001, the NYU Fall Semester for Tuesday/Thursday classes began on Thursday, September 6th, 2001. For teachers with this schedule, the next date they were scheduled to see students was Tuesday, September 11th, 2001. Many faculty, therefore, only saw their students weeks after 9/11 when NYU reopened after a period of closure.

and unanimous: most of us would never write about that morning ourselves. I did not write about it for ten years.

I still have the NYPD police-issued gasmask I was encouraged to wear to enter my office on Mercer Street in lower Manhattan. In the warm, Indian summer days of September we arrived to teach without our coats, but with our emergency kits in hand. For days after 9/11, no one could get home. New Yorkers couldn't cross the bridges into Brooklyn or Queens. We couldn't take the ferries to New Jersey or Staten Island. And when we finally did get home, it wasn't home at all. In Brooklyn, at my house just a few blocks east of the East River, a snow had fallen in September. How could I have known that during the days I'd been forced to take refuge in Manhattan that winter had already arrived, quick on the heels of the first weeks of fall? The snow was a soft, pale grey. Not the winter white of a fresh country fall, but the color that generally falls through NYC skies, already changed to a darker hue by city pollution. I ran my hand along the hood of a car to feel the soft flakes. And then I stopped. It was dust. It was falling from the clouds, days later, over the East River into Brooklyn. We breathed it in; we could hold it in our hands. This improper burial. Ashes scattered across the sky. It clung to our clothing and blackened our windows; it blurred our vision as we looked to the sky, always to the sky. We whispered because we couldn't bear to say it aloud: *The dust of lost lives*. And in the days that followed we waited. For the weight, the news, the terrible announcement that would soon arrive: Who was to blame now that it had happened, finally, to us at home?

The ubiquitous question—where were you on the morning of 9/11 really meant how close were you to the epicenter? How close were you, your friends, and your family to dying—by how many floors or blocks had you escaped fate? And propinquity earned you an uncomfortable authority. The closer you were the more reliable your story appeared. And yet your very existence as a narrator meant you hadn't been close enough to tell the most important story of that morning—you *had not been forced or decided to fall*. In September 2002, Eric Fischl's *Tumbling Woman*,³⁹ a bronze sculpture commemorating 9/11, was removed from Rockefeller Center after just one week on display due to public protest and outrage. The work depicted a nude woman in a posture the artist described as being in “perpetual free fall.” Yet in exhibition, she was clearly not falling: she had landed. The work itself, capturing as it did the human body in a kind of twisted repose, appeared much like a dancer caught in a choreographed tumble. With her hips raised, back arched in a pendulum of movement, and arms lifted in a port-a-bras that suggested she was simply caught in a slow, but continuing adagio, she appeared spatially and somatically in-between falling and flight, between retrograde and rebound. The public response to *Tumbling Woman* was swift and searing. Andrea Pyser of *The New York Post*, in an article titled “Shameful Art Attack: Rock Art Showcases WTC Leaper,” wrote: “A violently disturbing sculpture popped up last week in the middle of Rock Center's busy underground concourse. It depicts a naked woman, limbs flailing, face contorted, at the exact moment her head smacks pavement following

³⁹ Archived on artist Eric Fischl's website at: <http://www.ericfischl.com/html/en/public/tumbling/TW_03.html>

her leap from the flaming World Trade Center.”⁴⁰ Pyser goes on to question the relevancy of an artist who was not close to the towers, not even in Manhattan, to create artwork that would catalyze collective mourning or healing. She writes, “Fischl—who was traveling in Croatia yesterday—was not in Manhattan, but way out in the Hamptons on Sept. 11 of last year, and, despite the moronic poem that accompanies the installation, he did not witness the scene his work exploits.” As already mentioned, Pyser affirms the unusual logarithm of 9/11—proximity was seemingly the only path to legitimacy. And so, how close or removed from the violence of war, at home and abroad, is *sufficiently* close to be impacted—to feel responsible or be motivated to respond? And why should distance from violent acts of war, as Pyser suggests, negate or delimit one’s ability to engage?⁴¹

The third chapter of this dissertation, “Technologies of War,” emerges from my own professional and personal sense that we bear some responsibility, whether as empathetic citizens, concerned engineers, or engaged artists, to deliberate the most forceful assault on bodies in the 21st century: the violence of war. How we choose to engage will likely be predicated on our own sense of what is impactful—serving in the U.S. Military, engineering military technologies, protesting U.S. government war operations, writing scholarly texts, or generating responsive art. Here, Chapter 3

⁴⁰ Originally read in *The New York Post* on September 18, 2002. Archived at: Andrea Pyser. “Shameful Art Attack: Rock Art Showcases WTC Leaper.” *The New York Post*. 18 Sep. 2002. <<http://nypost.com/2002/09/18/shameful-art-attack-rock-center-showcases-wtc-leaper/>>

⁴¹ There is, of course, a large body of published work that critiques the commercialization and commodification of responses to 9/11, including selling memorabilia, artwork, memoirs, novels, films, and even tickets to the 9/11 Memorial Museum for financial profit. This was not, however, the etymology of Pyser’s argument, which attacked *Tumbling Woman* based on the artist’s perceived illegitimacy, not his monetary gain from the installation. For example see art critic Robin Cembalest’s examination of how New York Museums are addressing the memorialization of 9/11 in the 2010s. Robin Cembalest. “A Terrible Beauty: New York’s Museums Grapple with 9/11.” *ArtNews*. 15 Aug. 2011. Web. 12. Dec. 2012. <<http://www.artnews.com/2011/08/15/a-terrible-beauty/>>

examines the role of 21st-century, corporeal U.S. Military technologies—those that are physically, physiologically, or prosthetically integrated into soldiers’ defense and weapons system—and their performance within specific civilian, military, and scientific communities. U.S. Military technologies, in addition to their political exigency and utilitarian role, perform explicit functions in U.S. culture that are inextricably bound to performative state apparatuses, discourses of militarization, and increasingly, the collusion of military technologies with digital and consumer popular culture. The third chapter has three concerns that imbricate corporeal technologies and the U.S. Military. First, it defines and proposes a “theory of silhouetting” to describe how the discourse, design, distribution, and deployment of corporeal technologies presents a “silhouette” that forwards a rhetoric of invisibility, even while the technologies themselves catalyze visible destruction. Second, it considers the technological and theoretical production of “traditional” U.S. Military (cloth) uniforms as a material substrate in the process of being actively reenvisioned, analyzing the agency or absence of language related to embodiment in military design and technological production. Third, it considers discrete technologies, considering specific robotic, virtual, nano, and metamaterial technologies that are extant or anticipated in the 21st century. Methodologically, the chapter analyzes technologies’ engineering, research and development (R&D), and deployment. Chapter 3 draws on first-person interviews I conducted between 2008 and 2014 that consider how U.S. Military personnel have used specific corporeal technologies during active-duty service in Iraq and Afghanistan.⁴²

⁴² See: *Appendix C: Sample Interview Questions for U.S. Military Soldiers.*

Generally, the relationship between Western militaries and staged, theatrical performance has shifted from mutually constitutive court and military productions enacted on clearly circumscribed battlefields and stages, to equally complex stagings of nationalist power, ideology, and identity in globally networked, geopolitically shifting microtheaters. The trajectory of U.S. warfare has developed from so-called first generation warfare (conscription, Napoleonic military formation, and early handheld firearms) to second generation (Civil War and World War I nation-state alliances with advanced systems of weaponry), to third generation (World War II maneuver and coordinated air, ground, and sea formations) to fourth generation (networked guerrilla warfare and distributed technologies).⁴³ It has arrived in 2014 with molecular advances in nano, micro, metamaterial, robotic, and biometric surveillance technologies that potentially alter the material substrate of soldiering bodies, and by extension, military performance in U.S. theater operations and within scientific, civilian, and academic communities that are implicated in technological production and consumption.

Current and anticipated developments in 21st-century conflicts, transformed by geopolitical and technological exigencies of fourth generation (4G) warfare, represent a continuum with earlier systems of military performance and also signify a radical break. Military operations in the 17th century in France and in the 18th and 19th centuries in the U.S. frequently relied on systematized techniques of training that performatively demonstrated state functions or interests, as well as representations of gender, class, and the evolving roles of a militarized body politic. In the 21st century, these distinctly

⁴³ For significant examinations of the evolution of generational warfare, see John Robb. *Brave New War: The Next Stage of Terrorism and the End of Globalization*. Hoboken, NJ: Wiley Press, 2007; Thomas G. Mahnken, *Technology and the American Way of War Since 1945*. New York: Columbia UP, 2008.

performative functions for both a body politic and bodies of war certainly persist. However, military technologies portend to transform the corporeal and ontological boundaries of human beings, aided by institutional strategies embedded in the technologies' design and enacted in their deployment. These work in concert in military projects such as the Future Soldier Initiative (FSI) that promise unprecedented, exacting lethality in their performance with few, or no, embodied consequences for soldiers. As conceptualized, the performance of U.S. war operations will increasingly rely on networked, corporeal technologies that modify, or proclaim to radically reconfigure, the phenomenological experience of U.S. Soldiers, militarized citizens, and impacted communities. These corporeal technologies are frequently imagined to have been “liberated” from concerns of race, gender, and class in their production and performance. That is, by radically altering or augmenting the perimeters of the human body the new, digitally networked body is envisaged to be freed from constitutive markers of individual identity, subjectivity, and conditions of social and labor inequity,⁴⁴ even as the technologies operate in the name of distinctly national agendas—such as the “war on terror.”

The struggle to locate responsibility for the development and deployment of corporeal technologies, across diverse institutions, presages the significant ethical and political concerns at stake in considering 21st-century military technologies. Particularly problematic are those that forecast the reconfiguration of the lethal work and performance of bodies of war through digital machines (offered as a respite to labor via

⁴⁴ For example, for a discussion of some of the difficulties U.S. women service members experience in Iraq in relation to non-differentiated technologies and techniques, see: Helen Benedict. *The Lonely Soldier: The Private War of Women Serving in Iraq*. Boston: Beacon Press, 2009.

networked, immersive, and robotic technologies), or herald the syncretism of bodies with technology (offered as an augmentation via digital skins, embedded wearables, and prosthetic devices). Amidst alternating predictions of cyber-Utopia or cyber-Armageddon, dance studies perspectives can intervene valuably in evaluating 21st-century corporeal technologies, signaling varied possibilities to improvise, resist, protest, and re-engineer. While engineers are generally concerned with how technologies perform functionally, dance scholars are frequently concerned with how technologies perform theatrically, corporeally, or politically. As example, for an electrical engineer the design of a digitally-networked, U.S. Military helmet with embedded video projection may raise concerns of technical operation and function—Can the technology be suitably powered remotely? Will the microcircuits work correctly in a desert environment? For a dance studies scholar, the same helmet invokes considerations of subjectivity and embodiment—How do repeated images of war, viewed simultaneously with one “naked” eye and through continuous, live video feed with the other, impact a soldier at war? What are the consequences for a soldier when the violence of war is simultaneously being enacted by the body and digitally recorded and replayed? Dance, engineering, and military studies are thus productive to consider in concert.

Scholarship: Bodies at War

This dissertation is concerned with the intersection of two disciplines, engineering and performance, and is circumscribed by specific concerns that have indelibly marked my experience as a U.S. citizen. With this project I hope to contribute through a decidedly restricted focus: examining the embodiment of force and war and potential changes to embodiment based on extant and anticipated 21st-century U.S. Military corporeal technologies. The development of robotic, nano, and metamaterial technologies has not only come to influence the domestic production of technology for the military and consumer market, but will increasingly intervene to transform transnational economic, environmental, and health conditions in this century. While my project seeks to examine these concerns with a spirit of investigation, it also embraces a critique of scientific design and military fabrication when the embodiment of force and the politics of production are overlooked in these processes. While the term U.S. Military will be used in this document to refer generally to the institution, it provisionally stands in for discrete service branches, including the U.S. Army, U.S. Marine Corps, U.S. Air Force, U.S. Navy, U.S. Coast Guard, and corollary Reserve/Guard branches. Each service branch has differentiated institutional cultures, strategic philosophies, funding revenues, operational mandates, corporate and academic partners, and histories of technological use that cannot be collapsed and will be explored in distinction to one another in the following chapters. Auxiliary military agencies will be named specifically throughout.

Methodological and epistemological strategies inherited from the natural and physical sciences are distinctly inadequate in addressing the humanist inequities of gender, class, power, and ideological striation that inform the production, performance, and embodied complications of corporeal technologies in the United States. While the philosophy of science has a corresponding set of dilemmas to the philosophy of history and feminist, postmodern, and postcolonial studies—many catalyzed by similar inheritances from, or reactions to Enlightenment ideologies including the role of empiricism, reason, and truth—these queries are generally the purview of academic philosophers or historians of science rather than practicing or “lab” scientists. They may not inform one’s day-to-day practices (they did not generally press upon mine) even in fields such as engineering and technology that are routinely concerned with theorizing developments in their evolutionary past and present. My dissertation, therefore, draws from research of quite different discourse communities—including dance scholars, scientists, military strategists, and soldiers themselves. It invokes the research of practitioners who would be unlikely to meet in academic or professional circles, but whose work and labor nonetheless find covalence through the design, production, deployment, and public examination of U.S. Military corporeal technologies. Seemingly divided by discipline, political agency, and institution we all variously participate and perform as *bodies of war*. The theoretical concerns of each community are vast and thus the scope of the dissertation must be decidedly restricted. As this project is indelibly marked by scholarship in the field of dance studies, priority will be given to

attending to concerns of embodiment, corporeality, and performance that impact an embodiment of force.

In the last two decades dance studies has unfurled, reaching out to address coextensive concerns of identity, gender, ethnicity, nationalism, and labor—thereby revealing corporeal “intertexts”⁴⁵ of cultural production that Brenda Dixon Gottschild suggests inform all performances (2-3). Refreshingly, dance studies continues to query its own ontology, thereby productively reevaluating what dance studies is. Yet the discipline persistently carves unique, theoretical choreographies by refusing to attenuate the complex claims of embodiment. This dissertation attends to three specific concerns that dance studies has theorized dynamically—the body, performance, and corporeality—as they intervene productively in considering the embodiment of force. These terms find covalence with other disciplines—feminist and queer studies, theater and performance studies, new media, and science and technology studies (STS)—yet they are inextricable from what might be considered the disciplinary “stage” of dance scholarship. While one facet of this dissertation is to examine the evolving role of these terms, it is useful to briefly situate their significance here in relation to constitutive dilemmas for the embodiment of force and corporeal technologies.

Theorizing the Body

The term “body” in performance and media scholarship is frequently used in four basic ways. First, it is synecdochic (the term body is really meant to stand in for

⁴⁵ Brenda Dixon Gottschild appropriately cites the lineage of this term from Roland Barthes, Julia Kristeva, Mikhail Bakhtin, and Jacques Derrida; however, her application of it is newly applied to dance vocabularies and the “intertexts” of technical styles. See: Brenda Dixon Gottschild. *Digging the Africanist Presence in American Performance: Dance and Other Contexts*. Westport: Greenwood Press, 1996. Reprinted, Westport: Greenwood Press, 1998. Pages 2-3.

the whole human being, or beings, including mental processes). Second, Cartesian (the body is split from mental processes, paradoxically demanding that the “head” be considered a physical object and the synaptic functioning inside of it “mental”). Third, it is in peril (the body—mental and/or physical processes—is conceptually or corporeally experiencing a collapsing subjectivity, frequently at a technological interface). And fourth, it is communal (the singular or plural form is used to signify a repertoire of social, environmental, ethical, and political concerns for “bodies” and the communities or body politic they compose). The term “embodiment” has been variously used to refer to any of these, but in dance studies it is generally examined with great acuity. For example, writing from the 21st century, in *The Archive and the Repertoire: Performing Cultural Memory in the Americas* (2003). Diana Taylor initially contrasts “embodied culture” with “written culture” in Mesoamerica to examine how written transcription was privileged over bodily knowledge (an apparent Cartesian split). Taylor argues, “The dominance of language and writing has come to stand for *meaning* itself. Live, embodied practices not based in linguistic or literary codes, we must assume, have no claims on meaning” (25, original emphasis). Taylor concludes that select historians have overlooked the ways in which writing is a bodily act that cannot be reduced to a single mechanical gesture, but rather is inextricable from social practices of performance, recitation, and mnemonic ritual (a communal signification).

The synecdochal phrase, “I need a pair of hands” to represent a laboring body is usually what is meant by literary synecdoche. In the language of late 20th-century classical ballet, simple terms such as *cambré* (a bend from the waist in various directions) or

épaulement (position of the shoulders in relation to the head and legs) stand in for details of comportment, gesture, and carriage that apply to the entire body, which trained dancers must perform when cued by a single synecdochal word or phrase. Thus contained within one word is a physical and cultural history, temporally suspended, of presentational movement and gesture which dancers variously execute, thereby demonstrating their pedigreed, or stylistically influenced, training. Yet the *active synecdoche* of the body in dance studies moves beyond the contiguity of the part with the whole. Rather, the term *body* represents diverse sociohistorical and phenomenologically shifting processes. Barbara Browning's work in the mid 1990s on Samba, such as in "Samba: The Body Articulate," suggests that physical articulations in the Brazilian dance form make it possible to literally, not metaphorically, "speak with the body."⁴⁶ The Portuguese language includes various phrases to describe dance as etymologically burdened by both *logos* and *corpus*, such as *dizer no pé* (to speak with the feet), or *canto do corpo* (song of the body). Situating the dancing body as an embodied narrator, Browning argues that, "Samba narrates a story of racial contact, conflict, and resistance—not just mimetically across a span of musical time, but synchronically, in the depth of a single measure" (Browning 39). Susan Foster, examining the role of the dancing body during the European Enlightenment, has described a similar opportunity—the possibility of dance to "speak" or theorize through movement.. She queries in her 1995 essay, "Textual Evidences": "What if learning to choreograph, the choreographer learns to theorize, and learning to dance, the dancer assimilates the body

⁴⁶ See also: Barbara Browning. *Samba: Resistance in Motion*. Bloomington, IN: Indiana UP, 1995.

of facts and the structuring of discursive frameworks that enable theorization to occur?” (Foster 234) Both authors forward an idea of the body that might be considered a *narrativizing body*, one that performs its own elocutions through gestures and movement.

Tracing a similar tendril that entwines the body with language, various dance scholars have invoked Foucault’s theorization of the body as inscribed upon by circulating discourses that often appear to limit or impede a body’s capacity for individual or collective resistance. Ramsay Burt, in his 2004 essay, “Genealogy and Dance History: Foucault, Rainer, Bausch, and de Keersmaeker,” considers the various ways in which the body may be, following Foucault, inscribed. He summarizes scholarly arguments concerning a Foucauldian body⁴⁷ and suggests that authors have interpreted Foucault’s argument to imply that a body “must exist first as a blank surface or page prior to the moment when it is inscribed with cultural meanings by the metaphorical figure or writing machine of history” (Burt 33). In contrast, Burt suggests he will deploy Foucault’s genealogy of the history of the body to reveal both “history’s destruction” and the “possibility for agency” (34). In the dance work he considers, a genealogy of non-conformist, choreographic ruptures permit the dancing bodies to be *re-inscribed* with “possibilities of agency and resistance within performative repetitions of discourses, despite the all encompassing nature of the disciplinary effects of those discourses” (Burt 34). Rather than being written on, bodies write and re-write themselves with agency.

⁴⁷ While Burt does not perform this gesture, Foucault’s theorization is often applied in scholarship as if it is inert—that is, there is imagined to be *one* Foucauldian body—docile, subject to discourse, and constrained by a priori epistemic conditions. This implies, most obviously, that Foucault’s theorization of the body does not change considerably throughout his scholarship. It is also useful to consider that Foucault, like other scholars examined in this dissertation, theorizes terms not as static concepts but as ideas in motion.

For some scholars in dance studies, feminist scholar Judith Butler has provided one bridge between Foucault's theorization of discourse and its application to bodily concerns. She argues that Foucault's notion of the body positions it as a passive recipient of discourse—written on—and should be replaced with concerns for the body as an active co-participant in discourse—one which writes itself. In particular relation to dance studies, Butler's 1990 essay, "Performative Acts and Gender Constitution," is often cited as evidence that the body may "dramatically and actively embody...cultural significations" (277). Yet at stake here is the extent to which the body generates or performs, rather than simply rehearses, agency. Intervening in the dialogue a decade later, Susan Foster has suggested that while Butler appears to privilege the body in her early work on performance, she provides insufficient attention to specific bodily concerns, as distinct from spoken language, in her later work (for example, *Bodies that Matter*, 1993). Foster argues, "Only by assessing the articulateness of bodies' motions as well as speech...can the interconnectedness of racial, gendered, and sexual differences within and among these bodies matter" ("Choreographies of Gender" 4). Foster's critique is linked to Butler's emphasis on the processes of repetition and iteration required to make a social construction, such as gender or race, an apparent social norm. Foster suggests that in so doing, Butler obscures acts of improvisation and multiplicity—a choreographic potential—that characterize self-reflexive productions of identity. In addition, Foster's critique affirms the importance of examining bodily praxes within and across the historical conditions of their alleged production. Despite their different interventions, the works of all four authors embrace considerations of the body as both

synecdochic (signifying the whole human being) and communal (signifying a repertoire of social and political concerns), thereby presuming embodiment and theorizing agency.

In the last decade, one strand of dance studies has also come under the influence of phenomenology,⁴⁸ particularly the work of Henri Bergson and Maurice Merleau-Ponty whose insistence that the body be reintroduced into philosophical debates regarding ontology and sensorial consciousness has been taken up by scholars such as André Lepecki and Jose Muñoz⁴⁹. Phenomenology has proved a useful analytic tool for dance studies as it suggests that material consciousness—often theorized in analytic philosophy *sans* body—is metaphysically tied to the sensorial presence of the body (for dance, the body in motion) and also persists after sensorial presence has changed (for dance, theorizing performance when the body is at rest or the performance appears to have ended). Tracing phenomenological arguments, in the essay “Inscribing Dance” (2004) André Lepecki asks the reader to consider “dance’s materiality not only as that physical motility temporally and spatially enclosed within the frame of the stage and the dancers’ skins, but also as a symbolically charged, imaginary space.”⁵⁰ In his essay, this “imaginary

⁴⁸ The use of a phenomenological “lens” with which to view and theorize dance occurs at a time when phenomenology, first robustly articulated in the early 20th century by Edmund Husserl, Martin Heidegger, Maurice Merleau-Ponty, and Jean-Paul Sartre—with many branching taxonomies—is often considered part of the historiographic record in fields pertaining to the history of consciousness, rather than an active analytic to be applied to living art forms. See: Dermot Moran. *Edmund Husserl: Founder of Phenomenology*. Cambridge: Polity Press, 2005. For recent theorization of phenomenology in Dance Studies see: Mark Franko, ed. “Dance and Phenomenology: Critical Reappraisals.” *Dance Research Journal*, 43 (2). Cambridge: Cambridge UP, 2011. Print.

⁴⁹ For example, in a 2002 interview with Diana Taylor, Muñoz remarks: “I get to teach what I’m working on—which is definitely one of the things I love most about my job. So I recently taught a class on emotion and performance where I looked at all sorts of theoretical resources to think about feeling, including phenomenology.” Interview archived at: <<http://scalar.usc.edu/nehvectors/wips/jose-muoz-english>> NYU Tisch Performance Studies courses include Lepecki’s “Phenomenology and Performance.” Course description at: <<http://www.tisch.nyu.edu/object/H42.2122.html>>

⁵⁰ André Lepecki. “Inscribing Dance.” *Of the Presence of the Body: Essays on Dance and Performance Theory*. Ed. André Lepecki. Middletown: Wesleyan UP, 2004.

space” is linked to concerns for the apparent impossibility of decoupling ideas and ideals of femininity from the theorization of dance and (dance) writing.

In direct relation to this project’s concern with U.S. Military corporeal technologies that proclaim to alter the presence of bodies—that is, their ontological being⁵¹—the phenomenology of Henri Bergson suggests that material existence cannot be separated from the sensorial memory of experience, thus affirming the ways in which the body and memories of bodily experience remain critical to creating subjectivity. Bergson forwards an idea of matter as an “image” that is neither a thing (the body) nor a representation of a thing (contained within the body), but rather is constituted in relation to memory. In *Matter and Memory* (1896), Bergson defines matter in response to the dual philosophical traditions of idealism and realism as an *image*: “Matter, in our view, is an aggregate of ‘images.’ And by ‘image’ we mean a certain existence which is more than that which the idealist calls a *representation*, but less than that which the realist calls a *thing*” (Bergson 9). Defined as such, the body is neither “reduced” to an object, nor relegated to “being” *vis a vis* only interior mental processes. Bergson’s articulation of matter as an image (including bodily experience) succinctly locates it, practically and phenomenologically, partway between Cartesian mathematical extensity (matter as a “thing”) and George Berkeley’s mental interiority (matter as a “representation”)—that is, partway between the “real” materiality and the “imaginary” mind. This idea is arguably echoed in Lepecki’s theorization that the body both exists materially and persists in a “symbolically charged, imaginary space.”

⁵¹ Being is used here in the phenomenological sense to refer to a “being-in-the-world,” or “being-toward-death,” following Heidegger (*Being and Time*) and a “being with existence as a body,” following Merleau-Ponty (*Phenomenology of Perception*).

Bergson suggests that embodied perception, rather than simply a material epiphenomenon that affirms objects already in the world (reality as posited by materialism) or a mental epiphenomenon that creates objects of the world (reality as posited by idealism), is a physically embodied act of understanding wherein materiality is inextricable from our memory of it. This is useful theoretical ground for this dissertation because at stake in the design and deployment of U.S. Military technologies are the ways in which discourses of technologies, as well as the technologies themselves, proclaim to augment soldier's bodies as purely material vessels, or render their experiences and memories of war immaterial through virtual systems and prosthetic weaponry where killing is achieved through technological proxy.⁵² Both scenarios remove the possibility for bodies as images, following Bergson, that negotiate consciousness and memory, and bodies within the imaginary, following Lepecki, that negotiate political, feminist, and historical concerns. Phenomenology for dance studies investigations thus provides one theoretical substrate for avoiding the dilemmas of the Cartesian body noted above, and also considers how bodies continue to make public, "symbolically charged" claims once the circumscribed performance has ended: that is, how a body acts in the ongoing service of communities or communal bodies.

Variouly contested ideas of the body thus emerge, including the narrativizing body, the inscribed body, and the phenomenological body. As a window into the further choreography the body has been asked to perform in academic theory, scholars have

⁵² For a succinct introduction to these concerns, see James Der Derian. *Virtuous War: Mapping the Military-Industrial-Media-Entertainment Network*. Boulder: Westview Press, 2001.

rigorously scrutinized: the anatomical body, the skinned body,⁵³ bodies in code,⁵⁴ cyborg bodies,⁵⁵ the interactive body,⁵⁶ docile bodies,⁵⁷ bodies without organs and rhizomal bodies,⁵⁸ foul bodies,⁵⁹ fluid bodies, unstable bodies, the posthuman body,⁶⁰ the cavernous body, hot and cool bodies,⁶¹ ephemeral bodies,⁶² pre-theoretical bodies,⁶³ extensive and poised bodies,⁶⁴ performative bodies, iterative bodies, mechanized bodies, industrial bodies, and digital bodies. And yet, bodies continue to have more to say.

In the 21st century, bodies are digitally enhanced and networked to deploy the force of war and often become contested in both real and virtual spaces. Theorization of the body is *further reconfigured* as one moves from dance studies into new media or science and technology studies (STS). Scholars may create a secondary deletion wherein the term body is assumed to mean the whole person even when what is at stake in the theorization are the differential ways that the material human body, in contrast to interior mental processes or exterior social forces, is affected by technological interfaces: that is, there is theoretical slippage between the Cartesian

⁵³ Bernadette Wegenstein. *Getting Under the Skin: Body and Media Theory*. Cambridge, MA: MIT Press, 2006.

⁵⁴ Mark Hansen. *Bodies in Code: Interfaces With Digital Media*. New York: Routledge, 2006.

⁵⁵ Donna Haraway. "The Cyborg Manifesto." Simians. *Cyborgs, and Women: The Reinvention of Nature* New York: Routledge, 1991.

⁵⁶ See course descriptions and archive of digital shows at the Interactive Telecommunications Program (ITP), Tisch School of the Arts, NYU. Classes on interactivity are taught as part of the graduate curricula. For example: *The Electric Body*, <<http://itp.tisch.nyu.edu/object/H79.2782Lect>>

⁵⁷ Michel Foucault. *Discipline and Punish: The Birth of the Prison*. Oxford: Vintage, 1979.

⁵⁸ Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*, Trans. Brian Massumi. Minneapolis: U of Minnesota P, 1987.

⁵⁹ Kathleen M. Brown. *Foul Bodies: Cleanliness in Early America*. New Haven: Yale UP, 2009.

⁶⁰ Katherine N. Hayles. *How We Became Post-Human: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: U of Chicago P, 1999.

⁶¹ Brenda Dixon Gottschild. *Digging the Africanist Presence in American Performance: Dance and Other Contexts*. Westport, Conn.: Greenwood Press, 1996. Reprinted, Westport: Greenwood Press, 1998.

⁶² Peggy Phelan. *Unmarked: The Politics of Performance*. New York: Routledge, 1993.

⁶³ Thomas F DeFrantz. "The Black Beat Made Visible: Hip Hop Dance and Body Power." *Of the Presence of the Body: Essays on Dance and Performance Theory*. Ed. André Lepecki, Middletown: Wesleyan UP, 2004.

⁶⁴ Linda J. Tomko. *Dancing Class: Gender, Ethnicity, and Social Divides in American Dance, 1890-1920*. Bloomington: Indiana UP, 1999.

body, the body in peril, and the politics of diverse communal bodies. This may seem foolish to bring up in an assumedly post-Cartesian era, but the sever of the physical from the mental and social for a “posthuman” body—for example Katherine Hayles’ suggestion in her 1999 work, *How We Became Post-Human*, that it is possible to become posthuman by “gazing at the flickering signifiers scrolling down the computer screen” (xiv)—is precisely the dilemma that is under scrutiny for those dance and media scholars⁶⁵ writing about a phenomenologically threatened or materially persistent body.

Theorizing Performance and Performativity

In relation to this dissertation, it’s important to emphasize that dance studies research on new media and technology has generated theoretical work that is not simply a mapping or application of analytics in other fields (e.g. new media and science and technology (STS)) to points of interest and impasses in dance. In *Digital Performance: A History of New Media in Theater, Dance, Performance Art, and Installation* (2007), which provides an exhaustive, 700-page study of the history of dance and new media, Steve Dixon situates this position:

The concern of this book is to take a generally reverse stance to much of the writing around cyberspace, digital arts, and performance, which has tended to discuss technological aspects first and foremost and content/aesthetics second (if indeed at all). Our focus and concern is to assess and analyze the particularities of *performance* and *performances* in relation to how they have adopted and utilized technological developments in varied ways in order to create different types of content, drama, meanings, aesthetic impacts, physiological and psychological effects, audience-performer relationships, and so on. (5)

⁶⁵ See: Johannes Birringer. *Performance, Technology, and Science*. New York: PAJ Publications, 2008; Bernadette Wegenstein. *Getting Under the Skin: Body and Media Theory*. Boston: MIT Press, 2006; Mark B. N. Hansen. *Bodies in Code: Interfaces with Digital Media*. New York: Routledge, 2006.

Accordingly, the concern of my dissertation is to attend to the *performance* of 21st-century military technologies in constitutive relation to their design and use. The theorization of performance and its corollary, the performative, has a lengthy pedigree in dance and performance studies. While theorization of performance is, like that of the body, contested, it may still be traced through historical taxonomies, although ones that reveal both its problematic and resistive potential. Diana Taylor remarks of the ongoing debates in performance studies to establish a historiographic, pedagogical canon, “How would we define performance? What would we include in an *Introduction to Performance Studies* course? Should performance studies—defined by some of us as postdisciplinary, others as interdisciplinary, others as antidisiplinary others as predisciplinary—have a canon? Who would define it?”⁶⁶ André Lepecki, working at parallel purposes suggests that, “one may not single out, attribute to, nor privilege one single materiality of dance over, and in exclusion of, another, without acknowledging the transitory and historical nature of our attributions.”⁶⁷ At stake here is not a semantic quibble, but rather constitutive debates that point to extant and historical arguments regarding what constitutes the epistemological boundaries and material terrain of doing and theorizing performance, and that have also intermittently cleaved dance from performance studies (the latter at times proclaiming it embraces a wider repertoire of movement possibilities). In the U.S. the term performance provides an active site for theoretical contestation in dance studies, particularly because dance and performance studies’

⁶⁶ Diane Taylor. *The Archive and the Repertoire: Performing Cultural Memory in the Americas*. Durham: Duke UP 2003. Page xvi.

⁶⁷ André Lepecki, ed. *Of the Presence of the Body: Essays on Dance and Performance Theory*. Middletown: Wesleyan UP, 2004.

scholars have parsed, (re)deployed, and upended the term with great sophistication and scrutiny. At first glance, a delimiting definition might suggest a performance refers to being on a (theatrical) stage for an audience.⁶⁸ And yet this carries the presumption of a stage, and the performance itself frequently occupies a deferential seat to a theatrical or instructional script—the archived document that persists as the art form, seemingly independent of the historical materiality and enduring presence of its performance. Thus performance, like the body, encounters similar problems for its own ontological presence. Alternately, a comparative though similarly limiting, definition may seek to reign in the term by categorizing kinds of performance by genre: in dance, to see a “performance” is to watch moving bodies; in theater, it is to watch (primarily) speaking bodies; in music, it to listen to bodies composing with instruments. And yet this approach is decidedly lackluster, providing arbitrary disciplinary divides and failing to articulate and embrace interdisciplinary, uncategorizable, pedestrian, non-European, or deliberately defiant, contrarian kinds of performance. Performance art provides one example of this, yet its designation as a genre is already divisive. Performance art, blooming in the U.S. in the 1960s with the work of artists such as Carolee Schneeman, Nam June Paik, and Allan Kaprow, nonetheless does provide another tessellation for the term, suggesting that performance is inextricable from deliberate provocation, unorthodoxy (of the time), and the potential blurring of audience and performer. As

⁶⁸ The definition of dance as a “performance for an audience on a theatrical stage” was frequently offered up to me when teaching undergraduate students at both New York University’s Tisch School of the Arts (2001-2005) and at the University of California, Riverside (2005-2007). While one may wish to dismiss this characterization as that provided by young scholars not yet properly “indoctrinated” into a more sophisticated guild of dance studies, dance studies must also account for the potential understandings and circulations of the term in American popular culture that do not comport with its more nuanced deployment in academic and scholarly theorization.

theorization of performance becomes increasingly multilingual in dance studies, at stake are also the power dynamics of cultural translation and transfer. For example, as Diana Taylor points out in *Negotiating Performance, Gender, Sexuality, and Theatricality in Latin/o America* (1994), the word has no equivalent in Spanish⁶⁹ (the same is true of Portuguese), and thus influences from U.S. academia have pressed upon Latin American “performance” theorists, who may wish to consider another term to discuss embodied practices. Linked to the question of definition is that of authorial origin: Richard Schechner is variously cited⁷⁰ to have “coined” the term performance in the 1980s as “restored” or “twice-behaved” behavior wherein “daily life, ceremonial life, and artistic life consist largely of routines, habits, and rituals; and the recombination of already behaved behaviors. [...] The original ‘truth’ or ‘source’ of that behavior may not be known, or may be lost, ignored, or contradicted.”⁷¹ In Schechner’s language, performance may explicitly exist as “separate” from the performer because she is potentially performing iterations that appear to comprise her unique individuality, but remain units of acquired, and thus performed, behavior. Schechner’s work is still cited as an antecedent in select scholarship⁷²; however, dance studies scholarship in the last two decades has frequently theorized bodily practices without a recursion to Schechner’s definition of performance as restored behavior.⁷³ In “Choreographies of Gender” (1998)

⁶⁹ Diana Taylor. “Opening Remarks.” *Negotiating Performance: Gender, Sexuality, & Theatricality in Latin/o America*. Diana Taylor and Juan Villegas, Eds. Durham: Duke UP, 1994.

⁷⁰ See: Peggy Phelan. “Introduction.” *The Ends of Performance*. Peggy Phelan and Jill Lane, eds. New York: NYU Press, 1998, 3-6.; Diana Taylor. *The Archive and the Repertoire: Performing Cultural Memory in the Americas*. Durham: Duke UP, 2003, 2-3.

⁷¹ Richard Schechner. *Performance Studies: An Introduction*. New York: Routledge, 2002. Schechner examines (his own) historical deployment of the term over two decades in this reader.

⁷² See: Peggy Phelan and Jill Lane, eds. *The Ends of Performance*. New York: NYU Press, 1998, 3-6.

⁷³ One potential reason for the move away from Schechner’s theorization is that his definition may be interpreted to

Susan Foster provides a particularly productive theorization of the term performance, pairing it to a theorization of choreography, and notes its undertheorization in other fields such as gender studies; she suggests the term may be deployed to “conceptualize gender in dynamic relation with race and sexuality” (3), but offers the possibility for the term choreography to provide “a far more useful rubric for understanding gender” (5). Foster defines choreography as “the tradition of codes and conventions through which meaning is constructed in dance” (5). Her analysis distinguishes choreography (“dance-making”) as an array of interrelated, varying physical processes that constitute and produce bodily meaning, while performance (“dancing”) is regarded as acts of displaying, and thus necessarily redesigning, these choreographed bodily meanings. Foster summarizes her distinction between the two: “The contrasting functions of choreography and performance are apparent: dance making theorizes physicality, whereas dancing presents that theory of physicality” (10). In specific relation to the military arts and movement practices under consideration in this dissertation, Foster argues that choreography:

[It] extends far beyond conventional notions of dancing to include a wide variety of structured movement practices such as parades or political demonstrations, religious rites or academic lectures. For any of these structured movement practices, a set of protocols (which I have called a tradition) exists that will be referenced by the choreography and then vivified by the specific performance. (10)

suggest that embodied “sources” of movement cannot (or need not) be traced with attention to their genealogies: this predicament has political consequence and may obscure the ways in which movement is (re)articulated and (re)appropriated without attention to its emergence from specific historic conditions. For an excellent analysis of these appropriations, see Brenda Dixon Gottschild. *Digging the Africanist Presence in American Performance: Dance and Other Contexts*. Westport: Greenwood Press, 1996. Reprinted, Westport: Greenwood Press, 1998.

In this dissertation, the use of the terms performance and choreography, as deployed across the chapters, is informed by Susan Foster's distinction between these two terms. The term performance will refer to choreographies, gestures, or bodily actions that compose a live art form, and yet embrace concerns for the persistence of the form through other media (writing, physical, oral, or transcribed notation, technological archives, etc.). In this sense, military bodies and treatises may both "perform" for an audience. In comparison, the active theorization as well as the bodily training and practices involved in producing movement which military bodies (or texts) perform will be designated as "choreography." As example, U.S. Military soldiers publicly "perform" on behalf of the U.S. government, while their drill and cadence training may be theorized as a "choreographic" process. This distinction, however, is neither static nor theoretically or bodily "set." For example, it is arguable that certain performances do not require a recourse to—that is, are without an antecedent of—choreography. This becomes apparent when examining the intersection of the term choreography with the kinds of tasks to embody force that U.S. soldiers are required to "perform." While it may be argued that the physical training and drill soldiers receive constitutes or produces a "choreography of violence," it is somewhat unsettling to suggest that physical acts of torture have been "choreographed": the kinds of, generally productive and anti-essentialist, opportunities that Foster's theorization of the term choreography enables, may already have been violently erased or annihilated during warfare. That is, the agency and liberating possibility that Foster enfolds in her theorization of the term choreography may be, unfortunately, entirely absent from the performance of violence.

This dissertation theorizes and examines the embodiment of force and military training, displays, and deployment, particularly as they intersect with discourses of utilitarian performance (the metrics by which an engineered technology is considered to successfully accomplish its job) and the performative (discursive qualities that appear through cultural iteration and variation and historically specific conditions to draw attention to concerns potentially beyond the performance at hand). The term performative has one etymological foot in J.L. Austin's speech act theory,⁷⁴ with antecedents in the work of Adolf Reinach and the subsequent work of John Searle, wherein by iterating something we "make it so"—for example, the illocution of "I do" or "With this ring I thee wed" to perform marriage—and it finds another iteration in Judith Butler's and Eve Sedgwick's feminist and queer theory. In the philosophy of language, "performative acts/utterances" are generally specific and highly conscripted in their definition and application. For Butler, performative acts⁷⁵—such as hate speech or regulating discourses that guide constructed ideas of gender and sexuality—are contextual and environmentally iterative: they circulate and change through cultural repetition. Sedgwick, in her 2003 work, *Touching Feeling: Affect, Pedagogy, and Performativity*,⁷⁶ examines the relationship between emotion, processes of learning, and bodily action, and has written astutely of illocutionary words such as "homosexual" and

⁷⁴ Of note, Susan Foster suggests that a reading of J.L. Austin's linguistic theory of speech acts as inherently productive for dance and performance studies requires inserting the body as an interactive agent in the production of meaning when J.L. Austin did not intend to do so and thus constitutes a misreading of J.L. Austin's work. Foster argues of his theory, "It does not make any claims for speech as a form of bodily articulation (something that the phrase 'speech act' might suggest), nor does it explore action as an accomplishment of the body. For Austin, the body, fundamentally the passive executant of the subject, enunciates words in the direction of another body-subject with which it intends to communicate" (3).

⁷⁵ Judith Butler. *Bodies that Matter: On the Discursive Limits of Sex*. New York: Routledge Press, 1993.

⁷⁶ Eve Kosofsky Sedgwick. *Touching Feeling: Affect, Pedagogy, Performativity*. Durham: Duke UP, 2003.

“queer.” Similar to Derrida’s deconstruction of language, she posits that the analysis of language reveals covert, hegemonic operations: for example, while the term “Queer” may be redeployed as normative or subversive, its *categorizing* function persists.

While one way in which Butler resists Foucault’s theorization is mentioned above—summarized, Foucault’s discourses appear to preconfigure bodies which render them frequently unable to escape the condition of their own inscription—Susan Foster, as with her critique of Butler’s theorization of the body, also presses upon Butler to move further from Foucault in her theorization of performativity. Dance studies, with its disciplinary attention to improvisation, spontaneous movement, organizational patterns, and corporeal articulation, troubles Butler’s insistence that identity concerns such as gender find definition (as in meaning and shape) only through performative repetition. Foster intervenes to offer improvisation and choreography as alternatives:

Although Butler emphasizes that performativity can be located only in multiple rather than single acts, the focus on reiteration stresses the repetition of acts more than the relationality among them. How are these "acts" organized so as mutually to reinforce and/or expand on one another? How do acts not only reiterate social norms but also vary them so as to establish resonances among distinct categories of normative behavior?" (“Choreographies of Gender” 5).

Foster’s intervention is echoed in this dissertation, wherein the term performative is theorized to contain the possibility for individual, and thus highly variable, possibilities for generating meaning related to and eclipsing a given performance. For example, the bodily labor of U.S. Soldiers may be considered “performative” for the state, but soldiers’ own resistance and relation to U.S. governmental policies they are tasked to professionally embody also reveal their own considerations for gender, race, representation, and ethical deliberation. Jon McKenzie presents additional variations on

the convergences of performance and the performative in *Perform or Else* (1999). Linking a historiography of the field of performance studies to theorization of performance in corporate, organizational, and technological sectors, he explores a cultural substrate “that links the performances of artists and activists with those of workers and executives, as well as computers and missile systems” (3). Of note for this dissertation, McKenzie’s work leans heavily on Jean-François Lyotard’s postmodern theorization of performativity, which suggests that in a cybernetic society knowledge is increasingly legitimated based on its utilitarian ability to increase labor performance; as such, abstraction and conceptual knowledge are generally disregarded in the interest of industrial efficacy and efficiency. Taken together, the distinctions among these authors help point to the ways in which 21st-century military technologies contain within their design and deployment complex concerns for choreography, performance, and performativity. This dissertation seeks to examine the languages of performance that inhabit the fabrication of specific technologies—frequently explicated in programming code, schematics, and industrial engineering documents—which then circulate in their deployment and the evolving rhetoric of their requisite production. Under consideration are thus the ways in which U.S. Military corporeal technologies perform functionally as operational machines, perform sociopolitically as digital mediators between scientists, soldiers, and publics, and perform for individuals as uniquely embodied extensions of identity and ideology.

Theorizing Corporeality

The term corporeal has a similarly theoretically troubled past and present. While it is often used interchangeably with embodiment to refer to any and all ideas related to the material body, in new media and science and technology studies (STS), it is frequently destabilized to indicate its syncretism of *corpo* and *real*, and deployed in contrast to the term virtual reality. As such, the “corpo-real” does not just refer to the body, nor the corollary concerns listed above, but is used to differentiate between “real” bodies and their physiological and political demands, and “virtual” bodies or technological systems that may be linked, networked, or even implanted within a corporeal body but remain biologically inanimate, and thus not “real.” At stake in the theorization of the corporeal are the literal boundaries—of material self and subjectivity—wherein technologies appear physiologically or psychologically seamless with bodies and thus challenge or collapse an extant binary between the “real” corpus of the body and the “virtual” circuitry of machines. Katherine Hayles, tracing an argument that is not dissimilar from Judith Butler’s regarding inscribed bodily discourses, suggests that Foucault enacts a collapse of bodies into disciplinary technologies, thus diminishing the agency of individual, corporeal bodies to protest. Hayles observes: “The specificities of their corporealities fade into the technology as well, becoming a universalized body worked upon in a uniform way” (194). Hayles recovers corporeality from its potential ontological merger with computer technologies, and thus vitally affirms the subjectivity of individual bodies, as distinct from a generic body wherein considerations for race, gender, ethnicity, class, and agency are effortlessly elided.

However, complications arise which are particularly salient for this dissertation when the term corporeal moves between various discourse communities: the “virtual” in computer programming does not mean something that is antithetical to the real; it refers to a *very real* machine or interface that is used as a proxy to execute code. Its viral adoption in academic circles as antithetical to, or collapsing with, the real is perplexing to many computer and engineering professionals (those who assumedly might be first to feel their subjectivity threatened or collapsed at the computer screen), for whom the term has a very different valence. Following the definition from computer engineering, virtual spaces provide a user with interactivity in a computer-enhanced or simulated environment and may thus be considered quite “real,” in the physiological and proprioceptive sense of the word. In this dissertation, the point of distinguishing between the virtual and the (corpo) real in the design and deployment of U.S. military technologies will be the same as it is for most demarcations—to ensure that a semantic collapse in language does not also catalyze a literal and cultural collapse of representation, labor, ethics, socioeconomic privilege, and enactments of power in real or virtual spaces. The term corporeal, when deployed in this dissertation in relation to technologies that are physically, physiologically, or prosthetically integrated into soldiers’ defense and weapons system, considers the body as a subjective agent—that is, corporeality presumes embodied consciousness and the capacity for deliberation and decision-making in both “real” and “virtual” theaters of war. This dissertation also draws from the literary application of the “corporeal undead”⁷⁷—wherein non-living figures

⁷⁷ This term is also used by Jacques Derrida to challenge the polarity between states of life and death.

remain embodied, frequently in liminal conditions—to theorize the disquieting possibility that proposed military technologies will leave soldiers in a materially compromised or indeterminate state. The corporeal undead troubles what is an evidentiary categorical in science—the impossibility of existing between life and death—and yet it finds unusual application in 21st-century military technologies, such as the U.S. Army’s Future Soldier “Ensemble” which includes security-based, “zerioze functions,”⁷⁸ that propose: 1. to keep a soldier sufficiently “alive” so that the biologically integrated components of his or her wearable technology may be harvested and recycled by fellow service members or 2. to neutralize (explode or implode) biologically integrated circuitry to prevent theft in battle, thereby leaving a soldier with partial or mechanically aided physiological functions. In the medical sciences, *extracorporeal* technology refers to techniques and technologies related to perfusion, cardiopulmonary bypass, cardio anesthesia, etc. that serve to keep corporeal systems physiologically “alive,” even if a patient is no longer “living.” As discussed in Chapter 3, this term has also been adopted to discuss military technologies that serve similar functions in military theaters and suggests a disquieting future for bodies of war wherein technology is manipulated to disregard or obliterate corporeality. As U.S. agencies, universities, and corporations increasingly “innovate” weaponized technologies, often without consideration for their ethical implications, a precarious, state-supported paradigm emerges that appears to comfortably situate the engineering of 21st-century warfare within an ethos of cultural advancement rather than a vital critique of cultural violence perpetuated by, and against, bodies of war.

⁷⁸ Future Soldier Initiative. “Future Soldier White Paper.” Massachusetts: U.S. Army Natick Soldier Research, Dev, and Eng. Center, 2009. Web. 10 Jan. 2010. <<http://nsrdec.natick.army.mil/FSI/index.htm>>

Chapter I: Performances of War

Dances are of two kinds. One of these is employed in war for the strength and the defence of the State, the other is recreative and has the virtue of attracting hearts and awakening love.

—*Thoinot Arbeau, Orchésographie*

Force is the basis of any military activity. It is both the physical means of destruction—the bullet, the bayonet—and the body that applies it. It has been so since the beginning of time.

—*General Rupert Smith, The Utility of Force*

I—Introduction: Dancing Through War in France, 1562-1714

Militaries once danced.

In Early Modern France, warfare that physically assembled army against army and soldier against soldier—engagement referred to as “bodily combat” in the 21st century—was at one time enacted by soldiers trained in the art of movement for theaters of both war and court. During the Renaissance and Baroque periods (1450-1750),⁷⁹ war and its anticipated glories were rigorously engineered through art (performance, music, painting, and architecture) and military artifice (stratagem, tactics, and technology). War, a violent embodiment of the politics of persuasion in any historical period, further influenced French court life through military displays, ceremonial presentations, and court performances that symbolically and corporeally represented the force of war. Between 1562 and 1714—a period bookended by the

⁷⁹ The terms “Renaissance” and “Baroque” are contested across disciplines and are actively debated as specific historical and stylistic periods. However, in this dissertation the term Renaissance designates the time frame of approximately 1450-1650, while the term Baroque denotes approximately 1650-1750, following the periodization generally used in dance studies. See: Jennifer Nevile’s description of “key terms” in: Jennifer Nevile, ed. *Dance, Spectacle, and the Body Politic, 1250-1750*. Bloomington: Indiana UP, Page 3.

French Wars of Religion and The War of the Spanish Succession, respectively—dance and military arts both informed the performance of war during France’s ongoing military engagements.⁸⁰ The “art of war” was not simply a prescriptive metaphor for strategy, but also applied to the alliance between disciplined movement, drill, and training, and the evolving choreography of court and sovereign politics.

As Early Modern monarchs and courtiers moved throughout the continually negotiated, geopolitical territories of Europe in the 16th to 18th centuries, dance is one art that enabled the physical expression of evolving, cultural identities as well as political machinations at European courts. Dance historian Mark Franko offers an analysis of French court ballet from 1573 to 1670 that situates it as a potentially disruptive practice, physically negotiating established power and social relations. In *Dance as Text: Ideologies of the Baroque Body*, Franko suggests, “Court ballets magnified and, in the process, distorted the acceptable forms of contemporaneous noble sociability in accordance with conflicting, first-and second-estate visions of the dance as subject, and of royal subjects in their specular totality: the nation. In other terms, court ballet was the mannerist scene of a power struggle” (I). Franko’s argument leads him to inquire, “What were the cultural politics of baroque dance? What repercussions did that politics have on court ballet aesthetics? Can a different history of the dancer’s body be written, one that does not glorify dance history for the needs of the present, but unveils instead

⁸⁰ The designation of “art” or “arts” will be used throughout this chapter to refer to both dance and military movement practices, following its use in 17th-century European instructional manuals to describe dance and military movement. For example, the inscription to François de Lauze’s *Apologie de la Danse* (1623) describes dance as: “*Et la Nature a l’art, et l’art a la Nature.*” Colbert de Lostelneau’s military tract *Le Mareschal de Bataille* (1647) describes King Louis XIII as a master of the “art of military drill and maneuvers” in the “Bataillons” (“*fut le plus sçavant Maifre en cet Art*”) (244). And Johann Jacobi de Wallhausen’s drill manual is titled *Art Militaire pour L’infanterie* (1615). Modern scholarship examining Early Modern European military movement practices also refers to them as “arts,” including one of the most comprehensive texts, Sydney Anglo’s *The Martial Arts of Renaissance Europe* (2000).

the life-and-death stakes of its performance in the there-and-then?” (1). Franko’s observations situate dance within a political landscape wherein aesthetic production and performance may have had “life and death” stakes for dancing bodies and aligns it with concerns for how force was embodied in Early Modern France.

This chapter suggests that dance training and performance in 17th-century France may be examined in relation to another urgent, sociopolitical influence shaping the life-and-death stakes of contemporary life: *war*. War in France was not simply a scrim on day-to-day life through which performance(s)—defined in this chapter as physical movement produced for an audience or public to convey aesthetic, social, and political ideas and functions—may be observed. Rather, its relentless influence on economy, trade, territorial acquisition, state, church, and military administration, industrial and agricultural production, and the organization of the religious, noble, bourgeois, and peasant French Estates, necessarily extended to constitutively shape the politics of artistic production, including the performance of court dance.

In France, major engagements (without addressing minor sieges and battles) involving French participation provide a window into the nation’s continually shifting military landscape. Between 1562 and 1714 there were eight major campaigns of the French Religious Wars (1562-1589), followed by overlapping wars including the Dutch Revolt (1568-1648), Thirty Years War (1618-1648), Huguenot Rebellions (1620-1628), the Franco-Spanish War (1635-1659) interrupted by the wars of the Fronde (1648-1653), the War of Devolution (1667-1668), Franco-Dutch War (1672-1678), War of the Reunions (1683-1684), Nine Years War (1688-1697), and War of the Spanish

Succession (1701-1714). The composers, performers, and musicians of court ballets would likely have confronted the specter of war as an itinerant and intrusive thematic guest, appearing in character, plot, and gesture and holding sway over the sociopolitical justification for and production of the performances themselves. Dance scholar Margaret McGowan argues in *L'Art du Ballet de Cour en France (1581-1643)* that “political ballets” were used as theatrical tools of the French monarchy to reflect on contemporary events, the sovereign, or project political “aspirations” for the future.

McGowan observes:

The political themes of theatrical works were inspired directly by current events; these works are in general a more or less severe critique of a disaster that could have been avoided, an abuse of justice, or also the expression of approval towards the politics of the king, and even a means to exalt the justice of the monarch. [...] *Balet Comique* (1581) and *Ballet de Trancrede* (1619)⁸¹ have a very different character from those works of which we just spoke; these were not simple commentaries on some historical event, nor instruments of propaganda for the monarchy, they expressed almost political aspirations (of which the principal one, and the one that included all others, was the search for a balance between diverse elements of social and political life of the State that would correspond to the harmony observed in the movement of celestial spheres). These ballets aimed for the future, they were in great part the expression of politico-philosophical ideas, not only by their inventors, but also by those who took part in the presentation or were part of the audience.⁸² (170, translation mine)

McGowan describes the different political registers of ballets that served to promulgate extant and projected visions of the monarchy—importantly, court dance did not provide

⁸¹ The difference in the spelling of “balet” and “ballet” appears in McGowan’s original text (170), and the former follows period spelling for “*Balet Comique de la Roynie*” (1581).

⁸² Translation mine. “Les thèmes politiques des pièces de théâtre s’inspiraient donc directement de l’actualité; ces pièces sont en général une critique plus ou moins sévère d’un désastre qui aurait pu être évité, d’un abus de justice, ou bien l’expression d’une approbation à l’égard de la politique du roi, voire même un moyen d’exalter la justice du monarque. [...] *Balet Comique* (1581) au *Ballet de Tancrede* (1619) ont un caractère très différent de celui des pièces dont nous venons de parler; ce n’étaient point de simples commentaires sur quelque événement historique, ni des instruments de propaganda pour la monarchie, ils exprimaient pour ainsi dire des aspirations politiques (dont la principale, et celle qui englobait toutes les autres, était la recherche d’un équilibre entre les divers éléments de la vie sociale et politique de l’Etat qui pût correspondre à l’harmonie observée dans le mouvement des sphères célestes). Ces ballets visaient l’avenir, ils étaient en grande partie l’expression des idées politico-philosophiques, non seulement de leurs inventeurs, mais aussi de ceux qui prenaient part à la représentation ou qui faisaient partie de l’assistance. (170). Margaret McGowan. “Le Ballet Politique.” *L’Art du Ballet de Cour en France (1581-1643)*. Paris: Éditions du Centre National de La Recherche Scientifique, 1963.

only one type of embodied political discourse. In *Music, Discipline, and Arms in Early Modern France* (2005), music historian Kate Van Orden similarly describes the persistent influence of war and a “culture of arms” on performance by suggesting, “Even if one did not enter military service, the emphasis on action, the body, and the physical manifestation of virtue that der French *ballet de cour*, Italian opera, and English masque derived from a culture of arms remained strong” (11). In 17th-century France, dance may be considered alongside military movement arts such as fencing, dressage, and weapons handling as an embodied practice that was informed by the threat of extant or anticipated conflict.

The complexities of sovereign, society, and style across European courts cannot be effortlessly elided to discuss 17th-century “court dance” without the risk of collapsing critical, persistent differences. For example, French *ballet de cour*, Italian opera, and English masque evidence divergences and complexities within each form although they may be referred to as distinct “styles.” And even a synchronic glance at the politics of production of a single dance performance in France—for example, military historian David Parrott’s analysis of Cardinal Mazarin’s artistic patronage at the French court during the production of *Ballet de la Nuit* (1653)—reveals both its choreographic and political intentions. In the essay, “Art, Ceremony, and Performance: Cardinal Mazarin and the Cultural Patronage at the Court of Louis XIV,” Parrott examines the display of the dancing body of Louis XIV in relation to the nobility, suggesting that his appearance was requisite to Cardinal Mazarin’s orchestration of, and vulnerability to, power relations at court. Parrot asserts, “The king *had* to appear in the ballets, above all as a

trump card to convince the courtiers that they had made the right decision in backing Mazarin's restoration. The king's participation in the ballet was part of a much larger policy, essential to Mazarin's chances of political survival" (17). While each court production must be viewed in relation to the contemporary conditions of its production, dance in court productions did evidence discernable patterns throughout Europe. Specific dances, and thus the dancing masters, professional performers, courtiers, and royalty who performed them, transferred performance styles among the courts, and in so doing they also transferred ideas and ideals of power and nobility, along with the embodied representation of individual sovereigns. For example, Parrott argues that Cardinal Mazarin manipulated Italian dance forms as a performative tool in service of the sovereign reign of Louis XIV, which could then be performed within France and throughout Europe as embodied politics. Parrott argues:

He [Mazarin] initiated the successful assimilation of Italian influences into a French cultural tradition which would take the best of the baroque, but then—through the abilities of Lully, a Le Vau or a Le Brun—develop it into a distinctive French style which would not only embody the splendor of the reign of the sun-king, but would represent the cultural arm of a policy of French aggrandizement and influence abroad. (10)

Dance not only facilitated political agendas through individual performances, such as *Ballet de la Nuit*, but was used during wedding celebrations, pageants, processions, and court festivals to enable individual, partnered, and grouped bodies—nobles, courtiers, and military officers—to also perform politics as expressive and subversive agents. Modern scholars have studied these cultural events with attention to their political function, examining archival materials such as court records, performance livrets,

costume designs, and private correspondence.⁸³ As Franko notes with regards to French nobles, court festivals often occurred within a “theater of ideological tensions” wherein court ballet offered “the noble’s most conspicuous arena of self-display and transformation” (2). Other scholars have advanced similar observations, explicitly linking court dance to court politics. In her work on court festivals, Early Modern historian Helen Watanabe-O’Kelly argues for the politically persuasive role of performing bodies at two types of festivals, which she defines as ceremonies and spectacles, respectively, in her 2002 essay “Early Modern European Festivals—Politics and Performance, Event and Record.” Watanabe-O’Kelly observes:

Court and civic festivals in the sixteenth, seventeenth and eighteenth centuries can usefully be divided into two main types of event: ceremonies and spectacles. Ceremonies are those events which do not just demonstrate power relations in symbolic fashion but which actually bring power structures into being. [...] Spectacles, on the other hand, are theatrical events. At the end of the sixteenth century, such theatrical forms as the opera and the *ballet de cour*, the *carrousel* and firework drama were invented at court. These are representations of the nature of power, their theme often the bringing of order out of chaos, whether the chaos is caused by evil forces from without or by the operation of ungoverned passions within the ruler himself. (15)

Watanabe-O’Kelly designates ceremonies as explicitly performative (they enact power) and spectacles as theatrical (they perform power), a distinction which may be more fluid than the division suggests. However, her thesis regarding the literal and symbolic enactment of power through court performances finds company within an extensive body of scholarship; researchers in several academic disciplines have rigorously

⁸³ For an excellent example of how gathered archival materials relating to the production of a single ballet direct attention to its political function, see: Michael Burden. “A Spectacle for a King.” *Ballet de la Nuit*. Michael Burden and Jennifer Thorp, eds. Hillsdale: Pendragon Press, 2009.

examined Renaissance and Baroque dance,⁸⁴ music,⁸⁵ painting,⁸⁶ costume,⁸⁷ architecture,⁸⁸ and law⁸⁹ to elucidate the complex ways in which performance acquired and circulated meanings—for individuals, families, coalitions, and sovereign states.⁹⁰

An area of study that remains less examined is the convergence of bodily practices in the fields of dance and military arts, particularly as regards shared theoretical principles and pedagogical strategies for training and instruction. In contrast to U.S. military training of the 20th and 21st centuries, dance was generally learned by the French nobility alongside other presentational, training practices such as fencing, dressage, and military drill. As such, dance offered bodily discipline that was coextensive with many of the physical skills required for military training for cavalry, pikemen, and

⁸⁴ See: Marie-Françoise Christout. *Le Ballet de Cour de Louis XIV: 1643-1672 Mises en Scène*. Paris: Picard, 1967; Margaret M. McGowan. *L'Art du Ballet de Cour en France, 1581-1643*. Paris: Centre National de la Recherche Scientifique, 1978; Mark Franko. *The Dancing Body in Renaissance Choreography*. Birmingham: Summa Publications, 1986; Wendy Hilton. *Dance and Music of Court and Theater: Selected Writings of Wendy Hilton*. Stuyvesant: Pendragon, 1997.

⁸⁵ For sources related to dance, see: David J. Buch. *Dance Music from the Ballets de Cour 1575-1651: Historical Commentary, Source Study, and Transcriptions from the Philidor Manuscripts*. Dance & Music Series No. 7. Stuyvesant: Pendragon Press, 1993; Rebecca Harris-Warrick and Carol G. March. *Musical Theatre at the Court of Louis XIV: Le Mariage de la Grosse Cathos*. New York: Cambridge UP, 1994; James R. Anthony. *French Baroque Music from Beaujoyeux to Rameau*. Revised and Expanded Edition. Portland: Amadeus Press, 1997; Kate Van Orden. *Music, Discipline, and Arms in Early Modern France*. Chicago: U of Chicago P, 2005.

⁸⁶ See: Sarah R. Cohen. *Art, Dance, and the Body in French Culture of the Ancien Régime*. New York: Cambridge UP, 2000.

⁸⁷ See: Margaret M. McGowan. *Dance in the Renaissance: European Fashion, French Obsession*. New Haven: Yale UP, 2008.

⁸⁸ See: Jennifer Nevile. "Order Proportion, and Geometric Forms: The Cosmic Structure of Dance, Grand Gardens, and Architecture during the Renaissance." *Dance, Spectacle, and the Body Politick, 1250-1750*. Bloomington: Indiana UP, 2008.

⁸⁹ See: Joseph Roach. "Body of Law: The Sun King and the Code Noir." *From the Royal to the Republican Body: Incorporating the Political in Seventeenth- and Eighteenth-Century France*. Eds. Sara E. Melzer and Kathryn Norberg. Berkeley: U of California P, 1998.

⁹⁰ This chapter follows Saskia Sassen's theorization of the formation of the state as a "critical" actor that was variously territorially bounded but also economically and bureaucratically in flux, into the 17th century. The use of the term "state" throughout this chapter will refer to a territory with a discernable geographic territory and economic system, with the understanding that state formation, particularly under sovereign reign, does not occupy the same sphere of discourse as a 21st-century nation-state. In *Territory, Authority, Rights: From Medieval to Global Assemblages*, Sassen observes: "Crucial to the formation of the world scale taking shape in the sixteenth century was the development of territorial authority as part of the building of national states and national capitalisms. [...] France, above all other Western European countries, had a highly developed royal administration early on after three centuries of Capetian kings. [...] Despite economic contraction, however, the French state's more effective bureaucracy secured a growing share of all revenues. The increased flow of funds to the king also weakened the nobility's source of revenue, further strengthening the state" (Sassen 77).

musketiers, including memorizing discrete steps and executing them with attention to coordination, sequence, and spatial patterns. European dance, martial arts, and military drill manuals from the 16th to 18th centuries describe practiced positions, formations, and sequences, as well as embodied, socially desirable attributes such as posture, bodily carriage, agility and comportment, that were vital for action and accomplishment in theaters of dance and war.⁹¹ Significantly, both dance and martial arts manuals demonstrate shared theoretical principles for considering movement practices. Military historian Sydney Anglo remarks on their convergence in *The Martial Arts of Renaissance Europe* (2000):

Of the principal sources for renaissance dance theory, only two have anything like a symbolic notation and both of these remained in manuscript until modern times, but, from our point of view, it is a printed book of 1588, Arbeau's *Orchésographie*, which is especially noteworthy because the principles underlying its method (that is, the definition, naming, and illustrating of certain key postures which may then be grouped in various sequences and at different tempi) are very similar to what had already evolved, more than fifty years earlier, for fencing. (44)

As Anglo recognizes, dance shared a repertoire of physical principles with other Renaissance activities for military training. Displays of fencing, drill, and dressage were featured occurrences at court, and it would have been possible for dance training to be learned alongside, or influence, military training for nobles and courtiers. Anglo argues that by the end of the 15th century European knights had become “warriors gradually metamorphosed into courtiers” and that military training and displays had become more performative than practical, often appearing in “balletic” forms in drawings and texts

⁹¹ The term “theater of war” is used throughout this dissertation in line with its use in modern military theory to refer to the circumscribed, geopolitical space in which military engagement is ongoing or anticipated. The term’s wider application is often attributed to its theoretical use by Carl von Clausewitz in *On War* (1832), who describes its applicability to war across the centuries. This dissertation will follow Clausewitz and modern military scholars who use it to describe bounded, geographic areas or “zones of operation” (486) for war in earlier periods. Here, its application in both military and non-military spectacle presents theoretical convergences that will be addressed.

(168-170). Moving into the 16th and 17th centuries, Anglo observes that the fighting competition of European *barriers* shifted from a “military exercise” into “a social game” (168) and that “balletic emphasis characterizes all discussions of the barriers” in early 17th-century descriptions of the events (169). Anglo quotes Antonino Ansalone’s 1629 text and remarks: “Ansalone...notes that it is of no small profit to the knight to know how do dance because, ‘as said the Count Baldassare Castiglione, one must observe a certain majesty tempered with graciousness, and an airy sweetness of movement, with time and measure’” (169-170). Van Orden similarly argues that dance and music were requisite to a noble military education in Early Modern France: “Pyrrhic dance, equestrian ballet, and the lute instruction students received at military academies present clear cases of music’s place in their lives. The lute and dance were accepted as fundamental parts of a noble education long before *studia humanitatis* began to promote letters, foreign languages, and the classics as educational standards” (7).⁹² In the 16th-century dance instructional manual that Anglo references, *Orchésographie*, French dancing master Thoinot Arbeau initiates his conjured pupil, Capriol, into the “honourable exercise of dancing.” Arbeau begins his treatise by outlining the significance of martial dances, as well as the detailed relationship of music, marching, and rhythm, thus reminding both his contemporary and modern day reader that a relationship between dance and the military arts was often presumed in the 16th century. Arbeau instructs:

Let us speak first, then, of martial dances, and afterwards of those for recreation. The instruments used for military marching are long trumpets, trumpets, bugles, clarinets,

⁹² For extended examples regarding the requirements for French nobles to participate in both dance and military training, see: Kate Van Orden. *Music, Discipline, and Arms in Early Modern France*. Chicago: U of Chicago P, 2005.

horns, cornets, flutes, fifes, pipes, drums and others resembling the said drums. [...] The sound of these various instruments serves as signal and warning to the soldiers, to break camp, to advance, to retreat, and gives them heart, daring, and courage, both to attack the enemy and to defend themselves with manful vigour. Now, without them, the men would march in confusion and disorder, which would place them in peril of being overthrown and defeated by the enemy.⁹³ (Arbeau 18)

Arbeau's treatise, examined alongside other dance and military instructional manuals in this chapter, reveals some of the ways in which dance and military exercises shared a repertoire of physical gestures, as well as potentially symbolic meanings, to convey and construct force in theaters of war and stage. This chapter suggests that French nobility would have had opportunities to study, train, and perform both movement disciplines, while other social positions, such as courtiers, secretaries, military officers, and distinguished soldiers, would have been aware of or participated in cultural activities that emphasized both military and performing arts and would have, as Van Orden suggests, been influenced by contemporary concerns regarding bodies' capacities to perform power and force. The term *force* is theorized throughout this dissertation as the primary lens with which to view movement arts that articulate violence and power through the body. In Early Modern France, as in the 21st century, war cannot be waged and dance cannot acquire political agency without force—the deliberate intent to influence or inflict an outcome through physical action. And significantly, neither war nor dance can

⁹³ As Julia Sutton observes in her Editor's Notes to Mary Stewart Evans' English translation of Thoinot's *Orchésographie*, Evans incorrectly refers to instruments that did not exist in the 16th century in her translation. As such, the original text here is reproduced below from the 1888 Paris imprint (Introduction by Laure Fonta). "*Parlons donq premierement de la dance guerriere, puis nous parlerons de la recreatiue. Les infruments feuants à la marche guerriere, font les buccines & trompettes, litues & clerons cors & cornets, tibies, fifres, arigots, tambours, & aultres femblables, mefvement lefdicts tambours. [...] Le bruit de tous lefdicts infruments, fert de signes & aduertiffements aux foldats, pour defloger, marcher, fe retirer: & à la recontre de l'ennemy leur donne coeur, hardieffe, & courage d'affaillir, & fe deffendre virilement & vigoureusement. Or pourroient les gens de guerres marcher confufémēt & fans ordre caufe qu'ils feroient en peril d'efre rēuerfés & deffaicts, pourquoy nofdicts François, ont aduifé de faire marcher les rens & iougs des efcouades avec certaines mefures*" (Arbeau, *Orchésographie* 7).

enact meaning without the force of a body. In both disciplines, bodies in motion may perform or performatively indicate power, political action, and force.

Where archival evidence exists, it suggests that the confluence of arts and military training persisted in France from the 16th to 19th centuries, including at two preeminent royal military schools, *Collège Royal de La Flèche* (founded in 1604 by Henry IV) and the *École Royale Militaire* at Saint-Cyr⁹⁴ (established by Napoléon Bonaparte in 1802). Consideration of the various kinds of embodied military training nobles, courtiers, and soldiers may have received has been approached by many scholars who attend to and prioritize different archival sources to determine, most basically, who trained, with whom, at what locations, and with what methodologies. However, tracing the “footwork” of the evidentiary trail is a challenge for modern scholars; as Anglo notes of 16th and 17th-century martial arts training:

[During the Renaissance] despite the constant reiteration by humanist educational theorists of the value of training the body as well as the mind, we still know next to nothing about the practice of physical education and the provision of combat training for youths. Our understanding is no greater when we move from the schoolroom to the battlefield or dueling ground. Medieval and Renaissance warfare have long been under academic scrutiny, and historians have much to say about the evolution of military organization, weaponry, and communications; about finance and logistics; and about the social and political consequences of war. The one thing they scarcely ever mention is hand-to-hand combat and ways in which soldiers might have been prepared for it (2). [...] The schools of arms are even more obscure than the men who taught them. Not

⁹⁴ The primary French military academy changed names repeatedly between 1604 and 1870. These naming conventions became important in conducting research for this dissertation as some primary documents did not have a date, but included reference to a specific military academy, following the naming conventions below, which provided insight into the provenance of the document. The change in naming convention reflects political upheaval in France that often upset or precipitated a change to the instruction and operation of military training schools. For a selection of names, the academy was known as: Collège des Jésuites (1604-1762); Petit college municipal (1762-1764); Collège royal militaire (1764-1776); Collège des doctrinaires (1776-1792); Collège national militaire (1792-1793); Prytanée militaire français (1808-1814); Ecole royale militaire (1814-1831); Collège royal militaire (1831-1848); Collège national militaire (1848-1853); Prytanée impérial militaire (1853-1870); Prytanée national militaire (1870-2014). This convention is followed by *L'association des Anciens Enfants de Troupe* (AET), a modern association of French military schools, colleges, and preparatory programs that developed from the original *Anciens Enfants de Troupe*, founded in 1766 under Louis XV. Web. 10 Jul. 2012. <http://www.aet-association.org/aet/ecoles/ecoles_actuelles_france/5>

only do we lack documentary evidence about the day-to-day running of these establishments, we do not even know what they looked like. (12)

Addressing these academic and archival lacunae, Anglo scrutinizes military treatises,⁹⁵ illustrations, etchings, memoirs, and secondary descriptive accounts of combat. Anglo suggests that in France, already during the reign of Henry VIII, “martial experts were organized into something resembling a craft guild” (8) and “there is plentiful, if scattered, evidence about the care with which the examination and licensing process [for masters of arms to train pupils] was supervised. Anglo adds that these regulatory processes were “further elaborated and strengthened under Louis XIII and Louis XIV” (10). As regards the social position of students at these establishments, Anglo notes that 16th-century university students in Paris so frequently “cut classes at the university to haunt the schools of *‘maistres escrimerus et joueurs d’espee’*” that an *Ordonnance of the Parlement* was issued in 1554 and again in 1575 to discourage this type of “informal” instruction (9-

⁹⁵ The terms “manual” and “treatise” will be used interchangeably throughout this dissertation to refer to texts that provided pedagogical theory or suggested instruction for the contemporary reader, listener, or practitioner. Both period and modern dance and military writers deploy these two terms, at times interchangeably and at times favoring one or the other, not always marking a guiding or firm distinction for usage even when a theoretical principle is at work. In *Dance as Theatre Art: Source Readings in Dance History from 1581 to the Present* in “Section One: Court Ballet,” the dance texts of Cesare Negri, Fabritio Caroso, and Thoinot Arbeau are referred to as “manuals intended as guides for social dancing” (7), while the preceding page refers to the role of instructional “treatises” for court dance (6). In the same volume, Julia Sutton refers to and translates Caroso’s “instructional manual” in “Rules and Directions for Dancing the ‘Passo e Mezo’” (10-18), while the 1682 work of Claude Menestrier’s “*Des Ballets anciens et modernes*” is referred to as a “treatise” (38). Kate Van Orden and Sydney Anglo similarly use both treatise and manual to describe various instructional texts. For example, Van Orden refers to Girard Thibault’s *Academie de l’espée* (1626) as a “treatise” (57) and suggests that Jacob de Gheyn’s “treatise actually comprises a field manual” (202). In her essay, “‘Artistic’ Theory of Dance in Fifteenth-Century Italy,” Barbara Sparti consistently refers to published “treatises on the art of dance” in 15th-century Italy and generally defines them as texts that “provided the first known formulation of a theory of dance, and set out its basic principles” (183). While Sparti’s deployment of the term is consistent in the essay, the definition does not differ from that used by military scholars to describe instructional “manuals” that set out “theories and basic principles” such as Sydney Anglo’s discussion of the production of technical texts on martial arts. He writes, in a sentence that deploys both terms at once, “The advent of printing brought about an increase in the number of treatises on combat manuals” (22). Given these various deployments of the terms across both disciplines, all with formative historical antecedents, including, perhaps most significantly, how the contemporary writer titled and wrote his own text, the terms will be used interchangeably here, but with an understanding that their usage may be contested or differentiated as potentially offering different pedagogical intent and content, from both a contemporary and modern vantage.

10). Anglo emphasizes, however, that armed personal combat was “commonplace everywhere in Europe” (34) for men in all social positions and professions:

Any master of arms worth the price of his lessons would have known what his pupils, whether soldiers or civilians, really needed. [...] The masters taught everything that pertained to physical violence in times of peace and war. [...] For many centuries, the fighting taught by professional masters was relevant either on the battlefield, in the formal duel or in a brawl. The space given to the different skills required in each case varied from author to author, place to place (37).

Here, Anglo stresses that personal combat skills were not only taught to soldiers to train for active warfare, but were part of a culture that relied on the skillful use of personal force and arms for survival.

While Anglo analyzes the instruction of martial arts, primarily as it was taught outside of formal military academies, Van Orden examines the establishment of military schools for noble education, beginning with the first military academies established under Henry IV, including Antoine de Pluvinel’s academy for dressage in 1594 (which accepted only nobles)⁹⁶ and the College of Nobles at La Flèche in 1603 administered by the Jesuits. Emphasizing the “choreography” of the military skills that students of La Flèche displayed, Van Orden remarks:

The Jesuits were a perfect choice to head educational reform, for their pedagogical style brought military discipline directly into the service of a monarchy seeking greater control over the nobility. [...] At the pyrrhic ballet performed for the entry of Louis XIII into Lyons later that year, Jesuit students snapped from one formation into another at bullet commands like those used in infantry drills...The choreography closely approximated the tactics of the new infantry formations that would be used in seventeenth-century field warfare” (228).

Van Orden notes that by the beginning of the reign of Louis XIV, Paris had added five more major military academies for noble education in military arts and reminds the

⁹⁶ Van Orden notes that Cardinal Richelieu and the Duke of Vendôme both attended Pluvinel’s school, and Louis XIII also received tutelage from its instructors (40).

modern reader: “It is important to remember that in the early seventeenth century, the education of the nobility was designed with the military profession in mind” (42).

Early Modern military historians John A. Lynn and David Potter⁹⁷ have alternatively sought to address the question of how soldiers who served within state contracted and commissioned armies for France were trained and to provide basic demographic data regarding their social position, region of origin, ethnicity and, in the case of Lynn, gender.⁹⁸ In *Giant of the Grand Siècle: The French Army 1610-1715*, Lynn argues that early 17th-century French armed forces may be described as a “state commission army” (7).⁹⁹ While late 16th-century French forces were primarily composed of privately contracted armies (often raised by allied nobles) that had to arrive “off the shelf” and be “already armed, trained, and organized for battle with their own officers” (6), in the 1630s, Louis XIII worked to ensure greater control of the French armed forces and full loyalty to the monarchy by investing in a commissioned military, a policy continued and expanded by Louis XIV.¹⁰⁰ The requirements to train in drill, as issued by sovereign authority, began to appear in royal ordinances under Louis XIII and Cardinal Richelieu, specifically in “*Le Code Michau*” of 1629, and would have applied primarily to contracted regiments raised by French nobles. However, Louis XIV continued his

⁹⁷ See: David Potter. *Renaissance France at War: Armies, Culture, and Society, c. 1480-1560*. Woodbridge: Boydell Press, 2008.

⁹⁸ Women were not allowed formal entrée into 17th-century French armies. However, Lynn argues in *Women, Armies, and Warfare in Early Modern Europe* that “there was a rare group who adopted male dress and male identity to serve in the ranks of European armies” (164).

⁹⁹ Lynn broadly categorizes, with an eye to specific historic variations and breaks, the fundamental shifts in the composition of the French armed forces as the following: “aggregate contract army” (mid 16th-century paradigm); “state commission army” (early through late 17th-century paradigm); “popular conscript army” (French Revolutionary war paradigm and early 19th-century paradigm); “mass reserve army” (late 19th- century paradigm); volunteer technical army (20th-century paradigm).

¹⁰⁰ Lynn notes of Louis XIII, “The king now issued commissions to officers, primarily French officers, to raise and train regiments in the king’s name in accord with royal ordonnances” (8).

father's efforts to prioritize regimented drill and Lynn argues that, "No French monarch surpassed Louis XIV's intense interest in drill" (518). By the start of Louis XIV's personal reign in 1661, responsibility for training rested with each commissioned regiment; drill among the French infantry was mandated "at least two times each week" by royal ordinances and included the regular firing of arms (an expensive endeavor off the battlefield). During wartime, Lynn suggests "training had a special urgency" and the training mandated in royal ordinances was intensified at winter quarters, garrisons, and within encampments during active campaigns, often incentivized through pay to captains and officers for a company's performance (522). Of significance, Lynn observes that military training was conducted not only at the level of individual arms handling, but that maneuvers were performed *en masse* to rehearse larger battalions and even maneuver "an entire assemblage of twenty-four battalions of infantry" (522-523).¹⁰¹ A picture of opportunities for 17th-century military training thus emerges that, while certainly not complete, does suggest that embodied military arts were prioritized in the day-to-day experience of soldiering at schools for martial arts, military academies, in winter quarters and garrisons, and on the battlefield itself.

The emphasis on embodied arts as requisite for military training may also be considered in documents from French military academies from the early 19th century

¹⁰¹ Of importance, expectations for training were not necessarily equally applied to all military positions and occupations. In the section on "Drill and Training," Lynn asserts, "The intricacies of linear tactics of the *grand siècle* demanded a high level of skill on the part of the soldiers who employed them and required habits of obedience and discipline" (515, original emphasis). Of interest, particularly given that the cavalry was yet likely to be composed of nobles under Louis XIV, Lynn also notes, "During the seventeenth century, the level of skill expected of an infantryman seems to have been higher than that demanded of cavalry. [...] The greater complexity of infantry drill stemmed from the problem of effectively combining pike with firearms" (516).

that suggest a tradition of instructing military movement practices was maintained.¹⁰² One early 19th-century archival document entitled, “*Instruction pour les familles qui desirent faire admettre leurs enfants aux ecoles royale militaire*” (c. 1814-1830)¹⁰³ includes hand-written instructions for the families of incoming students to the Royal Military Écoles at La Flèche and Saint-Cyr, schools originally established at the beginning of the 17th and 19th centuries, respectively. The document “*Instruction pour les familles*” describes the types of activities students will expect to study at each school and remarks they will learn maneuvers, fencing, motions, and attend riding school.

At this time there are two schools: one is established in the Royal Collège de la Flèche; the other is located in the former royal house of Saint-Cyr, near Versailles. In these two schools, the pupils are admitted from the age of eight years: they will stay there until they are fifteen years of age. Upon reaching that age they will pass to a third school to finish their studies. The complete course will be of three years at this last school: it has yet to be established. No student will be admitted to the Grand École if he has not first been at school at La Flèche or at Saint-Cyr. At the Grand École, they will continue the study of mathematics, history and of geography; they will take a course of literature; they will learn German, English, Italian, cartography, the school of batallion and squadron, fortification, the principles of artillery maneuvers, fencing, and motions. All the pupils indiscrimantely will go to riding school. At the end of their studies, students will be susceptible to be placed, under the rank of sous-lieutenant, in the infantry regiments or the cavalry. Students who, after having completed their studies at La Flèche or Saint-Cyr, are destined by their families to a career other than that of arms, are able to remove themselves from the school upon a request their parents address to the minister of war. (Translation mine)

Il y a dans ce moment deux écoles: l'une est établie dans le collège royal de la flèche; l'autre est placée dans l'ancienne maison royale de Saint-Cyr, près Versailles. Dans ces deux écoles, les élèves sont reçus dès l'âge de huit ans: ils y restent jusqu'à quinze ans : lorsqu'ils auront atteint cet âge ils passeront a une troisième école pour achever leurs études. Le cours complet sera de trois ans à cette dernière école: elle n'est point encore formée. Aucun élève ne pourra être reçu à la grande école, sil n'a d'abord été élevé à celle de la flèche ou à celle de Saint-Cyr. À la

¹⁰² The early 19th-century letter presented here offers a suggestive “trace” of the kinds of documents that, assembled, might offer a portrait of how military movement practices changed across the century in France.

¹⁰³ This original, hand-written document appears as a copy in *Dissertation Appendix A: Instructional Letter for Écoles Royale Militaire*. It was purchased at *Livres & Papiers* in Paris, a bookstore that specializes in Early Modern French military documents, in September 2012. It was authenticated, based on the paper, ink, and writing as early 19th century (1800-1825). The references to La Flèche Saint-Cyr as the “Ecole Royale Militaire” and the location of Saint-Cyr at the “Maison Royale” near Versailles, likely date the document between 1814-1830, when the schools for cadets followed this naming convention.

grande école, on leur fera continuer l'étude des mathématiques, de l'histoire et de la géographie; ils feront un cours de belles-lettres; ils apprendront l'allemand, l'anglais, l'italien, le dessin de la carte, l'école de bataillon et celle d'escadron, la fortification, les principales manœuvres d'artillerie, l'escrime, la motion. Tous les élèves indistinctement iront au manège. À la fin de leurs études, les élèves seront susceptibles d'être placés, avec le grade de sous-lieutenant, dans les régimes d'infanterie ou de cavalerie. Les élèves qui, après avoir terminé leur études à l'école de la flèche ou à celle de Saint-Cyr, sont destinés par leur familles à une carrière autre que celle des armes, peuvent se retirer de cette école, sur la demande que leurs parents adressent au ministre de la guerre.

The *Écoles Royale Militaire* instructional letter to families, which also requires that students are able to read and write and are “neither crippled, nor deformed, and do not have any infirmity,”¹⁰⁴ demonstrates the types of skills that were yet required for military training into the early 1800s, even for the youngest aspiring military officers.

In France, the possibility that dance and military arts might share pedagogical strategies for training bodies or symbolically using bodies to represent force was facilitated by the presence of French nobility in theaters of both war and stage. More specifically, the organization of the French armed forces from 1562 to 1714, wherein French nobility, despite many shifts in their specific military occupations and the composition of the military itself,¹⁰⁵ remained indispensable in military operations and continually negotiated for the most prestigious military appointments, ensured their involvement with both dance and military arts. The role of the French nobility in both court and military functions not only enabled but encouraged military men to dance and

¹⁰⁴ “2, n'être ni estropiés, ni contrefait, et n'avoir aucune infirmité; 3. Savoir lire et écrire.”

¹⁰⁵ This chapter will further address select issues related to the formation and composition of the French armed forces, particularly during the reign of Louis XIV. Modern scholars refer to 17th and early 18th-century armed forces as the “French Military” or “French Army”: however, these terms are used in this chapter with the understanding that the French military was neither monolithic nor organized in the governmentally institutionalized manner in which the “U.S. Military” is structured in the 21st century. For studies of the 17th-century French Army see: David Parrott. “From Military Enterprise to Standing Armies: War, State, and Society in Western Europe, 1600-1700.” *European Warfare: 1350-1750*. Ed. Frank Tallett and D.J.B. Trim. Cambridge: Cambridge UP, 2010.; Guy Rowlands. *The Dynastic State and the Army Under Louis XIV: Royal Service and Private Interest, 1661-1701*. Cambridge: Cambridge UP, 2002.; John A. Lynn. *The Wars of Louis XIV 1667-1714*. New York: Pearson, 1999.

participate in the elaborate social rituals and political ceremonies of court life, while also occupying key roles in military governance and operations. In *Renaissance France at War: Armies, Culture and Society* (2008), David Potter provides a detailed account of how nobles were variously engaged in military service in Early Modern France. Tracing archival evidence of noble deaths, including military narratives reviewed in H  l  ne Germa-Romann's *De "bel Mourir" au "bien Mourir": Le Sentiment De La Mort Chez Les Gentilshommes Franais*, Potter argues that noble deaths from military engagements were quantitatively significant, but also qualitatively reflected the influential participation of the nobility. In the chapter "Cavalry and the Nobility at War," he writes:

A survey of narratives of noble deaths shows that death in battle accounted for 40% of all deaths in such stories in the 16th and 17th centuries. But the military vocation was most important as an underpinning ideology of social privilege and there were many more nobles than places in the King's army. It has been argued that the heavy cavalry retained its centrality in French military thinking and in the aspirations of the nobility essentially because of the prestige attaching to it, rather than for its usefulness. (67)

Potter's evaluation of the French nobility at war leads him to conclude that, "a significant proportion of the nobility saw its *raison d'  tre* in terms of war" (89), and helps in understanding how nobles performing at court could also be found performing in war.

Further affirming the critical role of the nobility at war in 17th-century France, despite the cultivation of a larger commissioned army under Louis XIV, John A. Lynn remarks in *The Wars of Louis XIV: 1667-1714* that, "The nobility set the values of society, and formed those of the king. [...] This is in no case more central than in the king's attitude towards war. For the nobleman, combat tested his manhood, and for the king, warfare tested his reign. His young courtiers were sure to push for vigorous military actions, for they needed an arena in which to win fame" (28). While Lynn, from a

modern vantage, concludes that two primary domains bound nobles to Louis XIV's monarchical reign—"the court and the army"— (187), contemporary scholars, including dance scholars, also remarked on their relationship at the time. For example, François de Lauze, 17th-century French dancing master, implored his readers to consider the social relevance of the court, and more specifically court dance, for French military officers. In his instructional manual *Apologie de la Danse* (1623), he illustrates the significance of court dance for military training by describing an encounter between a French king, likely Henry IV who died in 1610, and a nobleman in military service:

I pray them to consider the description of one of our late Kings whose perfections when at a ball showed to as great an advantage over his Courtiers as he surpassed in oratory and judgment the wisest and the most eloquent of his Kingdom. He, himself, reprimanded a Gentleman (otherwise well accomplished) for not having learnt to dance, and asked of him what he did know how to do. "I know well, Sire," answered he, "how to give a blow of my lance in war for the service of your Majesty." "I counsel you, then," replied this good Prince, "to arm yourself with a [frock]¹⁰⁶ in time of peace; as if he wished to say that the furies of war having ceased, a gentleman could not employ himself in a more noble exercise than that which gave him an illustrious admission into the acquaintance of his Court and society. (de Lauze 69)

De Lauze's contemporary anecdote suggests that dance was an activity performed by military officers and nobles at court when not immediately engaged in military campaigns. While contemporary texts note the presence of nobles in the military performing at court, few modern military texts examining European warfare from 1550 to 1750 mention the concurrent roles, as performers, that nobility held, and few dance texts examine the physical military training that nobility would have simultaneously

¹⁰⁶ In her published translation of *Apologie de la Danse* (1952), Joan Wildeblood translates the French term "*froc*" as a "monk's robe." This is not quite the correct translation or sentiment since de Lauze's anecdote is intended here to convey how important dance might be for a military officer at court once he had laid down arms. De Lauze does not refer here, nor anywhere in the paragraph, to ecclesiastical matters. I have therefore translated the term here as "frock" or "dress" from the French. Other scholars such as Kate Van Orden frequently use their own translations when referring to de Lauze's *Apologie de la Danse* (1623). Wildeblood is used in this chapter, with accompanying translation notes when required.

received alongside dance instruction.¹⁰⁷ These omissions provide the opportunity for the inquiry in Chapter 1: as two important embodied practices, how did dance and military arts variously inscribe a philosophy of bodies that indicated extant preoccupations with individuals' capacity to demonstrate or deploy force, and did the movement forms share an orientation in form and theory? Arbeau and his pupil provide one simple answer: they did so directly, through pedagogy. In describing an evolution of a Pyrrhic sword dance, the *buffens*, Arbeau instructs, "You see the above four pictures of the gestures I have described to you, to wit; *feinte*, *estocade*, *taille haute* and *revers haut*. There remain the pictures of the other two gestures which you see below. Besides these there are several other body movements but it seems to me it will suffice for you to have them in writing without necessitating picture." To his teacher's coaching Capriol replies, "Fencing has already acquainted me with all these gestures. Now tell me how to dance the *buffens*" (Arbeau 185). Arbeau both begins and concludes his instructional treatise with lessons in military dances, affirming one relationship—wherein dance incorporated military postures and movement sequences—between French dance and military arts in the late 16th century.

In her study, *Music, Discipline, and Arms in Early Modern France*, one of the few texts to explicitly examine the relationship between Early Modern music and military arts, Van Orden offers another relationship between dance and the military—one wherein individual dances are performed by nobles in the military and staged with

¹⁰⁷ Kate Van Orden, in *Music, Discipline, and Arms in Early Modern France*, similarly observes: "Violence occupies a very restricted position in her [Frances A. Yates] study, as it does in Roy Strong's studies of court festivities and Margaret M. McGowan's studies of *ballet de cour*" (5).

military themes.¹⁰⁸ Van Orden describes “ballet as war on another stage,” and argues in the chapter “Violence, Dance, and Ballet de Cour” that performance was often collaborative with military service. Echoing de Lauze’s contemporary observation, Van Orden suggests, “For noblemen, dance was not in conflict with the military career but was, rather, a standard complement to arms. Indeed, military men typically passed the seasons of each year on shifting terrain, with summer military campaigns followed by winter stations at court culminating in balls and *ballet de cour* mounted for Carnival” (103-104). In addition to examining nobles’ participation in dance, Van Orden addresses the military theme of a selection of dances, concluding in her third chapter that, “*Ballet de cour* did not ignore the politics of armed aggression but often incorporated violence, whence its power came” (105). Her work underscores the historical import of staged violence within 16th- and 17th-century dance performances, but necessarily focuses on the musical composition of dance and military arts, with less orientation towards the form and theory of embodied instruction.

In this dissertation, the primary inquiry of Chapter I focuses on the *embodiment of war* in 17th-century French military training, including the use of the body and assembled bodies to transmit both representational ideas and direct incidents of force in relation to war. Throughout, the use of the term body is informed by scholarship in dance and performance studies that is concerned with individual agency, subjectivity, and creative resistance, and deploys the term body (singular) to insist on the examination of

¹⁰⁸ In addition to Kate Van Orden’s text regarding music and the military in Early Modern France, William McNeil has written generally on dance, drill, and music in *Keeping Together in Time: Dance and Drill in Human History*. Cambridge: Harvard UP, 1995. Regarding the 21st-century U.S. Military, Jonathan Pieslak has written on the history of music in the American armed forces and the role of popular musical for deployed, active-duty U.S. service members in *Sound Targets: American Soldiers and Music in the Iraq War*. Bloomington: Indiana UP, 2009.

differences in representation, and thus the power and presence, of diverse bodies (plural). Conceptually, the chapter theorizes the terms embodiment and force, suggesting that an understanding of war is inextricable from an understanding of bodies at war, even if the *jus ad bellum* of war changes over time. Chapter I first examines specific, embodied training practices in France from 1562 to 1714 to discern resemblances between dance and military arts instruction, including considerations for bodily positions, movement sequences, floor patterns, and geometrical arrangements. And second, considers how a theory of the body emerges that, as evidenced through pedagogy, contemporary theory, and visual representations of dance and military arts practices, demonstrates regard for the embodiment of force during the period. Both inquires are directed towards the same question: in an historical era of nearly uninterrupted military action in France, how might two important embodied practices—dance and military arts—reveal extant preoccupations with the body as a representative agent of force?

Methodologically, Chapter I relies on primary documents, including published texts, images, letters, and manuals, as well as recent scholarship, to examine the historical syncretism of dance and military arts. The chapter examines the military drill manual of Colbert de Lostelneau, *Le Mareschal de Bataille* (1647), which is originally translated in this dissertation from French to English. Throughout this chapter, the term “embodiment” continues to refer to the phenomenological primacy of the body as an interactive agent in processes of cognition, self-awareness, identity formation, and decision-making. As corollaries, the terms “embodiment of war” and “embodiment of

force” acknowledge how war and its primary instrument of deployment—physical force—are resolutely bound to bodily experience. Soldiers continually engage in the embodiment of war and the embodiment of force through direct action, such as combat, as well as through enacted responses to war, such as marching for or against war. To kill an enemy in hand-to-hand combat is a clear embodiment of force, but so is a theatrical performance wherein a dancer depicts killing an enemy on stage.¹⁰⁹ In both instances the body acts as a primary agent of force—in dance, force may be depicted or represented on stage within the arc of a performance’s narrative content, while in a military theater of war force may be threatened or physically inflicted.

While it may seem obvious to suggest that attention to embodiment should be inextricable from a cultural analysis of war, few recent studies of French 16th- and 17th-century warfare prioritize the embodied experience of soldiering; rather, most texts investigate war as an imbrication of strategy, tactics, and technological innovation within

¹⁰⁹ For example, Jean-Marie Constant argues in the essay “Les Ballets Dans L’Imaginaire Politique de la Cour de Louis XIII Dans Les Années 1620” that in *Ballet des Fées des forêts de Saint-Germain* (1625), King Louis XIII deliberately performed with political and military allies and the ballet projected an ideal of the king as a forceful warrior at the “front line of the royal army” who “incarnated war” through the ballet. Constant suggests: “To dance the *Ballet des Fées des forêts de Saint-Germain*, the king displays his force by flanking himself with young men who are close to him. He wishes to demonstrate to the court, who are his political and military allies, in the event of a new crisis. [...] The dancers who were invited to perform with the king were not chosen lightly, they are the reflection of his anticipations and his political and military hopes” (30). She adds, “[In the ballet] war is present. Louis XIII insisted on incarnating war by being a combatant, according to the terms of the grand medieval feats of the nobility’s ancestors, which the collective memory has retained and magnified. France is in civil war. The king is at the front line, heading the royal army to fight the Protestant troops. [...] In this way, the *Ballet des Fées des forêts de Saint-Germain* of 1625, if not as directly political and transparent as the *Ballet de la Délivrance de Renaud*, announcing the violent takeover by Louis XIII, carries a message with a double meaning, the unity around a sovereign and noble values, but also the display of a royal will to prepare the future by forming a faithful following” (35, translations mine). Constant writes: “*Pour danser le Ballet des Fées des forêts de Saint-Germain, le roi affiche sa force en s’entourant de jeunes gens, qui lui sont proches. Il veut exposer à la cour, quels sont ses alliés politiques et militaires, en cas de nouvelle crise (30). [...] La guerre est présente. Louis XIII a tenu à incarner en étant un combattant, selon les termes des hauts faits d’armes médiévaux des ancêtres de la noblesse, que la mémoire collective a retenu et magnifié. La France est en guerre civile. Le roi est en première ligne, à la tête de l’armée royale pour combattre les troupes protestantes. [...] Ainsi, le Ballet des Fées des forêts de Saint-Germain de 1625, s’il n’est pas aussi directement politique et transparent que le Ballet de la Délivrance de Renaud, annonciateur de la prise de pouvoir violente par Louis XIII, est porteur d’un message à lecture double, l’unité autour du souverain et des valeurs nobiliaires, mais aussi l’affichage d’une volonté royale de préparer l’avenir en se constituant une clientèle fidèle (35).*”

historically evolving geopolitical theaters. For example, the otherwise exemplary works of David Potter, *Renaissance France at War: Armies, Culture and Society, c. 1480-1560*, and Guy Rowlands, *The Dynastic State and the Army under Louis XIV: Royal Service and Private Interest, 1661-1701*, make little mention of the embodied training or physicality of military service during the respective periods. Yet the explicit syncretism of performance and military practices at the time places the body at the center of a cultural analysis of art, war, and politics. Thus, we can ask productive questions about the historical role of the body in both art and war during this period. For example: Did shared bodily practices between dance and military arts influence theories of the body? Did military training inform comportment and choreography at court, and conversely, did the dance exercises practiced at court translate to aspects of military training and drill? Did the “choreography” of geometric war formations on the battlefield share a philosophy of organization or movement with those of dance spatial patterns?

Dance, drill, and military exercise manuals of the 16th to 18th centuries offer a glimpse into a complexly articulated world wherein movement disciplines demonstrated explicitly political choreographies, performed with the intent to influence, display, or assert power. While dancing arts are no longer, as Arbeau suggests, “employed in war for the strength and the defence of the State,” (Arbeau 17) these concerns, derived from an era when the embodiment of war in the form of tactics, drill, and displays of power was often performative—that is, presented with the intent to convey or instantiate a social or political meaning through the act—suggest possible lines of inquiry to better understand how soldiering bodies are variously trained, revered, and

marginalized during times of war. Western warfare has remained, in every age, a primary, ubiquitous force in shaping embodied life for both combatants and civilians. As such, a culture's relationship to the embodiment of its soldiers suggests broader considerations for how societies understand the body—soldiering, civilian, and “enemy” bodies—and also how they deliberate and respond to state-sanctioned violence that may sacrifice individual bodies to the ethically ambiguous cause of waging war to establish peace. The first chapter, therefore, initiates an historical engagement with a broader, principal question posed in this dissertation: what is the role of the body in relation to, and as an agent of, the force of war?

Training for War and Dance

It is also quite necessary, long before declaring war, to fill the troupes, both Infantry and Cavalry, with good Captains and Officers, to order them to constantly exercise the soldiers under their orders, for two main reasons; the first is that, being skilled and free, they become much bolder; and the other, to prevent idleness, which generally produces vices, febleness, and cowardice.

—Colbert de Lostelneau, *Le Mareschal de Bataille*

For the sole exercise of the dance is able, not only to eradicate the bad actions which a negligent upbringing has ingrained, but gives also a decorum and a grace which we call Civility, and which I am able to call properly *le bel estre* (elegant presence), a thing absolutely necessary to whosoever wishes to render his deportment and his approach agreeable in society.

—François de Lauze, *Apologie de la Danse*

1.1—Comparative Design for Movement Manuals

In the first half of the 17th century two French scholars, accomplished in their respective fields, confronted an identical dilemma while authoring texts that each imagined would be a seminal reference for their art forms. Both authors hoped to convey to an eager readership the correct positions and sequencing of the body so that unique gestures, coordinated movements, and geometric arrangements could be reproduced faithfully by individuals or assembled groups upon reading their instructions.

As was customary at the time, both authors dedicated their treatises to honored, royal patrons, remarking on the patrons' expertise in the given subject area—in this case, one to the Lord Marquess of Buckingham of England and one to King Louis XIV of France—and accepted responsibility for any errors and omissions therein. To Lord Buckingham, the first author writes, “I am assured, by the perfection with which

your Excellency has acquitted himself, that the affection which you have shown for this subject, could not but be favourable to an ambition which has taken as its object the service of the public. [...] Your Lordship's Very humble and very obedient servant."¹¹⁰

To King Louis XIV, the second author writes, "SIRE, I shall at least have this benefit, of having published the full extent of the Grandeur of your genius, and of having made known to the whole World that, before the age of nine, your Majesty was able to discern what scarcely any of the greatest Captains have learned in the entire course of a long life. [...] Your Majesty's very humble, very obedient, and very faithful subject and servant."¹¹¹ Each dedication acknowledges the importance of patronage and situates the respective art form in the larger context of serving a noble and a wider audience.

Both authors also provide an explanatory notice to the reader that critically comments, with great personal fervor, on the historicity of the texts' troubled publication, noting others' incompetency, publishing delays, and the explicit plagiarism of each text's content before it was printed.¹¹² The first author remarks of his thieving adversary in the book's "Aduertissement":

Telling him, some months later, that I had finished the last corrections, and even letting him see a discourse which I had added in favour of my subject, he did not omit a single manoeuvre to extract from me, and to have printed in his own name, that which I had not had sufficient assurance to give to the public. [...] As for me, who am interested to

¹¹⁰ "Assuré que l'affection quelle a tesmoigné avoir a son subiect par la perfection quelle se nest a quise, ne le pourroit rendre favorable a vne ambition qui a pris pour obiect l'vtilité d'un public [...] De Vostre Grandeur Le tres humble & tres obeissant seruiteur" (de Lauze 38). Translated by Joan Wildeblood, Hampshire: Noverre Press, 1952.

¹¹¹ "SIRE, j'auray au moins cét advantage d'avoir publié jusqu'ou va la grandeur de vostre Genie, & d'avoir fait connifre à toute la Terre qu'avant l'âge de neuf ans vostre Majeſte a ſceu ce qu'à peine les plus grands Capitaines ont acquis dans tout le cours d'une longue vie" (de Lostelneau, Av Roy). Translation mine.

¹¹² Adrian Johns' *The Nature of the Book: Print and Knowledge in the Making* (1998) provides an excellent study of the complications of European printing, politics, and knowledge-production in the 16th through 18th centuries. Johns does not address the publication of military texts to any extent, and focuses rather on natural philosophy. Of this genre, he suggests that accusations of plagiarism or "usurpation" and "property" were common among authors such as Thomas Hobbes, Isaac Newton, and Edmond Halley and were intended to not only establish originality, but to assault the authority and credibility of fellow scholars, thereby undermining their intellectual arguments, as well (459-461).

show you, in consequence of the resentment that I owe to this injury, the shame deserved by him to whom one has entrusted his affairs.¹¹³ (“Notice” 43-45)

Quelques mois après luy disant que i’y auois mis la derniere main, & mesme luy faisant voir vn discours qu i’y auois adiousté en faueur de mon subiect, il n’oublia pas vn de ses artifices pour tirer de moy & faire imprimer en son nom ce que j’nauois pas assez d’assurance de donner au public; [...] & à moy qui suis interesse de te marquer icy en suite des ressentimens que ie dois a ceste iniure, la honte que merite celuy à qui il a fié son affaire. (Aduertissement 42-44)

To his plagiarizing foe, the second author reprimands in his “*Advis Av Lectevr*”¹¹⁴:

Diverse Authors took certain portions with which they thought to adorn their books; There is in particular one Norman Author¹¹⁵ who took a good portion of the Evolutions, you shall be the judge, if it pleases you, as to who has better understood them. I found it better in the general name of his Nation, to so reproach him as to make his face turn red, and by putting it on him, for which I demand pardon from the rest of his Province. (“Notice to the Reader” 1)

*Divers Autheurs en ont pris des pieces don’t ils ont crû orner leurs livres; Il y a particulièrement un Auteur Normand qui m’a pris une bonne partie des Evolutions, tu jugeras s’il te plaist qui les a mieux entenduës; l’ay mieux aimé fous le nom general de ja Nation luy faire ce reproche que de la faire rougir en y mettan le sien propre, de quoy je demande pardon au reste de ja Province.*¹¹⁶ (“*Advis Av Lectevr*” 1)

¹¹³ Barbara Ravelhofer provides a remarkable account of the piracy of de Lauze’s *Apologie de la Danse* by B. de Montagut, whom de Lauze fingers directly as the plagiarist in the “*Aduertissement*,” in her edited translation and comparison of the two texts: Barbara Ravelhofer, ed. *Louange de la Danse: B. De Montagut*. Renaissance Texts from Manuscript Series, No. 3. Cambridge: RTM Publications, 2000.

¹¹⁴ This dissertation follows the convention of including all French translation that I have done myself in the body of the text, while including the translation source and French text of quoted passages in the footnotes. The exception occurs on this page, where de Lauze’s original French is presented alongside Joan Wildeblood’s translation of *Apologie de la Danse* (1952) for comparison to de Lostelneau.

¹¹⁵ De Lostelneau does not name his plagiarizing foe directly.

¹¹⁶ To date, *Le Mareschal de Bataille* has not been translated into English. All translations in this dissertation are mine, translated from my edition of the 1647 text (Printed Paris, Estienne Migon), which may also be found at the Bibliothèque nationale de France (BnF) Catalogue Call Number: “FOL-S-1757” or at BnF Gallica: <<http://gallica.bnf.fr/ark:/12148/btv1b8626570b>> (Photos of original text). The BnF Hachette Livre is printed from <<http://gallica.bnf.fr/ark:/12148/bpt6k54181054>> (black and white copy) and has a slightly different title page. Excluding the title page, the texts appear identical. I have reproduced the French text below the English translation. To preserve the integrity of the original text, I have retained all original orthography, and thus the letters, for example, i, v, and f have not been modernized to j, u, and s. The letter “f” denotes the identical appearance of the letter “f” in the original. For example, the word “*ju/tifier*” appears with both the letters “j” (would be modernized to “s”) and “f” (would remain an “f” as in the original). The texts *A History of the French Language Through Texts* (1996) by Wendy Ayres-Bennett, *A History of the French Language*, 2nd ed. (2002) by Peter Rickard, and *An Introduction to Old French* (1984) by William. W. Kibler were used as aids in my translation. G. Yvonne Kendall, in her text “The Music of Arbeau’s *Orchésographie*” (2013), provides orthographic notes for her translation of 16th-century French from Arbeau’s *Orchésographie* in Chapter 11, “Table 5. Orthography” and also notes that the period “i” could be translated into Modern French as a “j”—such as the 16th-century spelling of “i’aime” modified to to a modern “j’aime” (96). The orthography of Arbeau’s text (1588) and de Lostelneau’s text (1647) demonstrate, of course, significant differences in the original usage as the early 17th century represented a time of great change to, and systematic control of, the French language, particularly in the 1630s and 1640s. As Ayres-Bennett notes in her work: “The key stages in the increasing control of French are well known and include the foundation of the French Academy in 1635 and the publication of Vaugelas’s *Remarques su la langue française* in 1647” (178).

The authors' public, emphatic commentary regarding their enemies' plagiarism is of interest not only because it reveals the intrigue of intellectual property rights at a time when printing techniques and legal considerations for copyright, as understood from a modern vantage, were still developing, but because it affirms the shared, novel task of both authors' projects—each was trying to provide a manual for the instruction of movement when formal, codified systems for such efforts had not yet been entirely successful and were thus of great value for opportunistic theft and imitation. Both authors will struggle with the best methodology and narrative with which to instruct movement art forms that were generally learned through physical practice, observation of performances, and repeated correction—that is, were pedagogically embodied—and will suggest their work is imperative for the development of French society and state.

And yet what is most unusual in this comparison of historical texts—the first, the canonical, dance instructional manual, *Apologie de La Danse*, published in 1623 by French dancing master, François de Lauze, and the second, the military manual, *Le Mareschal de Bataille*, published in 1647¹¹⁷ by the French Marshal of the King's Royal Guard, Colbert de Lostelneau—is that it is de Lostelneau, the military marshal, *not* the dancing master, who insists it will be impossible to convey the movement of his art accurately without providing sequenced illustrations, instructions for the arrangement of coordinated group movements, and geometrically intricate spatial patterns. In startling contrast to de Lostelneau's pedagogical technique, particularly for dance historians, de Lauze remarks in his treatise that rather than use demonstrative figures or illustration,

¹¹⁷ Publication of *Le Mareschal de Bataille* is listed as 1647 on the title page, although the "Privilege of the King" is listed as having been granted on the last day of December, 1646.

the reader should rely on the narrative exposition of his “pen” for comprehension. As explored in this chapter, the pedagogical styles and choices of the two authors provide an opportunity to productively assess how bodies are physically and philosophically considered in each text. By further comparing the two manuals to other 17th-century military and dance materials, it becomes possible to sculpt one answer to the initial guiding question—dance and military arts demonstrate circulating preoccupations with the body as an instrument of force with the potential to enact, or subvert, sociopolitical expectations.

De Lostelneau’s presentation of the body in multiple, illustrative forms in his instructional treatise reveals contemporary concerns for the knowledge transmission of military movement arts. These include: an attention to bodily posture and fluid sequences, the representation of ideal geometric arrangements, and the “choreography” of bodies in patterned forms. De Lauze, not only discouraging, but disdaining, the use of illustrated figures to instruct dance, informs his readers in the first section of *Apologie de la Danse*, “The Method for Gentlemen”:

Those who believe that to teach dancing properly from a book necessitates numerous illustrations, in order to observe more plainly the movements which should be observed in dancing, are in agreement with that Orator of old, who, having to harangue in open Senate on an atrocious deed, committed this clumsy fault of setting up a painting before the eyes of the Judges, trusting more in the dumb strokes of a dead painting, than to the energy of the living eloquence. I leave to the partisans of this Orator, who may have some intention to set themselves to ruin this exercise, the practise of such inventions. It suffices me that my pen will make them seem unnecessary to the subject which I have undertaken and of which it is time that I spoke.¹¹⁸ (de Lauze 83)

¹¹⁸ “Ceux qui croient l’observation de plusieurs figures du tout necessaires pour biē montrer à danser par liure, & représenter plus naïuemēt les mouuemens qui se doiuent observer à la danse, ne s’accordent pas mal avec cest Orateur, qui ayant iadis à haranguer en plain Senat sur vn fait tres-atroce, commit ceste lourde faute d’en proposer vn tableau deuant les yeux des luges, se fiant plus aux traits muets d’vne morte peinture qu’à l’energie d’vne eloquence viue. Je laisse aux partisans de ce digne Orateur, (qui auront quelque dessein de s’opposer à la ruyne de cest exercice) l’vsage de tells inuentions, il me suffit que ma plume les face voir inutiles au subiect qu l’ay pris, & don’t il est temps que ie parle” (de Lauze 82).

In contrast to de Lauze, who derides the “dumb strokes” of illustration, de Lostelneau considers the methodology of his own task in *Le Mareschal de Bataille* which includes the extended title: *Necessary for All Those Required by their Profession to Carry Arms. By Means of Which a Simple Soldier May Become Capable of Commanding an Army. Containing: The Handling of Arms. The Movements. All Sorts of Batallions, both for the Infantry and the Cavalry. Different Orders of Battle. With a Discourse on the Considerations a Sovereign Must Make Before Declaring War.*¹¹⁹ De Lostelneau asserts he has reviewed diverse research materials and decided to use illustrations with annotation as the best explanatory mode:

The late King LOUIS THE JUST, in immortal and ever glorious memory, had ordered me to create a compendium, both on the Handling of Arms, Formations, Batallions, Orders of Battle, Army Encampments, the fording of rivers, along with other matters concerning war. [...] I first researched all that I had seen during twenty-five years practicing for this great Prince, and afterwards, what I had been able to see in the function of the Ranks with which his Majesty honored me, notably performing those of Sergeant or Battle Marshal; the last name that by custom was given, and that I've left so as not to render it unrecognizable, and everything else I was able to add of my own invention. After having assembled all my pieces, of which one other than myself would have been able to understand nothing, I believed that it would be necessary to place the whole of it into illustrated figures, with a brief discourse that would give them the necessary explanation. (“Notice to the Reader” I)

Le feu Roy LOUIS LE IVSTE, de'immortelle & tres-glorieuse memoire, m'avoit commandé de faire un recueil, tant du Maniment des Armes, Evolutions, Batallions Ordres de batailles, Campemens d'armées, passages de rivières, qu'autres choses concernant la guerre. [...] Le recherchay premierement tout ce que j'avois veu durant vingt-cinq ans pratiquer à ce grand Prince, & en suite ce que j'ay pu voir dans la fonction des Charges dont sa Majefté m'a honoré, notamment exerçant celle de Sergent out e Marefchal de Bataille; dernier nom que la mode luy a donné, & que je luy ay laiffé pour ne le rendre pas mefconnoiffable; & tout ce que j'y ay pû adjoûter de mon invention. Apres avoir affemblé toutes mes pieces, où autre que moy n'eust

¹¹⁹ “Le Mareschal de Bataille . NECESSAIRE A TOVS CEVX qui font profession de porter les Armes. PAR LE MOYEN DVQVEL VN SIMPLE SOLDAT SE peut rendre capable de commander une Armée. CONTENANT LE MANIMENT DES ARMES. LES ÉVOLUTIONS. Toutes fortes de BATAILLONS, tant contre l'Infanterie que contre la Cavalerie. Differens ORDRES DE BATAILLES, Avec un Dicours sur les considérations que doit avoir un souverain, avant que de commencer la guerre” (de Lostelneau Title Page). Note that the Gallica online manuscript at <<http://gallica.bnf.fr/ark:/12148/btv1b8626570b>> and my original edition contain this inscription. The BnF Hachette Livre, reproduced in black and white at <<http://gallica.bnf.fr/ark:/12148/bpt6k54181054>> omits “Necessaire...une Armée, and substitutes the word “Plu/feurs” for “Toutes fortes” prior to the word “BATALLIONS,” and “Divers” for “Differens” prior to the word “ORDRES DE BATAILLES.”

pû rien comprendre, je crû qu'il fallout mettre le tout par figures, avec un bref discours qui leur donnaît l'explication neceffaire. ("Advis Av Lectevr" 1)

De Lostelneau's method, privileging as it does figures with annotation over exposition, highlights two discrete challenges that both authors encounter: first, how to represent an individual body in motion, wherein an embodied understanding of posture involving the torso and head, intricate hand, arm, and foot positions, and coordinated, rhythmic movement between one gesture and the next is required; and second, how to organize patterns of assembled bodies in motion, wherein knowledge of geometric floor patterns, intricate partnering and collaboration, and an anticipation of accident or collision is vital.

Whether either author anticipated their work being reconstructed in the future—wherein knowledge of the positions, formations, and patterns would likely have eroded over time and thus require far more detailed representation—de Lostelneau certainly imagined that his text would be used for supplementary instruction to attain *complete* mastery of the subject, not simply as a novice's introduction to the field. De Lostelneau remarks in the "Notice to the Reader":

Moreover if you ask me why I gave the name of The Battle Marshal to my Book, I will give you two principle reasons for this; the first is that I have always esteemed the Rank, having held it for a long time with quite good fortune to have satisfied the Generals under whom I have had the honor to serve: so I thought it my duty to owe him this tribute: and the other is my opinion that whoever will perfectly know all that is contained in this Work will be somehow capable of holding this Rank. ("Notice to the Reader" 2)

Au furplus si tu me demandes pourquoy j'ay donné le nom de Marefchal de Bataille à mon Livre, je t'en diray deux raisons principales; la premiere eût que j'ay toujours aymé cette Charge, l'ayant long temps exercée avec affez de bon-heur pour avoir fatisfait les Generaux sous lefquels j'ay eu l'honneur de fervir: de forte que j'ay crû luy devoir ce tribut: & l'autre que mon opinion eût que celuy qui feaura parfaitement tout ce qui eût contenu dans cet Ouvrage fera en quelque forte capable de l'exercice de cette Charge. ("Advis Av Lectevr" 2)

De Lostelneau states plainly that not only mastery, but also the acquisition of a quite high professional rank may be procured from “perfect” study of his manual. In comparison, De Lauze has a socially prescriptive intent in mind for his anticipated audience that includes obtaining a generally “dignified bearing”¹²⁰ through the study of dance, a comportment which, as his steadfast critique of his peers’ behavior throughout his text reveals, he often finds acutely lacking. De Lauze reflects upon his project and assesses the vital role of dance within the broader aim of participating in civil society:

Neither will I enter into debate with certain badly knit and deformed persons, who could not hide the defects which they have by nature, except by overthrowing decorum. Nor, further, with those who, like Timons, have withdrawn themselves from the society of men, in order to live, fat and ungrateful, and to pursue Chimeras. Envy prompts these to despise the dance, through not having a body disposed to receive the graces, and without which these graces cannot attain their full perfection. [...] For the sole exercise of the dance is able, not only to eradicate the bad actions which a negligent upbringing has ingrained, but gives also a decorum and a grace which we call Civility, and which I am able to call properly *le bel estre* (elegant presence), a thing absolutely necessary to whosoever wishes to render his deportment and his approach agreeable in society.¹²¹ (de Lauze 67-69)

De Lauze’s title, *Apologie*¹²² *de la Danse*, which Joan Wildeblood translates as *An Apology for the Dance*, when understood as “vindication” for the dance, suggests not only a descriptive effort, but the arduous defense of dancing that de Lauze seemed intent to undertake. In various guises de Lauze assuages his readers, reminding them that dance is a worthy endeavor: “It is to the judgment of masters who are not preoccupied with

¹²⁰ “Il faut avoïre vne matiere proper pour receuoir vne si digne forme” (de Lauze 68).

¹²¹ “le n’entre pas aussi en debat avec certains personnages mal taillez & difformes qui ne peuuent cacher les deffauts qu’ils ont de la nature qu’en la ruine de la bien séance, non plus qu’avec ceux qui comme des Timons se sont retirez de la societe des homes, pour viure gras & ingrats, & donner la chasse aux Chimeres: l’enuie pousse ceux-là au mespris de la danse, puor n’auoir pas le corps dispose à receuoir les graces qui ne peuuent ester en leur perfection sans elle [...] Que le seul exercice de la danse peut non seulement arracher les mauuaises actions qu’vne negligente nourriture auroit enracinee, mais donner encore vn maintien & vne grace que nous disons entregent, & que ie peux appeller proprement le bel ester, chose tout à fait necessaire à quiconque veut rendre son port & son abort agreeable dans le monde” (de Lauze 66).

¹²² *Apologie* may be translated from the French as praise or vindication; however, the precise synonym for praise, *Louange*, had already been taken by de Lauze’s nemesis, B. de Montagut, when he seemingly pirated de Lauze’s text and reproduced it as *Louange de La Danse*. See: Barbara Ravelhofer, Ed. *Louange de la Danse: B. De Montagut*. Renaissance Texts from Manuscript Series, No. 3. Cambridge: RTM Publications, 2000.

seeking favours that I address myself, who would admit, I feel assured, that the dance itself has nothing blameworthy in it. That, on the contrary, good behavior is an inseparable element of it”¹²³ (de Lauze 67). While Wildeblood hypothesizes that de Lauze may not have been a dancing master (Wildeblood 15), if he was not, one must ask curiously: what commitment to or deep affection for dance compelled de Lauze to embark on such a laborious publication, particularly one he suggests will likely result in criticism and even ridicule? To this end de Lauze himself remarks, “Whatever they say, they will never prevent me from following my purpose, and I care very little if I become the butt of their slanders”¹²⁴ (67). Yet despite de Lauze’s philosophical adulation of dance—praise for its virtues of grace, civility, and refinement—he appears unconcerned with, and at times dismissive of, the potential challenges for a contemporary reader of learning movement without images, bodily sequences, floor patterns, or musical scores. De Lauze exclaims indignantly, “But in what way, some will ask me, shall we express in writing that which the intelligence desires to see done? As though one had never written of things more difficult to understand!”¹²⁵ (79). De Lauze’s instructional methodology is revealing precisely because historical omissions often reveal authorial suppositions. De Lauze’s method suggests that some circulating knowledge among specific reading audiences of basic dance positions, general etiquette, and instructional vocabulary could be assumed. As well, the expository style forecloses mimetic or

¹²³ “C’est au iugement d’arbitres non preoccupez de faueur que ie m’adresse, qui aduouèront ie m’asseure que tant s’en fait que la danse aye en soy rien de blamable” (de Lauze 66).

¹²⁴ “Quoy qu’ils dient, ils ne m’empècheront point de suiure mon dessein, & me soucie fort peu d’estre en butte de leur medisance” (de Lauze 66).

¹²⁵ “Mais le moyen, me dira quelqu’un d’exprimer par escrit ce don l’intelligence gist au voir faire? Comme si l’on n’auoit iamais escrit de choses plus difficiles à comprendre?” (de Lauze 78-79).

imitative potential for a novice, or illiterate dancer, since there are no illustrations of posture, patterning, costumes, or musical accompaniment and most of the descriptions assume prior knowledge of the dance, performance space, and social setting. Although de Lauze states his manual is for the “public,” it assumes socially stratified knowledge.

In comparison, de Lostelneau’s volume is dedicated to: “All Those Required by Their Profession to Carry Arms: By Means of Which a Simple Soldier May Become Capable of Commanding an Army.”¹²⁶ De Lostelneau directs his volume towards those who would need to replicate or instruct fundamental drill positions and movement sequences and his address to the “simple soldier” implies that it was intended for all levels of military professionals.¹²⁷ To this end, de Lostelneau’s text provides *four distinct representations* of bodily figures that appear in illustrated, ordered sets with an introduction and annotated instructions. Each set of illustrations presents different resolutions to the dilemmas of instructing movement arts, particularly for assembled groups. Included in the manual are: first, “Handling of Arms”: full-page drawings of French soldiers in sequenced stances practicing with military arms; second, “Evolutions”: two-colored, primarily linear arrangements of soldiers maneuvering represented by dots, dashes, and curving arcs; third, “Battalions”: two-colored, complex geometric dot formations for assembled musketeers and pikemen; and last, “Orders of Battle”: tri-colored, blocked configurations for organizing battalions, including infantry, cavalry, and

¹²⁶ *Le Mareschal de Bataille . NECESSAIRE A TOVS CEVX qui font proffion de porter les Armes. PAR LE MOYEN DVQVEL VN SIMPLE SOLDAT SE peut rendre capable de commander une Armée*

¹²⁷ “On this occasion, we and the public have remained deprived of until the present; which we desire to provide, in order that a work so useful, not only for Us, but also for all our Nobility, and generally for all those who carry arms in our service, shall not remain unproductive.” *À cette occasion, NOVS & le public fomos demeurez privez ju/qu’à prefent; à quoy defirant pourvoir, à fin qu’un travail /l utile, non feulement pour Nous, mais encore à toute noftre Nobleffe, & generalement à tous ceux qui potent les armes pour noftre fervice, ne demeure infructueux* (“Privilege” 1).

equipment. Each set of de Lostelneau's instructions will be compared to contemporary military and dance manuals to discern the authors' considerations for embodied instruction (training, discipline, and skill) and emergent theories of the body (representation, signification, and subjectivity).

1.2—Military Handling of Arms-Individual Action

Viewed from either a contemporary or modern perspective, de Lostelneau's text is remarkable in the history of printing, art, and military instruction. The treatise represents one of the first instances of tricolor printing in France¹²⁸—three colors of dots, dashes, and blocks are used to represent musketeers, pikemen, and cavalry in red, black, and yellow, respectively—as well as a new mechanical use of lead printing blocks for dotted and dashed images (as was already done for letters) in the battalion formations (Figure 1). At the time of printing, the publication remarks in the “Privilege of the King” indicate that the printing style and geometric illustrations of the movement were so novel that it had been impossible to print the text at one of the official printing houses, and permission had thus been granted for a Professor Estienne Migon to set up specialized engraving equipment in his home.

¹²⁸ Jacob Christoph Le Blon (1667-1741), originally from Germany, is often cited as the first European inventor of three- and four-color engraved printing; he made full color prints of red, yellow, and blue plates during the early 18th century. However de Lostelneau's manual, printed twenty years before Le Blon was born, antedates a very early process of multi-color printing. For a discussion of 18th-century European color printing see: Sarah Lowengard. *The Creation of Color in Eighteenth-Century Europe*. New York: Columbia UP, 2006. See: Asher Rare Books Military History Collection, 2014: Page 9. 10 Sep. 2014. <[http://www. books.com/data/File/2014%20Military%20History%20Web.pdf](http://www.books.com/data/File/2014%20Military%20History%20Web.pdf)>

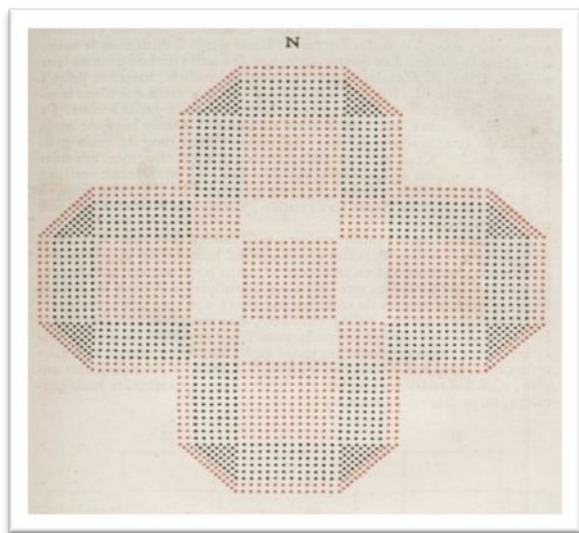


Figure 1. *Battalion Cross of Lorraine (N), Variation (Red Musketeers and Black Pikemen)*

The publication remarks, viewed alongside the dedication, provide an intriguing glimpse into the politics of printing in the mid-17th century. The remarks describe the manual as a highly-anticipated, French innovation for inscribing military movement (whereas, circulating manuals were often of Dutch, German, Italian, and Spanish authorship), and they situate the printing in the larger context of serving French nobility, all soldiers “who carry arms,” and the memory of Louis XIII, recently deceased, who had commissioned the work. A portion of the publication remarks are quoted at length: they affirm the unique, technical challenge of printing the manual and also emphasize de Lostelneau’s struggle to present formations for a movement art when the equipment itself had not yet evolved to do so.¹²⁹ In the “Privilege of the King” de Lostelneau reveals:

Our dear and well-regarded Master Estienne Migon,¹³⁰ Professor of Mathematics, has asked us to say and remonstrate that, as commanded by the late King¹³¹, our ever-

¹²⁹ Historian Adrian Johns argues in *The Nature of the Book: Print and Knowledge in the Making* that late 16th-century European natural philosophers who were concerned with piracy and usurpation claimed technical printing inventions to solidify their authority to what would be called today “intellectual property rights.” He writes, “One hint of this is provided by the fact that many natural philosophers concerned themselves with the technology of printing itself. It was a subject of recurring interest” (462).

¹³⁰ Estienne Migon, “Professeur és Mathematiques” is listed on historical monographs as an “*Imprimeur ordinaire du Roy*” including *La Perspectiva Speculative et Pratique* (1643) and *Les Morales d’Epictète, de Socrate, de Plutarque et de Senéque* (1653) printed at the Chateau de Ricuelieu.

honored Lord and Father of glorious remembrance and through our own commanding, that he has undertaken to bring forth into the world a Book entitled THE BATTLE MARSHAL, composed and compiled by Sir Lostelneau, Battle Marshal of our Camps and Armies, and Sergeant Major of our Garde Française. Yet, to the extent that this Book is entirely filled up with Battalions and Orders of Battle, which he intends to print with Lead Printing Blocks for the images, as done with the letters, whereas up until the present time all those who have printed similar illustrations have always engraved them using wood or copper, these materials are purely the invention of said Migon and greatly serve the intelligibility of this Work through the diversity of colors in which each figure is printed, to wit, the Musketeers in red, the Pikemen in black, and the Calvary in yellow, a feat which could never be done if said figures were engraved in copper. And as this manner of printing the Battalions is entirely novel and nothing of the like has been seen before, he has not been able to find any Printer who was able to make a run of said Work, for they do not have any of the proper Printing Blocks, and no Metal Caster of printing blocks has been found anywhere who would be able to cast such printing blocks, for lack of knowledge of the shape that they ought to have, as there is no one other than said Migon who is capable of presenting this invention of making dots and matrices, and who knows the proportion and size that these Characters must have. [...] This is why said Migon has been unable to advance an impression of said Book, of which on this occasion, we and the public have remained deprived of until the present; which we desire to provide, in order that a work so useful, not only for Us, but also for all our Nobility, and generally for all those who carry arms in our service, shall not remain unproductive.

Notre cher & bien-ami Maître ESTIENNE MIGON Professeur des Mathématiques nous a fait dire & remontrer que par le commandement du feu Roy notre tres-honoré Seigneur & Pere de glorieuse memoire & par le nostre, il a entrepris de mettre en lumiere un Livre intitulé LE MARECHAL DE BATAILLE, composé & recueilly par le sieur de LOSTELNEAV Marechal de Bataille de nos Camps & Armées, & Sergent Major de nos Gardes Françaises. Mais d'autant que ce Livre est tout rempli de Bataillons & Ordres de Batailles qu'il pretend imprimer avec des Caracteres de plomb comme on fait la lettre, au lieu que jusqu'à present tous ceux qui ont imprimé de semblables figures les ont tousjours fait graver en bois ou en cuivre, ce qui est de la pure invention dudit MIGON, & qui fervir grandement à l'intelligence de cet Ouvrage, à cause de la diversité des couleurs dont chaque figure est imprimée, à sçavoir les Mousquetaires de rouge, les Piquiers de noir, & la Cavalerie de jaune, ce qu'on ne pourroit jamais faire si les dites figures estoient gravées en cuivre. Et comme cette maniere d'imprimer des Bataillons est toute nouvelle, & qu'on n'a point encore rien veu de semblable, il n'a pu trouver aucun Imprimeur qui ait pu travailler audit Ouvrage, parce qu'ils n'ont point de Caracteres propres, & qu'il ne s'est trouvé aucun Fondateur de lettres qui leur en ait pu fonder, pour ne sçavoir pas la forme qu'ils doivent avoir, n'y ayant que ledit MIGON qui puisse donner l'invention d'en faire les poinçons & matrices, & qui sçache la proportion & grandeur que doivent avoir iceux Caracteres; [...] C'est pourquoy ledit MIGON n'a pu avancer l'impression dudit Livre, duquel à cette occasion, NOUS & le public sommes demeurés privés jusqu'à present; à quoy desirant pourvoir, à fin qu'un travail si utile, non seulement pour Nous, mais encore à toute notre Noblesse, & generalement à tous ceux qui portent les armes pour notre service, ne demeure infructueux. (Privilege du Roy 1)

¹³¹ This text reference regards Louis XIII, who died in 1643.

After it had been confirmed that Estienne Migon was indeed “of the Catholic, Apostolic & Roman Religion”¹³² (“Privilege” 2), he was granted exclusive privileges to engrave de Lostelneau’s work in the setting of his choice.¹³³ De Lostelneau’s manual is historically notable not only for the detailed information it provides regarding the text’s complicated path to its final printing, but because it reveals de Lostelneau’s dedicated effort to represent hundreds of individual soldiers by accounting for the position and movement of each separate body, choreographed across symbolic and political spatial geographies. This strategy represents tactical concerns for individual and collective arms handling, but it is also affirms a philosophy of bodily control that circulated in mid 17th-century France, particularly for the nobility. Military historian Brian Sandberg has described this paradigm as the emergence of the “warrior noble” and observes in *Warrior Pursuits: Noble Culture and Civil Conflict in Early Modern France* (2010), “The *salles d’armes* and armies of the religious wars provided warrior nobles with weapons training that emphasized a body mechanics of orchestrated postures, graceful movements, and fluid attacks. [...] Nobles were taught to control their passions and maintain tight discipline over their minds and bodies in their exercise of arms” (171). De Lostelneau’s manual provides textual evidence of the detailed emphasis on disciplining individual

¹³² “après qu’il nous eſt apparu eſtre de la Religion Catholique, Apoſtolique & Romaine” (*Privilege du Roy* 2). For an important discussion of the influence of religious affiliation on the production of French theoretical military tracts, see David Parrott, *Richelieu’s Army: War, Government and Society in France, 1624-1642*, Pages 26-33.

¹³³ The “Privilege” states de Lostelneau, “may print or have printed all ſorts of Battalions and Orders of Battle with the diſcourſe neceſſaire for the explanation of each figure, without the poſſibility for any others, regardless of their quality and condition, to be able to incorporate into printed matter ſaid Battalions and Orders of Battle with printed Characters of the likes of thoſe ſaid Migon has invented” (*Qu’il imprime ou face imprimer toutes fortes de Bataillons & Ordres de Batailles avec le diſcours neceſſaire pour l’explication de chaque figure, ſans qu’autres de quelque qualité & condition qu’ils foient ſe puiſſent ingerer d’imprimer de/dits Bataillons & Ordres de Batailles avec de ſemblables Caracteres que ceux que ledit MIGON a inventé*) (“Privilege” 2).

bodies that occurred within French martial culture, facilitated practically by printing inventions and fueled politically by the desire to claim proprietary military techniques in service of the French sovereign state.

While de Lostelneau's remarks in the "Privilege of the King" reiterate the challenge of, and exclusive privileges for, printing the "Batallions" and "Orders of Battle," he does not mention any unusual challenge to printing the first series of illustrated figures in the "Handling of Arms." This is perhaps because de Lostelneau's treatise, despite his accusations that his work was plagiarized by an unidentified Norman author, replicates precisely the illustrations of arms handling in Dutch artist Jacob de Gheyn II's 1607 publication, *The Exercise of Armes*, including the physical stance, weapon handling positions, and distance from the bounded frame. De Gheyn's manual, translated into French, English, and Danish in 1608 and referenced widely throughout Europe, would have already been in use during the Thirty Years War (1618-1648), and was undoubtedly known to de Lostelneau by 1647.¹³⁴ The first series of images in de Lostelneau's "Handling of Arms" section includes forty-eight, page-height figures of soldiers holding the pike and musket in sequenced stances for instruction. The figures have been changed into French costume, but are otherwise identical to the ones published in de Gheyn's work, which includes more than one hundred drawings for training with the caliver, musket, and pike. Military historian Bas Kist, in his introduction to *The Exercise of Armes: All 117 Engravings from the Classic 17th-Century Military Manual*,

¹³⁴ David Parrott notes in *Richelieu's Army: War, Government and Society in France, 1624-1642* that de Gheyn was "competently plagiarized by de Lostelneau in the first part of his *Maréchal de bataille*" (38) and Frank Tallett, without mention of the explicit plagiarism, designates de Lostelneau's text as a "more comprehensive" technical manual amidst the "steady outpouring" of drill manuals in *War and Society in Early Modern Europe, 1495-1715* (40).

suggests that de Gheyn's manual was commissioned by John II of Nassau in the late 16th century, for which de Gheyn received a copper engraving patent in 1606 from the Dutch States-General to produce his work, and was then plagiarized by Wilhelm Hoffman in 1609, Johann Jacobi von Wallhausen in 1621,¹³⁵ and Jacques Callot in 1635, circulating throughout Europe with only slightly amended images (Kist vii-viii).

To clarify the resemblance of the instructional images in the two manuals, Figures 2-4 include images from de Lostelneau's manual for handling the pike in the top row, juxtaposed in the bottom row with pike manipulation for the same instruction found in de Gheyn's manual (Figures 5-7). These include: "Ordering" the pike (wherein the pike is placed on the ground in a starting position), "Porting" or "Presenting" the pike (wherein the pike is held horizontally at chest height to resist attack), and "Charging" the pike (wherein the pike is lowered and a sword drawn in defense of cavalry). In addition, both manuals should be compared to the nearly identical images for pike handling found in Johann Jacobi von Wallhausen's manual, *Kriegskunst zu Fusz*, translated into French as *Art Militaire pour l'infanterie* in 1615 (Figure 8). Wallhausen occupied a prominent position as a widely published and cited European theoretical tactician. He was acquainted with French military theorist, Jean de Billon, and translated the French theorist's canonical publication, *Instructions militaires* (1617) into German. In Wallhausen's manual, the images are printed in a series, as if in an animated sequence, suggesting active movement and coordination between positions.

¹³⁵ Kist states that Wallhausen's military text, *Defensio Patriae oder Landrettung*, published in 1621 contains images copied directly from de Gheyn, and that *Kriegskunst zu Fusz*, published in 1615, contains images that differed slightly. However, the images in *Kriegskunst* do bear resemblance to de Gheyn, although the figures appear in series with slightly different costume and posture.



Figure 2. Image of a French soldier standing (or "Ordering") the pike on the ground. Series of 13 images. (de Lostelneau, *Le Mareschal de Bataille*, 1647, Page 77)



Figure 3. Image of a French soldier presenting (or "Porting") the pike in a forward position. (de Lostelneau, *Le Mareschal de Bataille*, 1647, Page 79)



Figure 4. Image of a French soldier drawing a sword (or "Charging") with a pike in defense of cavalry. (de Lostelneau, *Le Mareschal de Bataille*, 1647, Page 99)



Figure 5. Comparison of a Dutch soldier "Ordering" a pike on the ground. Series of 32 images. (de Gheyn, *The Exercise of Armes*, 1607, Image 1)



Figure 6. Comparison of a Dutch soldier "Porting" a pike. (de Gheyn, *The Exercise of Armes*, 1607, Image 14)



Figure 7. Comparison of a Dutch soldier drawing a sword and "Charging" with a pike. (de Gheyn, *The Exercise of Armes*, 1607, Image 25)



Figure 8: Series of German soldier handling pike. (Wallhausen, *Art Militaire pour l'infanterie*, 1615, Page 24)

The three image sets bear important resemblances, including similar physical stances and implied motion between postures. The images of de Gheyn and de Lostelneau show only slight differences beyond costume. Both illustration sets depict the soldier facing forward in a stance of identical width with turned out feet, the right foot the same distance from the pike, and copied arm carriage. In Figures 2 and 5, wherein both figures stand with an “Ordered” pike in the neutral, starting position returned to throughout the handling sequence, even the fingers of the figures are identical, with both thumbs raised along the waist or on the pike. De Gheyn’s instructions, located below the illustrations in the manual,¹³⁶ clarify slight variations that are permitted to posture and position. He notes, for example, that the right foot need not always be ahead, as illustrated.

In the using of the Pike is first shewed unto the Souldier how he (standing still) shall hold the Pike before him, governe it against the thumbe, and take it up in three tymes. That is to saye: he shall not (for comelynes) set it within or without the right foote, but iust before him in the same line: well understanding that he is not bound to set the right foote always before. His arme he shall hold not stretcht out butt a little bended and his hand about the height of his eyes. (de Gheyn 93)

In this first instruction, de Gheyn emphasizes the physical “still” position of the pike. This position is necessary so that a pikeman may “Advance” his pike in three motions to end holding it close to his right side for action—first, crossing his left hand across the body to grip the pike in the center; second, gripping the pike at the bottom to hoist it aloft, and third, drawing it in to the side of the body. In de Gheyn’s series of thirty-two

¹³⁶ An original copy of De Gheyn’s 1608 manuscript may be found at Bibliothèque nationale de France (BnF) Catalogue Call Number: “FOL-S-1754” or at BnF Gallica, titled, *Maniement d’armes d’arquebuses, mousquetz, et piques. Representé par figures, par Jaques de Gheijn*. <<http://gallica.bnf.fr/ark:/12148/btv1b8626571r.r=de+gheyn.langEN>>

pike instructions, the Ordering instruction is repeated three times as a “pass through” or “return” position, thus the timing and detail of its execution are critical.

In comparison, de Lostelneau’s instructions for Ordering the pike are nearly identical, with slightly less information regarding hand placement:

In order to train the pikemen in the handling of their weapons, and in the use of them in all the movements and necessary presentations for war, it is necessary to begin to teach them the posture they must take as it is represented in this figure where they hold the pike on the ground. In order to execute that pose well, the soldier must hold the pike with his right hand and must have his hand to the right of his eye. He must hold the pike straight and the heel of the pike must be placed next to the front of his right foot. The pike must always be held with the right hand for most of the commands.

Pour dresser les Piquiers au maniment de leurs Armes, & s’en ferir pour tous les mouvements & presentations necessaires pour la guerre, il faut commencer à leur enseigner comme ils se doivent camper, ainsi qu’il est representé par cette figure, qui tient la pique en terre. Ce que pour bien executer, le Soldat tenant la pique en terre avec la main droite, doit avoir sa main au droict de l’oeil; que la pique soit eslevée droictement; & que le talon d’icelle soit à costé de la pointe du pied droict. La pique doit toujours estre portée avecque la main droite, en la plus-part des commandements. (de Lostelneau 76)

De Lostelneau’s instruction emphasizes that appropriate posture and coordinated movements are vital to successful warfare. This theme is repeated throughout his manual, affirming how the embodiment of war in relationship to organizational tactics and strategy became increasingly observed in 17th-century military training manuals.

Figures 3 and 6 for “Porting” or “Presenting” the pike provide the most obvious, visual difference in posture in the series. In de Lostelneau’s illustration the pike is raised to mid-chest with the left hand lightly resting in a closed position over the pike shaft, while in de Gheyn’s illustration it is at chin level with an open hand. De Lostelneau describes Presenting the pike as follows:

In order to present the pike, one must hold the left hand one arm’s length under the right one and at the same time put the right foot one step behind the left one. Take the heel of the pike with the right hand; then lower the pike so that the iron of it is at the height of the man’s waist, or at the breast of a horse; bend the left knee deeply, turn

your toes outwards and lean the pike on the left elbow. In this posture, the soldier will be strong enough to resist any attack. If there is a command given, having the pike presented, it is necessary that the Soldiers take off from the left foot, and march resolutely holding their pikes firmly, without lengthening any thrust.

Pour présenter la pique, il faut porter la main gauche un brassée au dessous de la droite, & lâcher en même temps le pied droit un pas derrière le gauche; prendre le talon de la pique avec la main droite; puis baisser la pique tant que le fer d'icelle soit à la hauteur de la ceinture d'un homme, ou du poitrail d'un cheval; plier fort le genouil gauche; tourner la pointe des pieds en dehors; & appuyer la pique sur le coude gauche. En cette posture le Soldat fera ferme pour résister à ce qui pourroit le choquer. Si l'on fait commandement de donner, ayant la pique présentée, il faut que les Soldats partent du pied gauche, & marchent résolument, portant leurs piques fermes, sans allonger aucune avancée. (de Lostelneau 78)

As opposed to the first static posture, De Lostelneau describes here a movement sequence, albeit for one image. De Lostelneau's narration of the pike in motion is represented visually in Wallhausen's series wherein the figures, as if prepared for animation in a flipbook, represent transitional positions (Figure 8). Wallhausen describes the series as one wherein each transition involves steps to return to neutral that: "must be carried out three times" (63), while de Gheyn writes for the instruction, "He (at the third tyme) shall duely charge the Pike, the right arme stretcht out, having the same well in the right hand, setting the left elbowe fast against the hippe, and shall be taught how he shall set down the Pike againe at three tymes or motions" (de Gheyn 93). De Lostelneau's instruction is more detailed for the footing placement, transfer of weight, and transitioning, but all three descriptions reveal a shared challenge of instructing movement in dance and the military arts—how to convey motion without diagram, symbolic notation, or rhythm for execution. *Sieur de Praissac's* French instructional manual *Discours militaires* (1614) published thirty years prior to de Lostelneau, also models figures for pike handling (Figure 9) that replicate de Gheyn's manual (1607). And de Praissac's evolutions for ranks within a battalion (Figure 10) are of note as they

combine figures common to early-17th century manuals with symbolic, dotted movement trajectories. These bear resemblance to de Lostelneau’s symbolic evolutions for maneuvering soldiers, although de Lostelneau has entirely replaced the figures with their symbolic representations by mid-century (Figures 9-10).



Figure 9. *Sieur de Praissac, Pike handling of arms, Discours militaires, 1614, Page 5*

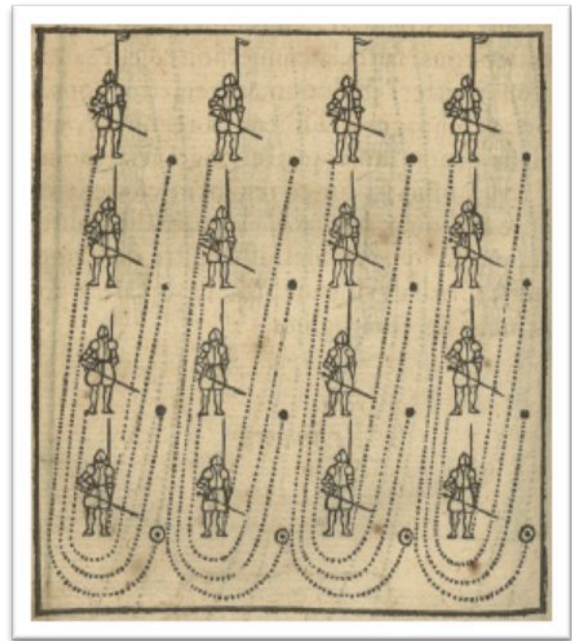


Figure 10. *Sieur de Praissac, Evolution for ranks in a Battalion, Discours militaires, 1614, Page 186*

The instructional manuals of prominent French military theorists that David Parrott refers to as “the leading writers of military theory in the early seventeenth century” (28)—including Louis de Montgomery (*La Milice Française*; 1610), Jean de Billon (*Les Principes de L’art Militaire*, 1612; *Instructions Militaires*, 1617), *Sieur de Praissac* (*Discours Militaires*, 1614), Henri duc de Rohan (*Le Parfaict capitaine*, 1636), and Colbert de Lostelneau (*Le Mareschal de Bataille*, 1647)—all make various use of both figurative and symbolic illustration with annotation to represent the weaponized force of bodies in

motion. These authorial decisions to include full-size figures that appear animated when viewed in series, or to use symbolic representations of hundreds of massed bodies aligned and choreographed in space as individual figures, dots, and dashes, are neither self-evident nor inherently necessary: they signify consideration for the embodiment of force as manifested through representations of martial bodies. In a French study of visual representations of French military bodies and soldiers, *Le Militaire en Représentations: XVIII siècle-XXI siècle* (2009), military historian François Lagrange of the *Musée de L'Armée* describes the significance of the soldiering body as a “site of technique” to effect lethal force. He proposes, “The silhouette of the French soldier, his dress, his armaments, his recruitment, continually modified the warring body across the ages. The French military, without exception, designated the male body (soldier or officer) as the site of technique to make war” (9-10, translation mine). Lagrange’s edited volume surveys the “image production” of French soldiers from the 14th to 21st centuries and suggests that drawings, illustrations, diagrams, ordinances governing appearance, and training manuals all worked to produce a French soldiering body that was continually adapted to represent extant movement techniques and tactics of war even when not physically in motion. The emphasis in LaGrange’s text is on a survey of image production by the French armed forces, and he does not provide extensive discussion of differences of social position, geographic origin, occupation, ethnicity, and types of contracted service that would have differentially produced ideas and ideals of varied French “bodies.”

In the “Handling of Arms” section of de Lostelneau’s work, and throughout de Gheyn’s short treatise, both authors address the dilemma of diagramming movement via identical strategies—sequenced illustrations with written exposition. Indeed, Sydney Anglo argues that this methodology was the default for combat instruction throughout history and affirms its notable appearance in 17th-century manuals. Anglo asserts:

The earliest attempts at a systematic depiction of sequences of individual movements are associated with various types of personal physical combat; and from the beginning, these were more didactic than commemorative; and, as might be expected, pictorial (or pictorial and verbal), rather than diagrammatic or symbolic. It was only possible, therefore, to indicate movement by multiplying the images of figures in series of related postures in much the same way as in seventeenth-century drill manuals. [...] It is a fact that, throughout the long history of didactic combat illustration, this representational approach, despite its obvious limitations, has always predominated. (Anglo 44)

Anglo distinguishes among four distinct types of movement representation: written, pictorial, diagrammatic (for example, diagrammed footwork for fencing or dance on a two-dimensional plane), and symbolic (for example, geometric representations of the body in motion). French movement manuals from the 17th and early 18th centuries variously combine these notations: De Lostelneau’s *Le Mareschal de Bataille* utilizes all four types in his treatise; de Lauze’s *Apologie de la Danse* relies on written instruction alone; de Lauze’s predecessor, Thoinot Arbeau, combines written, pictorial, and symbolic (in the form of short musical scores) notation in *Orchésographie* (1588); Raoul Auger Feuillet’s *Chorégraphie* (1700) introduces a detailed diagrammatic and symbolic system, now referred to as Beauchamps-Feuillet, to denote movement combinations and directional facings; and Pierre Rameau’s *Le Maître à Danser* (1725) includes written and figural representations while his second text, *Abbrégé de la Nouvelle Methode* (c.1725),

includes a modified use of Beauchamps-Feuillet notation to describe Baroque choreographies.

In comparison to the three military authors, de Lostelneau, de Gheyn, and Wallhausen, de Lauze exclusively narrates movement sequences in his instructional manual. The simplest motion that de Lauze endeavors to describe is a formal bow. Following the removal of one's hat, de Lauze remarks, "And when his discretion makes him judge the moment to make his bow, without bending his knees, he gently slides the right leg in front until it nearly touches the left. Then, without stopping thereupon, except but a little, in gently bending both knees, the toes well turned out, he will disengage the left, as it were, insensibly, and will thus continue until he has joined those to whom he is indebted"¹³⁷ (de Lauze 87). De Lauze's description is somewhat teleological—if one did not already know how to perform a bow, it is unlikely that following this prose alone would gracefully accomplish the job. De Lauze continues, "Then if he finds, as is usual, several assemblies in the same place, he will make these same bows, on one foot or the other, according as to how the people are placed, always without any gesture or posture of the body; because in this the direction of the eyes is sufficient"¹³⁸ (87). Here, de Lauze's instructions refer to one's relationship to the audience or recipient of the bow, presuming knowledge of an unstated etiquette regarding how "people are placed" as one enters a room. Interestingly, de Lauze notes

¹³⁷ "& lors que sa discretion luy fera iuger le temps de faire la reuerance, sans plier les genoux, qu'il coule doucement la iambe droite deuant iusque à ce qu'elle touché quasi la gauche, & sans s'arrester que bien peu la dessus, la pointe des pieds fort ouuertes en pliant doucement l'une & l'autre, il desgagera comme insensiblement la gauche, & continuera ainsi iusqu'à ce qu'il ait ioint ceux qui l'y obligent" (de Lauze 86).

¹³⁸ "que s'il se trouuoit, comme il est ordinaire, plusieurs companies en vn mesme lieu, il fera ces mesmes reuerences sur l'ven & sur l'autre pied, selon que les personnes seront places, toutesfois sans aucun geste out posture du corps: car en cela la seule conduit de la veue est suffisante" (de Lauze 86).

that no “gesture or posture of the body” should occur and that the “direction of the eyes” alone is sufficient to convey deference or appropriate esteem. The significance of the gaze, rarely mentioned in military treatises, is one of the distinguishing features between the two types of movement manuals.

De Lauze’s next advice for the general instruction of the *Courante* continues to narrate without illustration or diagram, suggesting that circulating knowledge of the dance among his intended audience may have aided in recreating the movements. De Lauze instructs:

And having placed him as is required to begin a *Courante*, one must make him carry his leg in front and behind, sometimes in a straight line, and sometimes over and under the leg which is on the ground, to make him learn the connections. Hence, all the movements proceeding from the hip, the toe of the foot which will be in the air, as well as on the ground, will be well turned out, and inasmuch as this will enable him to acquire insensibly the ease of crossing well in the *capriole* and the *entrechat*, if he has a good figure for dancing he must be made to practice this lesson frequently.¹³⁹ (87-89)

The initial position in which the trainee should be placed as “required to begin,” the equivalent of the Ordered position in pike instruction, is somewhat opaque to a reader from this description alone. Nor is it quite certain what carrying “his leg in front and behind, sometimes in a straight line, and sometimes over and under the leg which is on the ground” precisely models. Some of the challenges that de Lauze, in particular, presents for a reader result from his effusive style of writing rather than the impossibility of accurately describing form and sequence. However, parsing the intertextual differences between dance and military instructional manuals reveals not

¹³⁹ “& l’ayant fait placer comme il est requis d’estre pour commencer vne courante, faut luy faire porter la iambe en auât & en arriere, tantost en droicte ligne, & quelque fois dessus & dessous la iambe qui sera à terre, pour luy apprendre les liaisons, le tout sans mettre à terre que pour se soulager ou pour changer de iambe, afin de faire de mesme de l’autre, dont tous les mouuemens precedent de la hanche, la pointe tant du pied qui sera en l’aire que de celuy qui sera à terre fort ouuertes, & par ce que cela luy acquerra insensiblement la facilité de bein passer la capriolle, & l’entrechart, s’il a le corps dispose à la danse par haut, il luy faut souuent faire exercer cest leçon” (de Lauze 88).

only different authorial strategies, but distinctive disciplinary pressures and apertures. The failure to replicate precise, codified movement within a military battalion might result in death, whereas slight variances in the execution of dance steps allowed for a display of individual artistry and improvisation that could be politically deployed. Art historian Sarah R. Cohen examines the “artful body” of Louis XIV and his court in *Art, Dance, and the Body in French Culture of the Ancien Régime* (2000) and argues, “Central to my study was the art of aristocratic dance, whose varied use in court and Parisian society literally embodied the diverse exploration of aristocratic identity in this era” (5). Cohen’s remarks suggest that dance not only conveyed physical competency, but contributed to the embodiment of individual identity. Anglo similarly remarks on the function of dance to convey individual interpretation when he compares dance and swordsmanship to military drill: “Drilling of the kind recorded by de Gheyn is a completely closed activity, whereas many dances and all serious sword fights are open activities with no fixed conclusion and with multifarious, interrelated sequences of movement, susceptible to immense and ceaseless permutation” (42). In Anglo’s terminology, dance and sword fighting, even when not explicitly improvisational, represent forms of “open” movement that allow for interpretation once the basic steps or sequences have been mastered. And yet while drill practice appears closed, drill as executed in real-time also acquires an open quality since soldiers must react on a chaotic battlefield and be sufficiently skilled to draw on embodied knowledge to address improvisational, lethal situations while yet maintaining structure and formation. Van Orden addresses the potential for responsive, improvisational “choreography” in 17th

century drill and suggests that once acquired in practice, drum cadence provided the guidance on the battlefield for spontaneous variations:

Gheyn's pike drill is of particular interest because it was not a static choreography in the manner of the gun drills but a vocabulary of motions keyed to command words that could be employed in any sequence. Gheyn recommends that once conscripts know the routine, the captains practice giving the commands in a variety of orders, "according to what occasion requires." The drill, then, rehearsed a basic vocabulary for battle, to be executed on the move to the cadence of field drums. (207)

Van Orden's interpretation of the choreographic potential of pike drill offers an alternative to Anglo's observation, imbuing drill with fluidly changing movement properties. In addition, as suggested in this chapter, the potential of the martial body to convey and choreograph power through movement has been undertheorized.¹⁴⁰

The third and final set of comparative pike images from de Lostelneau and de Gheyn to review is "Charging" with the pike against cavalry (Figures 4 and 7). The two images, save for costume, are entirely identical, including the facsimile placement of the left thumb, slightly elevated index finger, and curving grip of the last three fingers on the pike shaft, as well as the inward bend of the right thumb and slightly lifted pinky finger on the sword handle. Even the shadows of the figures' lower bodies are identical. Yet the narrative description is again more detailed in de Lostelneau's text:

In order to place the pike in defense against the cavalry, one has to lean the heel of the pike against the right foot; advance the left foot a large step forward; take the pike with the left hand approximately at the counterweight; bend the front knee deeply; lower the iron of the pike to the height of the breast of the horse and place the sword in your hand over your left arm. It is in this position that we can best resist the cavalry.

¹⁴⁰ The genre of literature on Early Modern chivalry within military history provides insight into the function of events that included martial themes or influences, including arms handling displays, tournaments, royal entries, processions, and pageants. However these investigations tend to focus on military strategies, etiquette manuals, and contemporary conceits of the "noblesse" and "chevalier" rather than the moving politics of choreographed bodies. For chivalry see: Malcolm Vale. *War and Chivalry: Warfare and Aristocratic Culture in England, France, and Burgandy at the end of the Middle Ages*. London: Duckworth, 1981.; Richard W. Kaeuper and Elspeth Kennedy. *The Book of Chivalry of Geoffroi de Charny: Text, Context, and Translation*. Philadelphia: U of Penn Press, 1996; Maurice Keen. *Chivalry*. New Haven: Yale UP, 2005.

Pour mettre la pique en defenſe contre la Cavallerie, il faut appuyer le talon de la pique contre le pied droit; avancer le pied gauche un grand pas en avant; prendre la pique de la main gauche environ au contrepoids; plier fort le genoüil de devant; baiſſer le fer de la pique à la hauteur du poitral d'un cheval, & mettre l'eſpée à la main par deſſus le bras gauche. C'eſt en ceſte poſture qu'on peut mieux reſiſter à la Cavallerie. (de Loſtelneau 98)

While de Loſtelneau narrates each sequential motion of Charging, de Gheyn only briefly informs the reader, “In the 25. [figure] how he (expecting horſemen) ſhall ſet the Pike againſt the right foote and draw his ſword over the left arme, like as this figure ſheweth” (de Gheyn 94). De Gheyn, affirming the value of kinetic knowledge transfer through bodily representation—what the “figure ſheweth”—expects the illustration of the body alone to convey the ſomewhat complex maneuver.

De Loſtelneau’s choice to use illustration with exposition throughout his work leads to the questions of ubiquity and usage: what training or notation manuals might he have reviewed prior to his own endeavor, and how were these notation systems incorporated or amended to evidence French cultural or military ſuperiority? Certainly, his acquisition of de Gheyn’s figures, published forty years prior in 1607, affirms that he used this manual and, ſignificantly, that these illustrations were ſtill tactically relevant, and his reference in the notice to one “particular Norman Author” ſuggests he had ſeen replications of ſymbolic or matrix arrangements from another author that were ſufficiently ſimilar to his own to provoke his ire in print.¹⁴¹ Yet archival gaps in records of 17th-century military instruction, as in dance, make it challenging to trace the materials authors may have referenced towards the production of codified, movement systems. Dance ſcholar Ann Hutchinson Guest comments on this historiographic

¹⁴¹ No mention is made in widely cited modern ſcholarship on 17th-century French military manuals of a ſimilar, archival edition or ſurviving manuſcript that is as aethetically elaborate as de Loſtelneau’s rare tract.

problem of tracking movement notation in *Choreo-Graphics: A Comparison of Dance Notation Systems from the Fifteenth Century to the Present*, wherein she presents thirteen historical and extant systems for notating dance movement. She observes, “The extent to which inventors of notation systems have, or have not themselves studied other systems is usually evident from the introductions to their books. In some, no mention is made of the evidence of any other system; in others, statements about other systems reveal gaps in comprehension on the part of the writer” (xv). De Lauze was certainly aware of Thoinot Arbeau’s *Orchésographie* (1588). In fact, in his own 1623 preface de Lauze declares he will leave a more precise historiography of select national dances to his French countryman, Arbeau, and suggests of *Orchésographie* “There the curious will find something worthy of their interest, whither I will let them resort in order to proceed where my purpose summons me”¹⁴² (de Lauze 57). The question of explicit or theoretical borrowing is significant because it suggests how the intertextuality of philosophies of the moving body may have been shared across disciplines. One proposition of this chapter is that 17th-century practitioners of dance and military arts, working in two fields prominently grappling with notating choreographed sequences for the body, shared similar dilemmas and solutions to addressing gestural, linear, and geospatial movement, coordinated in time. Where it is available, evidence suggests that not only did military and dance authors refer to and borrow from their colleagues, for example de Lostelneau from de Gheyn and de Lauze from Arbeau, but that there was potentially cross-pollination of images and ideologies of the body that resulted from

¹⁴² “Si quelqu’un en desire sçavoir davantage Arbeau m’a promis de se servir de son Orchesographie pour me solager de ceste peine là les curieux trouueront quelque chose digne de leur anuie où ie les lairay aller pour venir où mon dessein m’appelle” (de Lauze 56).

their shared dilemmas as embodied arts, and the inevitable influence of circulating philosophies of the body and movement that pressed upon both fields at the time. Military historian Frank Tallet argues in *War and Society in Early Modern Europe, 1495-1715* that ancient Greek theoretical military manuals were referenced in the 17th century, particularly by Dutch reformists such as de Gheyn whose treatise relied heavily on the commands and countermarch formations found in Aelian's *Taktike Theoria* (AD106) (Tallet 26). *Taktike Theoria* is also cited by dancing master Thoinot Arbeau in *Orchésographie* in his own remarks on military drill: "If you wish to know about evolution [military maneuvers] consult the book that Aelian dedicated to the Emperor Hadrian" (Evans 37). In *The Martial Arts of Renaissance Europe*, Sydney Anglo traces the pictorial similarities between Thoinot Arbeau's *Orchésographie* (1588) and Henry de Saint Didier's fencing manual, *Traicté contenant les secrets du premier livre de l'espée seule* (1573), arguing that Arbeau was likely influenced in both his diagrams and exposition by Didier's text, and that Arbeau could have assumed his dance students' knowledge of fencing, thus freeing Arbeau to focus on musicality for particular steps rather than position and posture. Anglo addresses the idea of shared and borrowed knowledge in Arbeau's text:

Especially revealing is Arbeau's application of his pedagogical technique to the Pyrrhic, or sword dance which he illustrates with a group of six woodcuts depicting the 'Feincte', 'Estocade', 'Taille haute', 'Revers haut', "Taille basse" and 'Revers bas', which are worth comparing, for style and content, with the cuts in Saint Didier's fencing treatise which antedates the *Orchésographie* by fifteen years. 'Besides these', Arbeau continues, 'there are several other body movements but it seems to me it will suffice for you to have them in writing without necessitating pictures.' His pupil replies that fencing has already acquainted him with all these gestures and, in the accompanying illustration, the requisite movements are geared to their musical expression. (Anglo 44)

While Anglo does not provide the images in his text, they are reproduced below for comparison (Figures 11 and 12). Of some disappointment to dance historians, it is the military manual that provides greater detail, but the two dancing figures look remarkably similar to their fencing counterparts, including the downstage position, weight distribution, and distance of the feet, bent knee posture, and slightly forward-leaning back positions, and rely on similar exposition to describe the posture and implied motion.¹⁴³ In their manuals, Arbeau describes the “Reuers bas” (Figure 11) as a movement “when the dancer strikes his companion cutting upwards from left to right” (Arbeau, *Orchesography* 183), while Saint Didier describes the action (Figure 12) as, “lieutenant will advance the right foot, and with the right hand, he will strike down towards the bend of the knee” (“*aduancera ledit Lieutenant le pied droit, & tirera vn maindroit de bas au iarret*” (Saint Didier 79).



Figure 11. “Reuers bas” (Reverse high cut) gesture in the Pyrrhic dance. Thoinot Arbeau, *Orchésographie* (1589)



Figure 12. “Premier coup, qui est vn maindroit de bas.” Henry de Saint Didier, *Traicté contenant les secrets du premier livre* (1573)

¹⁴³ Of note, while these depictions share visual similarities, they do not necessarily imply similarities in social position, instructional environment, or performative intent.

The shared, visual representations of position and gesture in Arbeau and Saint Didier, and de Lostelneau and de Gheyn, reinvigorate the question of audience, and suggest that their convergences are facilitated because the manuals were directed at individuals likely to be familiar with both art forms. De Lostelneau's treatise specifically states its purpose as a manual for Louis XIV's nobles as well as "simple" men of arms, although these "simple" soldiers would likely have been of a social stature that allowed him the means to acquire, read, and appreciate the complexity of such a tract. Wendy Ayres-Bennett suggests in her socio-historical study of verbal and textual usages of 17th-century French in *Sociolinguistic Variation in Seventeenth-Century France: Methodology and Case Studies* (2004) that literacy rates were not, however, always a direct measure of audience reception because orality and regional differences must be considered as a significant method for transmitting information in 17th-century France: "Orality may indeed be thought of as more important in the seventeenth century than today, given the relatively low literacy rates of the period. [...] Although there are large regional differences and discrepancies between urban and rural communities; for example, as many as 75% of Parisians may have been literate under Louis XIV" (18). It's important to consider that while drill and dance manuals were certainly prescriptive, they do not inherently provide evidence that the theoretical instructions were physically accomplished, in either practice or performance by soldiers and dancers, even when the inscriptions explicitly state the intended audience, and may have been read, orally transmitted, or physically demonstrated. De Lostelneau's stated audience for his manual

is shared with that of de Gheyn's. De Gheyn also intends his treatise to be used by all types of soldiers, including novices:

A worke (without question) very fitt for novices and yonge souldiers to whom it belongeth to exercise themselves with great diligence here in, verye necessarye also to all Captaynes and Comandors the better to looke to the exercising of souldiers, and lastly verie profitable to all Princes and People, be it intyme of warre the better to defend themselves, and offend theyr ennemyes or be it in time of peace with the more facilitye (by this kinde of exercising) to draw a better assurance to themselves, and become the more dreadfull and redoubted to others. (de Gheyn I)

It is plausible to imagine a shared audience, as well as a "shared" (usurped) illustrative method, for the movement series in these manuals. In *The Complete Soldier: Military Books and Military Culture in Early Stuart England, 1603-1645*, historian David Lawrence explicitly examines the role of military manuals, such as de Gheyn's, for English soldiers and suggests they were primarily written by and intended for an audience of gentlemen aspiring to be "complete soldiers" who were encouraged to read manuals from numerous countries to properly learn *l'arte militaire*. Lawrence observes of the English military texts produced between 1603 and 1645:

These books included lengthy treatises on the *arte militaire*, infantry drill manuals, books on personal combat, military histories, and pamphlets on the laws of war, many of which were written with the intention of moulding the "complete" or "perfect" soldier. Most often, the complete soldier was a gentleman, a man of means who could read and write, knew arithmetic and geometry. [...] When English military books could not answer all the questions a soldier might have about the trade, he was encouraged to purchase works by Spanish, Italian, French, and German authors. (1)

Lawrence's analysis locates English manuals within a larger genre of circulating treatises wherein authors borrowed, copied, and amended images and text to create a distinctively "national," authoritative manual, and also affirms the position of the body as a central focus in 17th-century training manuals throughout Europe. Military training manuals, particularly those with images of the body in moving series, represent an acute

emphasis on illustrated instruction, coordinated action, and a vernacular of specific commands that emerged during the period to orchestrate bodies for war. While the martial arts of wrestling and swordsmanship have the longest tradition of figurative illustration, even fencing received renewed, vigorous attention to detailed bodily description, geometry, and sequenced movement in the 17th century. Girard Thibault's manual, *Academie de l'espée*, privileged for print by Louis XIII in 1630, is a breathtaking assemblage of military theory, illustration, and mathematical principal that Sydney Anglo describes as the "The most magnificent of all fencing books" (Anglo 74). Produced specifically for the "reigning European princes who had subscribed to the cost of production and whose expectations demanded satisfaction" (80), Anglo observes that, "the elaboration of Thibault's method for showing the development of each movement went far beyond the scope of any earlier text, just as his geometrical delineation of foot movements is of an unprecedented precision" (78). Anglo's assessment confirms that not only drill, but elaborate training manuals for varied embodied military arts, emerged.

The exceptional attention directed towards inscribing movement in the 17th century was informed by the changing arms, tactics, and expansive engagements of 17th-century European warfare: preparations for war necessarily marked the soldiering body as a site of political preoccupation as the size of state and contracted armies grew remarkably during the Thirty Years War (1618-1648). Historian Frank Tallett summarizes these changes as modifications to arms, linear tactics, and financing driven by competing state interests, respectively. In *War and Society in Early Modern Europe: 1495-1715* (1992) Tallett argues:

Overall, we may posit a ten- or twelvefold increase in aggregate in the numbers of men under arms during the course of the sixteenth and seventeenth centuries. The increase was marked in the first half of the sixteenth century, but reached a plateau around the 1550s. [...] Another round of expansion then took place, connected mainly with the Thirty Years War (1618-1648), which raised numbers to a new peak. Insignificant though these totals may be by twentieth-century standards, the multiplication of troops in the sixteenth and seventeenth centuries was wholly unprecedented, and marked a quantum leap forward in the number of men under arms. [...] Changes in the types of hand weapons employed by soldiers engendered a shift in emphasis in early-modern armies away from the heavily armoured, laboriously trained cavalryman, who could be recruited only from the ranks of the nobility, to the more lightly armoured, easily equipped foot-soldier—the pikeman at first and then the newly proficient handgunner—who could be recruited from any section of society. Moreover, the use of linear tactics, which evolved as the best means of utilizing the fire-power of the handgunners, gave advantages on the battlefield to those armies which could deploy the largest numbers of men. But on their own, these technological explanations for the prodigious increase in the number of men under arms are inadequate. Fundamentally, it was a question of money and inter-state competition. (10)

Tallett's analysis provides tactical ballast to the question of why 17th century military training manuals provide such exacting detail concerning bodily coordination and complex, geometric battalion formations. De Lostelneau's manual was published in 1647 at the end of the Thirty Years War and Dutch Revolt (1568-1648)—during which France was allied to the Dutch Republic first under Louis XIII and Cardinal Richelieu, and later Cardinal Mazarin (1642-1661)—and de Gheyn's manual was published in 1607 at the height of the Dutch Revolt. Both authors, allied at war as armies grew in size and thousands of soldiers required highly orchestrated training, worked diligently to build and clarify a standardized, movement vocabulary and sequential instructions that placed the body at the center of tactical concern. Soldiers became the intelligible site for the transference and presentation of embodied military knowledge. The manuals' images and illustrations are also decidedly performative as they imply that a soldiering "body at war" is a representative body, capable of embodying and performing, in this case for

France and the Dutch Republic, acts of sovereign allegiance through the superior embodiment of force at war. In order to understand how significant embodied military maneuvers were, not only for an individual soldier, but for an entire battalion, it is helpful to bear in mind what the complex movement of a battalion looked like from the perspective of a single pikeman or musketeer. This requires a better understanding of the physical and organizational complexity of embodied maneuvering during 17th-century French warfare. A theory of training the body in both military and dancing arts did not only pertain to individual study, but required complexly organized “corps” of bodies.

1.3—Military Evolutions-Collaborative Linear Maneuvering

De Lostelneau’s manual proceeds from individual training to basic group *Evolutions* (linear maneuvers) for soldiers. Evolutions enabled 17th-century militaries to perform what could, on another stage, be described as group choreography to coordinate movement, firing, retreat, and communication within larger battalions composed of infantry, cavalry, and supplies. From a 21st-century vantage, it may be difficult to imagine the orchestration of maneuvering armies of thousands of individual bodies, entirely on foot or horseback, and the embodied precision that this required.

De Lostelneau’s description provides an initial impression of this geometric complexity:

After training the soldiers in the handling of their arms, it is necessary to show them the EVOLUTIONS, the need of which we have in several acts of war, to double the ranks, half-ranks, quarter ranks: files, half-files, quarter files: conversions, and countermarches, by files and by ranks; all the useful motions, in order to form battalions against the cavalry and against the infantry, or to win or leave land, according to the necessity and the advantages that one may lose. In what follows, you will find a few movements that are not absolutely necessary, it suffices to say, to explain why I put them here, that outside of the pleasure there is in seeing them in practice, they serve the purpose of making the soldiers more skilled, which is not a small advantage. Yet the strongest

consideration for me to keep them in this book is the practical use of these that I have seen made of them by the greatest King¹⁴⁴ of the world from whom I had the honor to have learned the little that I know today.

After the handling of the weapons, and before starting the Evolutions, one has to put the battalion how it was at the origin, the Pikemen in the middle and the Musketeers on both flanks, which will be done easily after having all the soldiers take their arms, with this command. TO ARMS, EVERYBODY. The soldiers having taken their arms, silence must be commanded, because if it is not observed, the commands would not be heard and all would be in disorder; it is also necessary to make sure that no person leaves the ranks nor the files, nor turns his head to any side, nor does anything that would be disgraceful.

Après avoir dressé les Soldats au maniment de leurs armes, il est nécessaire de leur montrer les EVOLUTIONS, pour le besoin qu'on en peut avoir en plusieurs actions de guerre, soit à doubler les rangs, demy-rangs, quarts de rangs: files, demy-files, quarts de files: conversions, & contremarches, par files, & par rangs; toutes motions utiles, tant à former les bataillons contre la cavallerie & contre l'infanterie, qu'à gagner, ou quitter un terrain, selon la nécessité, & les avantages qu'on en peut prendre. Et parce que dans la fuite il se trouvera quelques mouvemens qui ne sont pas absolument nécessaires, il me suffit pour justifier la raison pourquoy je les ay mis en ce lieu, de dire qu'outre le plaisir qu'il y a de les voir practiquer, ils servent encore à rendre les Soldats plus adroits, ce qui n'est pas un petit avantage; mais la plus forte considération qui m'a obligé de ne les laisser point en arriere, est la pratique que j'en ay veu faire au plus grand Roy du monde, duquel l'ay eu l'honneur d'apprendre le peu que je çay dans ce mestier.

Après avoir fait le maniment des armes, il faut avant que de commencer les Evolutions, remettre le bataillon en son premier estat, les Piquiers au milieu, & les Mousquetaires sur les deux flancs, ce qui se fera commodement après avoir fait prendre les armes à tous les Soldats, par ce commandement. A VOS ARMES, TOVT LE MONDE. Les Soldats ayans pris leurs armes, il faut commander le silence, lequel n'estant point observé, les commandements ne feroient pas ouïs, & tout iroit en desordre; il faut aussi empêcher que personne ne quitte son rang, ny sa file, ny ne tourne la teste deçà our delà, n'y ayant rien qui soit de plus mauvaise grace. (de Lostelneau 107)

De Lostelneau begins with specific instructions for individual soldiers who work collaboratively as linear ensembles in rank and file formation. The directions in the Evolutions are prerequisites to perform the increasingly complex arrangements for battalions, the most important “corps” unit of military warfare in the 17th century wherein linear forms are reshaped into complex geometrical patterns. The instructions in this section are still directed towards individual soldiers, but de Lostelneau now

¹⁴⁴ De Lostelneau refers here to King Louis XIII under whom he served, who died in 1643 four years prior to publication of *Le Mareschal de Bataille*.

advises soldiers how to work in unison, modeling the movements that will be replicated by hundreds of infantry with coordinated rhythm and execution. De Lostelneau's first set of instructions provides movement for uniform action that will be used in all subsequent evolutions. De Lostelneau describes the directional commands as follows:

TO THE RIGHT. Ordinarily we repeat this command four times, at the end of the last command the front side is where it was at the beginning. To make a right turn, it is necessary to turn only on the left foot, and to move the right foot firmly to the side; The Pikemen have to place their hand on the pike and put it on the ground at the same time as their right foot.

TO THE LEFT. Same steps as above for the foot and the hand to turn left.

HALF TURN TO THE RIGHT. The instructions to make a half turn are to stand back on one's feet, either presenting the arms or otherwise as is written in the treatise for Handling arms.

HALF TURN TO THE LEFT. What needs to be done to operate a half turn to the left is to stand back on one foot as is perfectly shown in the said treatise for Handling arms. The Battalion being placed at its first front, we have to command the muskets to be placed back on the shoulder if they were presented and the pikes on the ground the way it is written in the treatise.

A DROICT. L'on fait d'ordinaire quatre fois ce commandement, à fin qu'à la dernière, le front se trouve où il estoit au commencement. Pour faire à droit, il ne faut que tourner sur le pied gauche, & porter le pied droit gravement à costé; The Pikemen doivent porter la main & la pique, en la posant à terre, en meſme temps que le pied droit.

A GAVCHE. Pour faire à gauche, il faut observer la meſme chose que deſſus, pour les temps due pied & de la main.

DEMY TOVR A DROICT. L'inſtruction pour faire demy tour à droict, & pour se remettre, soit en preſentant les armes, ou autrement, est eſcrite au traicté du Maniment des armes.

DEMY TOVR A GAVCHE. Ce qu'il faut faire, pour faire demy tour à gauche, & pour se remettre, est pareillement monſtré au dit traicté du Maniment des armes. Le Bataillon estant remis à son premier front, il faut faire mettre les mousquets sur l'eſpaulé, si l'on les a preſentéz, & les piques en terre, en la forte qu'il est eſcrit au traicté fuſdit. (de Lostelneau 109)

These basic directional commands presume that individual soldiers have sufficiently acquired the proper techniques in "Handling of Arms" and are thus prepared to work collaboratively. The significance of the left and right half turns should not be underestimated. In addition to maneuvering, attrition, injury, and fatigue during

extended siege and battle made the coordination of changing lines imperative. These basic steps, which emphasize the pivot of the foot, the quality of a “firm” weight shift, and coordinated foot and arm gestures, are required to execute nearly all of the “Evolutions” that de Lostelneau describes.

In the symbolic illustration de Lostelneau provides for the first maneuver to “Double Your Ranks to the Right” (Figure 13), the bottom set of parallel dots represents eight ranks, or rows, of soldiers in horizontal alignment, and thirty-two files, or columns, of soldiers in vertical alignment. Each of the sixteen black dots in one row represents one body of an individual pikeman, while each of the sixteen red dots, divided on the outer flanks, represents one individual musketeer. One of the most basic and widely utilized military formations of the early 17th century was to place musketeers on the outer files and pikemen on the interior, as de Lostelneau advises and all of his images depict. The bottom depiction is the starting (and when required, return) position in all of the paired sets of images, while the top represents the desired formation. In Figure 13, the soldiers have doubled their ranks “on the right,” in this case expanding the horizontal line (rank) to sixty-four soldiers wide by four soldiers deep (file) by marching into place maneuvering pikes and muskets. In the top depiction, the individual dots are doubled precisely to sixty-four from a rank of thirty-two; this is evidenced at a glance by the compressed spacing, and the short, angled lines from lower left to upper right below every other dot that represent the physical movement of each soldier marching into place immediately to the right of the man in front of him.

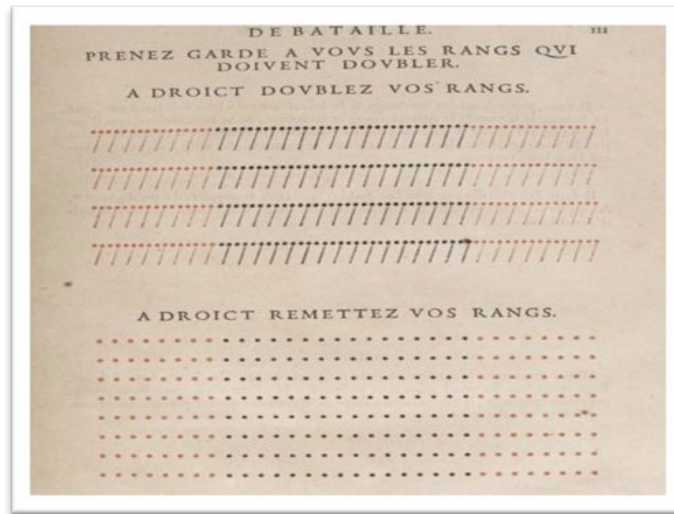


Figure 13. “Double Your Ranks to the Right.” De Lostelneau’s paired depictions of the starting (bottom) and desired (top) formations, composed of individual musketeers (red dots) and pikemen (black dots) marching into place to the right of the men in front of them (|||).

De Lostelneau provides careful instruction, including the starting foot and individual spacing, for the general manner in which ranks must be doubled so that every other row remains in place while the alternating rows maneuver in between. He insists:

It is necessary, to double the ranks, if the battalion has eight ranks, that it is the second, fourth, sixth and eighth which double, and if they were at six or ten ranks, it would be necessary to make them double in the same order, leaving always the first one and also one rank out of two on the field. It is necessary that the soldiers always start with the left foot and that they place themselves in the middle of the distance between the soldier ranks which are doubling. In order to re-form the ranks, when starting make a half turn to the right. March starting with the left foot up until the place where you started, and once arrived, make another half turn to the right to be back in place.

Il faut, pour doubler les rangs, si le bataillon est à huit de hauteur, que ce soient le second, le quatriesme, le sixiesme, & le huitiesme, qui doublent; & s’il estoit à six, ou à dix de hauteur, il faudroit les faire doubler par le mesme ordre, laissant toujours le premier, & ainsi l’un entre l’autre, sur leur terrain. Il faut faire observer que les Soldats partent toujours du pied gauche, & qu’ils se placent dans le milieu des distances des rangs, dans lesquels il doublent. Pour remettre les rangs, il faut en partant faire le demy-tour à droit. Puis marcher du pied gauche, jusques à la place d’où on estoit party, où estans arrivez, il faut encore faire demy-tour à droict pour estre remis. (de Lostelneau 110)

In visualizing this maneuver, the simplest evolution that de Lostelneau describes, one may already discern the collaborative complexity that was required of soldiers as they

marched miles across hostile territory while loading and firing arms within physically intricate battalion arrangements. The rank doubling formation, like many others, may also be reversed *en arriere* (backwards) and *à gauche* (to the left) with the same starting position (Figure 14). In this case, the angled lines, from top right to lower left, represent the soldier marching to join the rank behind him, taking up a position to the left of the stationary soldier. The reversal reveals another way in which military marshals confronted similar concerns for inscribing spatial patterns as dance masters—how to demarcate bodies moving in partnership or ensemble along linear trajectories.

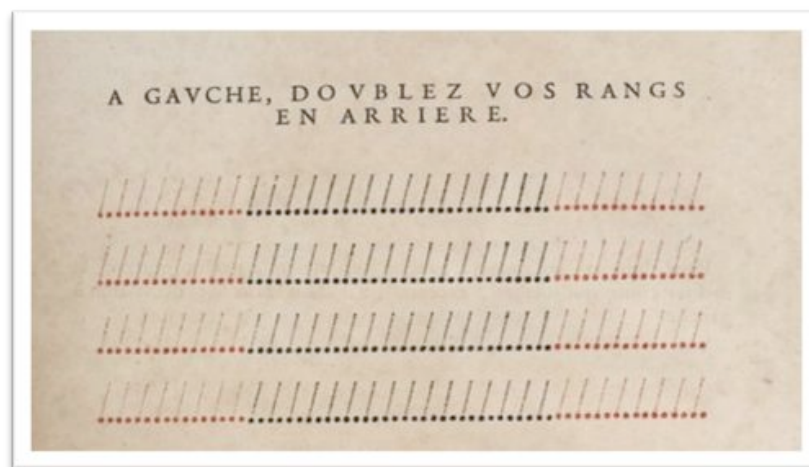


Figure 14. “Double Your Ranks to the Left and Back” De Lostelneau’s depiction of musketeers (red dots) and pikemen (black dots) marching back into place to the left of the men behind them to double their ranks (111).

In a subsequent evolution, de Lostelneau informs the reader how to “Double the Ranks By Quarter Lines to Right and Left from Center” (Figure 15). In this paired image set, the ideal movement is no longer strictly angular, but requires arcs of movement as soldiers follow curving paths through space. In the bottom depiction, three separate columns of soldiers, separated by gaps to represent the anticipated arrival of six soldiers, are initially divided into eight ranks and thirty-two files. The black dots of

pikemen are positioned in the center flanked by two columns of red dots of musketeers, and the absent bodies on the field are represented by fainter colored dots, symbolically allowing the distance between columns to be measured by moving soldiers. In the top depiction, soldiers follow curving quarter-arcs to maneuver into a formation of four ranks and sixty-four files. In motion, ranks three and four march to join ranks one and two, while ranks five and six march to join ranks seven and eight, followed by a half turn.

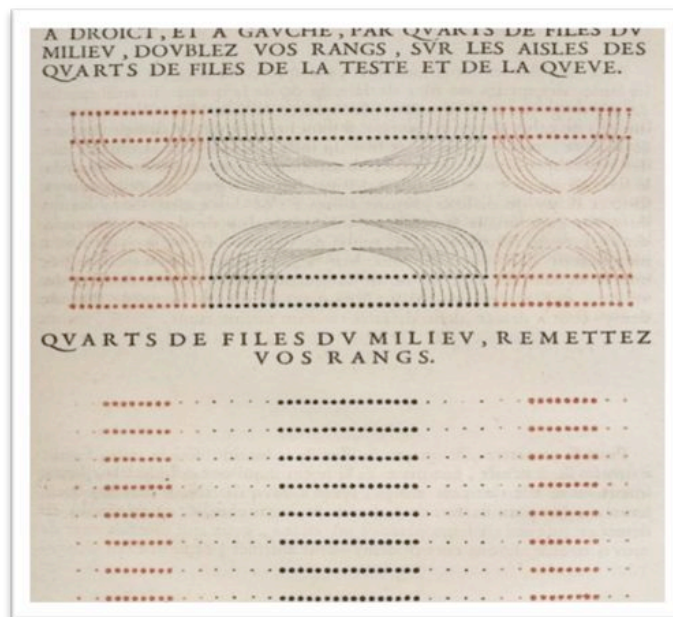


Figure 15. *“Double the Ranks By Quarter Files Right and Left from Center”*

Accompanying the illustration, de Lostelneau provides sequential instructions wherein the starting left and right flanks and center files (bottom depiction) are “quartered”:

To double the ranks, by quarter files from the head and the rear, on the flanks of the quarter files of the center; it is necessary for the half-ranks from the right side, the quarter files from the head and those from the rear, to go right; and the half ranks from the left side to go left; and for them to march until they are one step outside the ranks of the center; afterward, the same half rank from the right side of the quarter files from the head will still go right, and those from the rear, to the left; and the half rank from the left side of the quarter files from the head will go left in parallel, and those from the rear will go right; then they will all march at the same time on the flanks of the quarter

files from the center; where those from the head will make a half turn to the right, so that they will all face the same way.

To return to their places, the quarter files from the rear will make a half turn to the right, and those from the head will march until they are on the right of their ranks; afterwards, they will go right and left and will continue to march back to their places.

Pour doubler les rangs, par quarts de files de la teste & de la queue, sur les ailles des quarts de files du milieu; il faut que le demy-rang de main droicte, des quarts de files de la teste, & celuy de la queue, fassent à droict; & le demy-rang de main gauche, à gauche; & qu'ils marchent jusqu'à ce qu'ils soient un pas hors des rangs du milieu; apres quoy, le mesme demy-rang de main droicte des quarts de files de la teste, fera pareillement à gauche, & celuy de la queue à droict; puis ils marcheront tout d'un temps, sur les ailles des quarts de files du milieu; où ceux de la teste feront demy-tour à droict, à fin de faire tous un mesme front.

Pour se remettre, les quarts de files de la queue, feront demy-tour à droict; & tant eux, que ceux de la teste, marcheront jusqu'à ce qu'ils soient au droict de leurs rangs; apres quoy, ils feront à droict & à gauche, & continueront de marcher en leurs places, où ils se remettront. (de Lostelneau 156)

Without the visual illustration for de Lostelneau's exposition, this maneuver, like all the others of increasing complexity in this section, would be very difficult to replicate *en masse*. De Lostelneau's expository description of the military choreography provides an alliance between the text and the symbolic and diagrammatic illustrations. The exacting detail of directional facings, movement paths, and complex crossings suggests that a language of instruction circulated for pairing verbal instructions with physical action in military training, and also affirms that military theorists such as de Lostelneau prioritized creating movement with precision, technical accuracy, and rhythmic coordination as a vital component of the professionalization and performance of 17th-century soldiering.

The third image set in the "Evolutions," one of the most complicated that de Lostelneau describes, instructs an entire battalion to shift a quarter to the left (conversion) when they encounter an impasse, temporarily marching two by two, and then reform the entire battalion on the either side, facing a new direction (Figure 16).

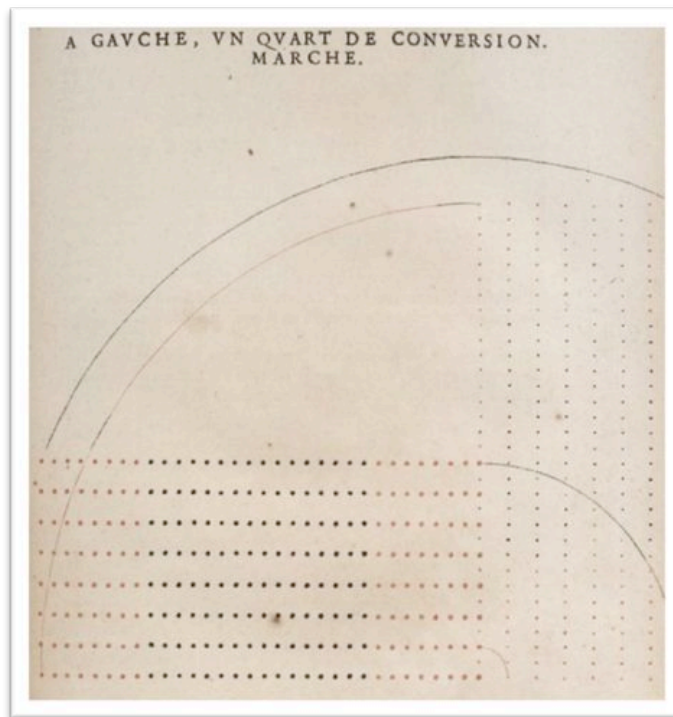


Figure 16. *Quarter Conversion Turn to the Left*

De Lostelneau describes this maneuver as follows:

This figure is a battalion, which is at the entry point of a bridge or some other very narrow passage, and is thus obliged to pass two by two. To ensure that the ranks of Musketeers join in the front of Pikemen, as shown in this figure, the Musketeers of the first row who are on the right aisle must move to left, and those who are on the left aisle must move to the right; and they must march until they meet each-other on the right hand side of the half rank of Pikemen, or those of the right aisle will go to the right, and those on the left aisle will go to the left, and when they are ordered to march they will march in half ranks, and will arrange themselves in two files. Once the Musketeers of this rank have marched on, the first rank of Pike men will follow them, marching in the same order; Meanwhile, the second row of Musketeers will march in front of the Pikemen and will march as the first one has done; and after the second one, the third one will follow; and thus till the end; and when they will have crossed the bridge, and they will be at a place where they can position for battle, the first rank must rearrange in the first form; and the first to the second, and all other ranks following that, till the battalion is arranged. There must be an Officer, or at least a Sergeant, with each rank, to promptly arrange the Battalion and head towards the enemies if they are present on the other side. If the passage is wider, then one can march in groups of 4, 6, and 8 or more, if possible; as more will pass at one time, the sooner the Battalion will be in a state for combat. While properly observing this order, a Regiment, or even an entire Army, if required can pass and reposition in battle as soon as it has crossed. This figure shows how to march and how to reposition for battle. One can also, if one wants,

pass and even reform the Battalion; but by ranks it is less difficult and more secure; among the many reasons one has to march by rank rather than by file, there is very good one, which is that one reforms the Battalion, if they have marched by files then there are only two men in front, which increases only as the files march; the passage cannot be covered, and the enemies can see not only what is occurring but also that there are a lot people; whereas by crossing in rows, as soon as a row is formed it hides what is behind by a wide front.

Cette figure est un Bataillon, qui se trouvant à l'entrée d'un pont ou quelqu'autre passage fort étroit, est obligé de la passer deux à deux. Pour faire joindre les rangs de Mousquetaires devant les Piquiers, comme represente cette figure, il faut que les Mousquetaires du premier rang qui sont à l'aisle droicte, & qu'ils marchent jusqu'à ce qu'ils se recontrent au-droict du demy rang des Piquiers, ou ceux de l'aisle droicte feront à droict, & ceux de la gauche feront à gauche; & lors qu'il leur sera commandé de marcher ils defileront par le demy rang, & se mettront en deux files. Les Mousquetaires de ce rang ayant defilé, le premier rang ayant defilé, le premier rang des Piquiers les suivra, defilant par la mesme ordre; cependant le second rang de Mousquetaires marchera devant les Piquiers & defilera comme a fait le premier; puis le troisième après le second; & ainsi jusqu'à la fin; & quand ils auront passé le pont, & qu'ils seront en lieu où ils pourront se mettre en bataille, il faudra faire remettre le premier rang en sa premiere forme; & du premier au second, & tous les autres rangs en suite, jusqu'à ce que le Bataillon soit formé. Il faut qu'il y ait un Officier, ou du moins un Sergent, avec chaque rang, pour former promptement le Bataillon, & faire teste aux ennemis s'il y en avoit de l'autre costé. Si le passage est plus large, lon pourra defiler par 4, par 6, par 8, ou davantage s'il se peut; tant plus on passera à la fois tant plutôt le Bataillon sera remis en estat de combattre. Observant bi; outre qu'entre plusieurs raisons qu'on en cet ordre on peut faire passer un Regiment, voire toute une Armée s'il est besoin, & la remettre en bataille aussitôt qu'elle sera passée. Cette figure montre comme il faut defiler & comme il faut se remettre en bataille. On peut aussi si lon veut passer par files & reformer de mesme le Bataillon; mais par rangs il y a moins d'embarras & plus de seureté; outre qu'entre plusieurs raisons qu'on a de defiler par rangs plutôt que par files, il y en a une tres bonne, qui est que quand on reforme le Bataillon, s'il a passé par files, on n'a que deux homes de front, lequel ne croist qu'à mesure que les files passant; ainsi le passage ne peut estre couvert, & les ennemis peuvent voir, non seulement tout par rangs, aussitôt qu'un rang est formé, il couvre par un grand front tout ce qui est derriere. (de Lostelneau 236)

Here, the choreographic nature of the maneuvering becomes particularly apparent as the soldiers must arc along discrete paths in separated pairs (duets) and reconvene to reform a larger battalion. In this evolution, the symbolic depiction of soldiers' movements are intended to deliberately deceive an enemy, or to "hide what is behind it in a wide front." The description visualizes the organizational and stratified violence of the embodiment of war in 17th-century France wherein soldiers were principally

choreographed to act as human shields for one another, often in hierarchies based on weaponry or social station. 17th-century military tactics orchestrated the arrangement of thousands of individual bodies in a way that is no longer invoked. Tallett suggests in *War and Society in Early Modern Europe, 1495-1715* that the size of 17th-century armies required a comparatively new form of warfare wherein soldiers had to receive instructions and extensively practice linear formations, all prior to battle:

The proliferation of gunpowder weapons, the adoption of new tactical formations, the use of new forms of siegecraft: all these developments affected the ordinary soldier's experience of conflict, whether battle or siege, making it very different by the late seventeenth-century from what it had been two centuries earlier. [...] As armies and battlefields grew in size, and as linear formations were adopted, it became very difficult for a single man to keep track of what was happening everywhere on the battlefield. By the seventeenth century commanders were, for the most part, obliged to content themselves with drawing up their forces before battle and issuing orders on what was to be done during the course of it. (44-46)

Tallett's emphasis on the relevance of linear formations comports with their prominence in *Le Mareschal de Bataille*, which Tallett designates as a "more comprehensive manual" among the "steady outpouring of a more narrowly technical literature" in the 17th century (40). The "Evolutions" also reveal the deliberately sequential methodology of de Lostelneau's work, also found in de Lauze's manual, wherein attention to embodied training progresses from individual mastery to partnering and group coordination. De Lostelneau's representation of single, figurative soldiers, followed by collaborative linear maneuvers, reveals one formative consideration for instruction that the manuals share—bodily knowledge must first be individually acquired before it can be collectively performed in public. Critically, this is a pedagogical choice that emphasizes the needs of individuals as distinct participants who may progress in skill acquisition at dissimilar rates. De Lauze remarks on the differential

capacity and limitations of dance students with some frequency; for example, he observes, “If it be someone who has never learnt to dance, it will be very advantageous to make him lean with his hands against a table, in order to give him greater ease in learning the movements which are necessary”¹⁴⁵ (de Lauze 87). Later, regarding attaining competency in the *Capriole*, he suggests, “But because those who have attained perfection in it have in all probability begun long since, it is greatly necessary that those who undertake it should not wait till a too advanced age”¹⁴⁶ (115). While a seemingly minor point, contemporary writers’ attention to bodies as differentially capable in the 17th century is a consideration that acknowledges individuality, and thus provides possibilities for agency. This agency has at times been overlooked in modern arguments that reduce complex bodily performances to uniform action in service of the state. Bodies that do not drill the same, dance the same, or train the same are bodies whose individuality must at least be remarked upon, and more likely accounted for, in training that would hope to press bodies into uniform action in name of state or sovereign. In 17th-century France, even as dancing and drilling bodies were certainly being cajoled into performance, de Lauze and de Lostelneau both demonstrate a regard for the individuality of bodies that resists a formulaic narrative of their simple collapse into passive state service. The equation of disciplined bodies with subjugated or “docile” bodies is most often associated with French theorist Michel Foucault in *Discipline and Punish: The Birth of the Prison* (1975). Mark Franko, in his essay “The King Cross Dressed:

¹⁴⁵ “Sy c’est quelqu’un qui n’aye iamais appris à danser sera fort bon de faire appuyer des mains contre vne table, pour luy donner plus de facilité a aprendre les mouuemens qui sont necessaires” (de Lauze 88).

¹⁴⁶ “Mais parce que ceux qui ont atteint la perfection y ont avec plus d’apparence commencé de longue main, il est grandement necessaire que ceux qui l’entreprendront n’attendent point à vn aage trop auancé” (de Lauze 118).

Power and Force in Royal Ballets,” suggests that Foucault’s observations regarding the hegemony inherent in geometry apply to late 16th-century composite dance spectacles, specifically, those from the Valois Court (1573 to 1582); Franko writes, “Michel Foucault’s comment on the role of geometry in absolutism seems uncannily apt in this context: ‘Geometry belongs to oligarchy since it demonstrates proportion through inequality’” (Franko 68). Foucault himself writes explicitly of the changes to geometrical pike and musketeer formations moving into the 1600s and argues that spatial location, time, and command were combinatory factors of discipline. Foucault contends in the section “The Composition of Forces”:

From the end of the seventeenth century, the technical problem of infantry had been freed from the physical model of mass. In an army of pikes and muskets—slow, imprecise, practically incapable of selecting a target and taking aim—troops were used as projectile, a wall or a fortress. In the course of the classical period, one passed over to a whole set of delicate articulations. The unit—regiment, battalion, section, and later, ‘division’—became a sort of machinery with many parts, moving in relation to one another, in order to arrive at a configuration and to obtain a specific result. What were the reasons for this mutation? Some were economic: to make each individual useful and the training, maintenance, and arming of troops profitable; to give to each soldier, a precious unit, maximum efficiency. (162)

Foucault goes on to argue that the invention of the rifle allowed soldiers, previously massed in indistinguishable units or “immobile masses” to become individual targets within a “geometry of divisible segments whose basic unity was the mobile soldier with his rifle” (163). For Foucault, both the 17th-century “imprecise, immobile” soldier and the 18th-century “precise, mobile” soldier remained subject to mechanisms of regulation and discipline. Foucault argues that, “Discipline is no longer simply an art of distributing bodies, of extracting time from them and accumulating it, but of composing forces in order to obtain an efficient machine” (164). Theoretically, a new, metaphorically and

institutionally mechanized military paradigm emerged in the early 18th century that was enabled via three processes which Foucault argues: first, positioned the soldier as a “fragment of mobile space” whose body acted as a “body-segment” within an ensemble; second, synchronized time so that each body would be “adjusted to the time of the others”; and third, commanded soldiers with such efficacious precision that “order does not need to be explained or formulated; it must trigger off the required behavior and that is enough” (166). While Foucault’s analysis is salient it also, incongruously, elides the possibility for agency, action, or deliberation by the very bodies it argues are bureaucratically, or corporeally, under siege. In so doing, Foucault’s theorization adds a secondary layer of discipline: the presumption of docility through discourse is itself regulatory. Nor does Foucault’s dismissal of a century of evolving, European military tactics as simply an “immobile mass” of pikemen and musketeers comport with the attention directed at professionally and elaborately choreographing those individual bodies. As seen in the next section, the remarkably artistic battalion patterns found in drill manuals eclipse the facile equation of a mass in service of a state machine: they appear to emerge from circulating philosophies regarding the art of war rather than the machine of war. Art historian Sarah R. Cohen similarly notes in *Art, Dance, and the Body in French Culture of the Ancien Régime* that, “The limited view Foucault offers of physical style in the ancient régime—self-surveilling, self-disciplining, subjected to its own internalized mechanisms of power—can account only fractionally for the diverse and changing ways in which the body operated in court and Parisian culture” (10). In their introduction to the edited volume, *From the Royal to the Republican Body: Incorporating the*

Political in Seventeenth- and Eighteenth-Century France, editors Sara E. Melzer and Kathryn Norberg also problematize Foucault and suggest one precise goal of their volume is to challenge Foucault's assumptions regarding disciplining bodies:

Foucault, indeed, implies that the state is invincible and omnipotent, always successful in disciplining bodies; in his reading, there is little resistance or change. In fact, however, these "technologies of power" were not always effective; sometimes they encouraged not obedience, but active resistance. Which leads to the overriding question addressed in this volume: When do bodies change? How can "new" bodies—that is, new gestures, dress, dance, behaviors—ever emerge? (5)

One answer to the editors' question, "When do bodies change?", may be found in 17th-century French military manuals. While superficially drill appears regulatory, skill at infantry and arms handling provided an opportunity for thousands of "bodies to change" through the profession of soldiering—common folk who, as Tallett argues, gained unprecedented access to the profession due to the changing technologies and techniques of war. Disregarding the significance of this professionalization obviates the evidence that military life provided an important avenue for financial advancement for economically challenged households and unemployed laborers. Tallett asserts in *War and Society in Early Modern Europe, 1495-1715* that both contract and commission systems dominated recruitment for soldiers in 17th-century France and that soldiers recruited in France came from generally disadvantaged social ranks: "[They] came from those in the labour market, albeit often at the bottom end of it: minor artisans and petty shopkeepers, journeymen and wage labourers; and, from the countryside, the smallholders, subsistence farmers, ousted tenants and casual laborers. A few of those admitted to the *Invalides* in 1677 said they had 'known no other way of life than war'" (88). Soldiers' individual lives and associated hardships, as well as their voluntary

service—conscription and impressment were rare—complicates the argument for “docile bodies” and offers a more complex portrait of soldiers’ embodiment at war.

Significantly, John A. Lynn has argued in *Women, Armies, and Warfare in Early Modern Europe* that 17th-century warfare also provided women an opportunity to enter the martial economy as aides to military camps and campaigns, and also as soldiers. While women serving in the former capacity numbered in the thousands across Europe, Lynn suggests that documented female soldiers numbered in the hundreds; Lynn acknowledges that “the most important studies [of women] have not been the work of scholars focused on the history of military institutions, but historians concerned with the phenomenon of cross-dressing and gender” (186).¹⁴⁷ It is possible that the uniformity of bodily discipline and costume permitted rather than prohibited, women’s entrée into the profession of soldiering, as occurred during the Civil War in the United States for women disguised as male recruits and soldiers.¹⁴⁸ Lynn proposes that accounts of French female soldiers were eagerly received in 17th-century France and, like military training texts, were translated and circulated throughout Europe: “Books and pamphlets presented the lives of women soldiers to the literate population. In contrast to song,¹⁴⁹ literature allowed for a broader and deeper range of exposition. The ‘true’ story of a woman soldier’s life became a seventeenth- and eighteenth-century literary genre” (169). The composition of the French military suggests that, in addition to presenting

¹⁴⁷ Two of these studies are: Rudolf M. Dekker and Lotte C. van de Pol. *The Tradition of Female Transvestism in Early Modern Europe*. London: Palgrave Macmillan, 1997; Sylvie Steinberg. *La confusion des sexes: La transvestissement de la Renaissance à la Révolution*. Paris: Fyad, 2000.

¹⁴⁸ The possibility for women to pass as infantry wearing men’s uniforms in the Civil War is discussed briefly in Chapter 2 of this dissertation, *Bodies of War*.

¹⁴⁹ Ballads describing the lives of women warriors and soldiers were also popular in 17th-century Europe, particularly in England. See: Diane Dugaw. *Warrior Women and Popular Balladry, 1650-1850*. Chicago, U of Chicago Press, 1996.

sovereign power, soldiers from various social positions would have necessarily negotiated individual capacities to enact or perform force. As de Lostelneau's manual models, training methods were envisioned for individual bodies, coordinated linear formations, and choreographed geometric battalions en masse. The role of a soldier would have been individually integral to, and simultaneously engaged within a larger collective, in the massively scaled project of setting in motion political action.

1.4—Military Battalions-Geopolitical Geometry

De Lostelneau proceeds from “Evolutions” to the final two formations of organizational complexity: “Battalions” (complex geometrical formations) and “Orders of Battle” (organized battalions of cavalry and infantry). Both present moving, geopolitical architectures that demonstrate the remarkable aesthetic significance placed on the artistic assembly of bodies, even when the figurations were wildly impractical or impossible to execute on the battlefield. De Lostelneau begins his introduction to the geometric “Battalions” by tracing their invaluable use in battle, as well the invention of specific configurations that he recommends, which in this case presents an interesting historical note since de Lostelneau documents here their use by his uncle Sir de Lostelneau, the former Commander of The King's Guard.

Up to this point, we have learned the basics of what our Battle Marshal should know, but now, it is time to perfect the skills which he will execute perfectly and promptly, in all types of Battalions, against cavalry and against infantry, using his Troops, at all times and in all places, and making them fight. He will organize the infantry so that it may defend itself, and remaining organized it will be unbreakable to all but the largest of efforts, successfully confronting a larger enemy with a smaller number of Troops. Different Battalions have been invented by those knowledgeable in the Art of War, to be perfected by their Successors, who added in their way, whatever they could to make them better. In Antiquity we found the Round, the Oval and the Square. [...] The fair Sir de Lostelneau, my Uncle and predecessor as the Commander of The King's Guards, is

the first man in France to have found it useful to train with them, by using simple and quick rules concerning how to free the center, to square them up on the inside, even when the number of men was odd. I would dare say that he managed to reduce, to his advantage, the Art to a set of simple infallible rules, from which thousands of Officers drew the knowledge which they possess today. [...] I included a few of my own, however, I have to admit that most come from my fair Uncle who left them to me. Four of them, referring to the formation of an Octagonal, or an eight-faced Battalion, are infallible. (de Lostelneau 243)

IVSQV'ICY nous avons affez faict entendre les commencemens de ce que doit ſçavoir noſtre Mareſchal de Bataille; il eſt maintenant neceſſaire pour le perfectionner dans cette Charge, qu'il ſçache parfaitement & avec promptitude dreſſer toutes forces de Bataillons, tant contre la Cavalerie que contre l'Infanterie, pour ſe pouvoir qu'il aura à faire combattre, & ranger ſon Infanterie de forte quelle puiſſe ſe defendre ſans deſordre & ſans eſtre rompuë que par de grands efforts; meſme qu'un petit nombre puiſſe combattre & reſiſter contre un plus grand. De temps en temps les ſçavans dans le Meſtier de la Guerre ont inventé des differents Bataillons, que leurs Succelſeurs one perfectionné, en adjouſtant à leur forme ce qui les pouvoir rendre meilleurs. Dans l'Antiquité il n'y avoit que le Rond, l'Ovale & le Quarré [...] Le feu Sieur de Loſtelneau mon Oncle & mon devancier dans la Charge de Major des Gardes du Roy, eſt le premier en France qui a trouvé l'uſage de les dreſſer, & qui s'eſt faict des regles faciles & tres promptes pour vuider les centres, & les quarrer au dedans, quant meſme le nombre d'hommes ſeroit impair; & j'oſe dire à ſon avantage qu'il a reduit ce Meſtier à des regles infallibles, d'où des milliers d'Officiers en France ont tire ce qu'ils en ſçavent aujourd'huy. [...] j'y en ay mis quelques-uns de la mienne; mais il faut demeurer d'accord que la pluſ-part eſt tirée des regles que mon Oncle a laiſſées, don't il y en a quatre infallibles pour former les Octogones, ou Bataillons à huit faces.

Battalion formations, ranging from hundreds to thousands of soldiers, represent one of the oldest forms of organizing groups of swordsmen, infantry, and cavalry, and reached a theoretical apogee of mathematical complexity in the mid-17th century, particularly in de Lostelneau's manual. Square battalion formations had been used widely throughout Europe in the 16th century, but were increasingly utilized to coordinate pikemen, musketeers, and cavalry in smaller formations to ensure proper firing and coverage in the 17th century.¹⁵⁰ As de Lostelneau notes in his own introduction, they were judiciously used by Maurice of Nassau in the early-17th century:

¹⁵⁰ For an analysis of changes to Early Modern French arms in relation to tactics, military formations, and types of warfare (such as siege warfare and open field warfare) see: Bert S. Hall. *Weapons and Warfare in Renaissance Europe*.

The fair Prince d'Auranges Maurice de Nassau, was one of the first to make use of these techniques, enabling his soldiers to resist, even in open country, against Cavalry, having found a way to vacate the center and to face the enemy all around. (243)

Le feu Prince d'Auranges Maurice de Nassau, est un des premiers qui a trouvé l'usage de les mettre en estat de résister mesmes en pleine champagne contre la Cavaleire, ayant trouvé l'invention de buider les centres, leur faire face par tout.

Specifically, the pairing of weapons, pike, and musket against the cavalry necessitated more complex arrangements of soldiers, particularly in an open battlefield, to simultaneously defend and attack. John A. Lynn describes the structural organization of this coordination in *The Wars of Louis XIV: 1667-1714*:

Companion to the musket, the pike was a formidable spear about fourteen feet long, bristled with an iron point and girded with metal strips for a yard or so from the point to prevent swordsmen from hacking off its lethal tip. The French employed the pike primarily as a defensive weapon to keep attacking cavalry at bay. Its great length allowed the weapons of men in rear ranks to protrude well in front of the formation, so that a solid block of infantry with pikes lowered threatened its enemy with a hedgehog of steel points. Such a wall was necessary because the time-consuming process left musketeers defenceless much of the time, since an unloaded musket was no better than a club in a fight. When challenged by a swift cavalry charge, musketeers had to shelter behind the pikes of their comrades to keep from being ridden down by the horsemen. (59)

De Lostelneau's theoretical insistence on bodily precision, beginning with the fixed handling of one's individual arms and the coordinated execution of linear formations, is graphically affirmed in Lynn's description of the lethal consequences of misstep or disorganization during battle. Battalions were not simply organized to perform ideas or *representations* of force: they were choreographed to *employ* lethal force. Lynn traces the evolving, physical structure of European battalions and suggests:

In general, pikemen massed in the centre of the battalion with musketeers and fusiliers marshaled at the wings. Battalions stood ten deep at the start of the [17th] century in

Baltimore: Johns Hopkins UP, 1997. In relation to the basic arms depicted in de Gheyn's and de Lostelneau's manuals, the pike and shot formations used throughout the 16th century were superseded by increasing numbers of musketeers who provided superior lethality against arranged pikemen, and wielded matchlock muskets (with a serpentine mechanism that held and lowered the match) in the first half of the 17th century, followed by flintlock muskets (with a flint and spark mechanism that did not require an open flame) in the mid to late 1600s.

accord with the fashionable Dutch practice, but became thinner and wider with the decades. The depth of the formation reflected the length of time it took to load a musket, step forward, fire it, and then retreat into the battalion to reload. For example, if men required a minute to reload, and if the commander wanted to fire a volley every six seconds, he would have to stack his musketeers ten deep. (61)

Lynn estimates that during the “great wars” of Louis XIV’s personal rule, approximately 800 men composed a battalion, further divided into twelve to sixteen companies, but notes that during declared wartime, likely due to attrition, the composed numbers could be one hundred to two hundred fewer men (60-61).

Of the four instructional schemas that de Lostelneau discusses, French battalions evidence most clearly the embodiment of war through highly choreographed movement patterns wherein individual soldiers maneuver into place to guard other soldiers, handle arms, or present a sufficiently powerful assembly to deter the enemy. De Lostelneau’s descriptions in this section, unlike the “Evolutions” where the annotations are generally strictly instructional for maneuvering, are complemented by military theory about the strategic or tactical use of battalion arrangements. De Lostelneau’s description of the eighth battalion configuration, out of seventy battalion arrangements, in Figure 17 provides tactical analysis not only for maneuvering, but also for deterrence and deceit.

Of the organizational structure, de Lostelneau remarks:

This Battalion is the same as those preceding, except that between two files of Pikemen there is one file of Musketeers which one is able to use to deceive the enemies who will not suspect why such an order is useful, which makes it easier in an instant for the Musketeers by getting them out from the Pikemen forwards or backwards.

Ce Bataillon est meſme que les precedens, excepté qu’entre deux files de Piquiers il y en a une de Mouſquetaires, ce qui ſe peut pratiquer pour decevoir les ennemis, qui ne jugeront pas à quoy un tel ordre eſt bon, duquel il eſt facile de ſe ſervir en un inſtant des Mouſquetaires les faiſant fortir hors des Piquiers en avant ou en arriere. (de Lostelneau 260)

Here, de Lostelneau echoes Lynn's modern description of the function of the protective array of pikeman as well as their directional movement. For "Battalion A" (Figure 18), de Lostelneau provides a detailed account of the numerical organization of the men into four major squared sections with pikemen on the inside and musketeers on the outside as well as eight, smaller flanked squares of pikemen and angled "sleeves" of musketeers:

If you have four hundred Pikemen to realize Battalion A [Fig. 18], place them with ten in height and forty in the front to realize four equal Battalions of one hundred Pikemen, each that you arrange as shown in Figure B. Seven hundred and forty Musketeers are then needed with ten in height and seventy-four in the front that must flank the Pikemen in the first order of which you will take sixty-four for the center of the middle, twenty-five for each of the little squares and that allows two hundred Musketeers for the eight squares, one hundred for each of the four squares that form a cross of Musketeers out of which you take twenty Musketeers for each sleeve and place the seventy-six remaining on the border outside of each Battalion of Pikemen.

Si vous avez 400 Piquiers pour faire le Bataillon A, il les faut mettre à 10 de hauteur & 40 de front, en faire quatre Bataillons egaux, de 100 Piquiers chacun, que vous disposerez comme monstre la figure B. Il faut 740 Mousquetaires, à 10 de hauteur & 74 de front, qui doivent estre aux flancs des Piquiers au premier ordre, desquels vous prendrez 64 pour le centre du milieu; 25 pour chacun des petits quarrez, qui font 200 Mousquetaires pour les huit quarrez; 100 pour chacun des quatre quarrez qui forment une croix de Mousquetaires, d'où font tirez 20 Mousquetaires pour chaque manche, & des 76 qui restent vous en ferez la bordure du dehors de chacun Bataillon de Piquiers. (de Lostelneau 264)

De Lostelneau's battalions progress through increasingly complex architectural patterns that not only specify floor arrangements for individual soldiers, but provide detailed movement instruction for how soldiers must turn, march in pairs and small ensembles, and interweave lines to form, dissolve, and reform a fluid "corps" of geometrically shifting choreographies that marshal bodies of war. De Lostelneau provides particularly detailed descriptions of the "Cross of Lorraine," an image depicted in Figure 19 wherein the pikemen form a red cross in the interior of an arrangement of musketeers. The battalion is of particular interest because it is offered in multiple variations (Figures 20-

22), with soldiers practicing the original formation, and then learning patterns that open, angle, or reform the cross into an entirely new geometry. The variations build upon one another visually and pedagogically. De Lostelneau’s description of the second variation of the “Cross of Lorraine” is also significant as it is one of the only places in the manual where any rhythmic accompaniment for execution is mentioned.

Battalion E [Figure 20] is once again the Cross of Lorraine; we can see by this figure that the Musketeers have detached in order to be able to shoot. It is necessary to order one Officer for each Battalion of Musketeers to lead them so that they may shoot in order; they will leave to shoot their salvo as soon as they hear the drums and will retreat when they hear the drums calling them to go back to the field, always with promptness and judgment.

Ce Bataillon, E, eſt encore la Croix de Lorraine; on peut voir par cette figure comme les Mouſquetaires ſe font deſtachez pour aller faire leur deſcharge. Il faut ordonner un Officier à chaque Bataillon de Mouſquetaires, pour les conduire & pour les faire tirer par ordre; ils partiront pour aller faire leur ſalve, auſſi-toſt qu’ils entendront batter l’allarme, & ſe retireront quant on battra aux champs; le tout avec promptitude & judgement. (de Lostelneau 268)

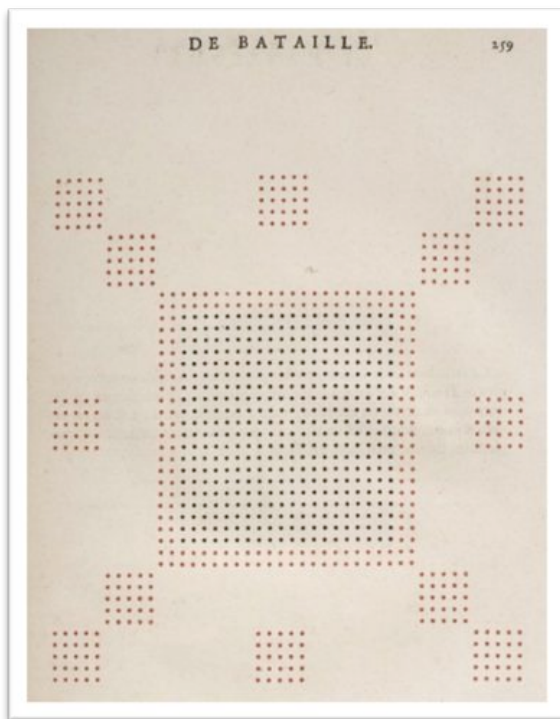


Figure 17. Untitled “Bataillon”

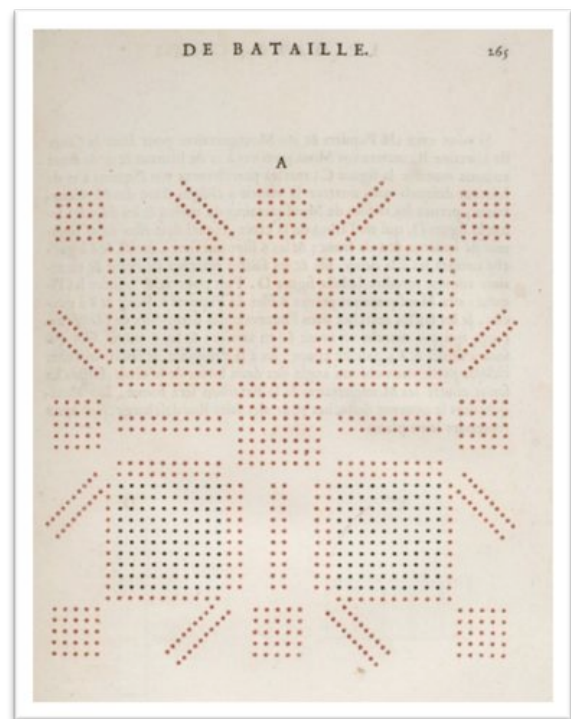


Figure 18. “Bataillon A”

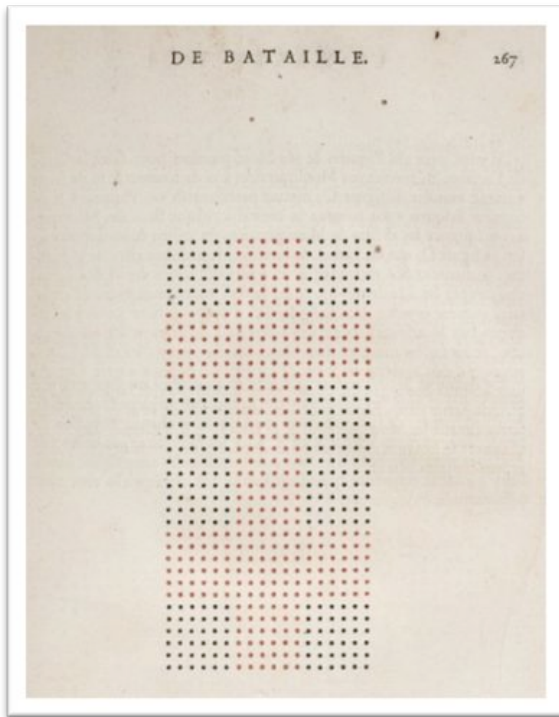


Figure 19. "Bataillon Cross of Lorraine"

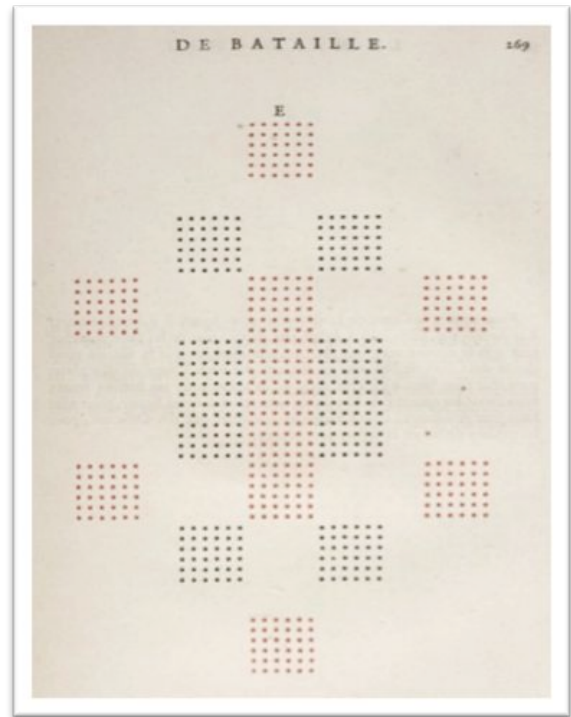


Figure 20. "Bataillon E-Cross of Lorraine Open to Shoot"

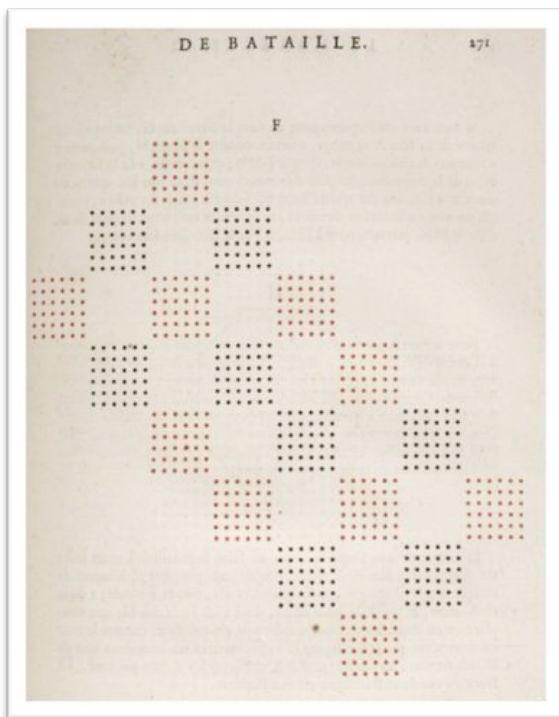


Figure 21. "Bataillon F-Cross of Lorraine-Opened Angle"

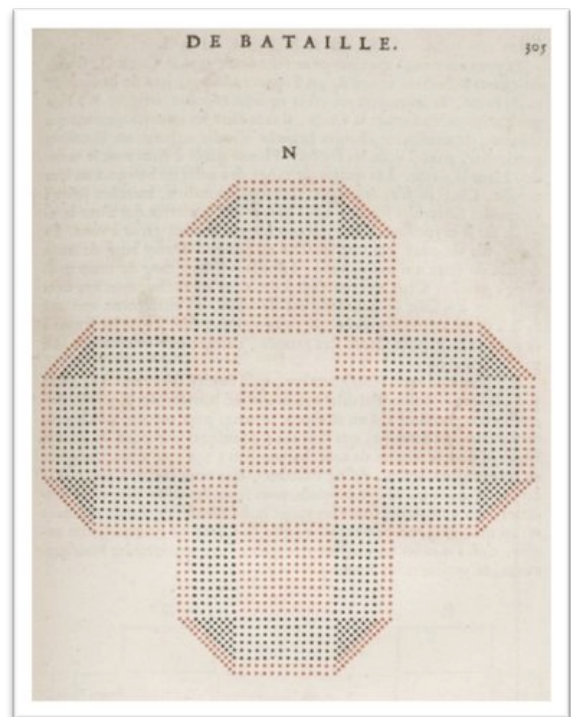


Figure 22. "Bataillon N-Cross"

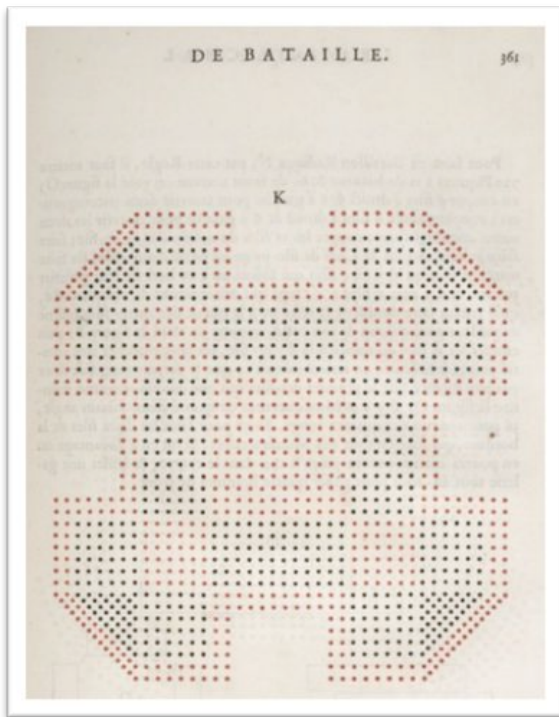


Figure 23. "Bataillon K-Citadelle"

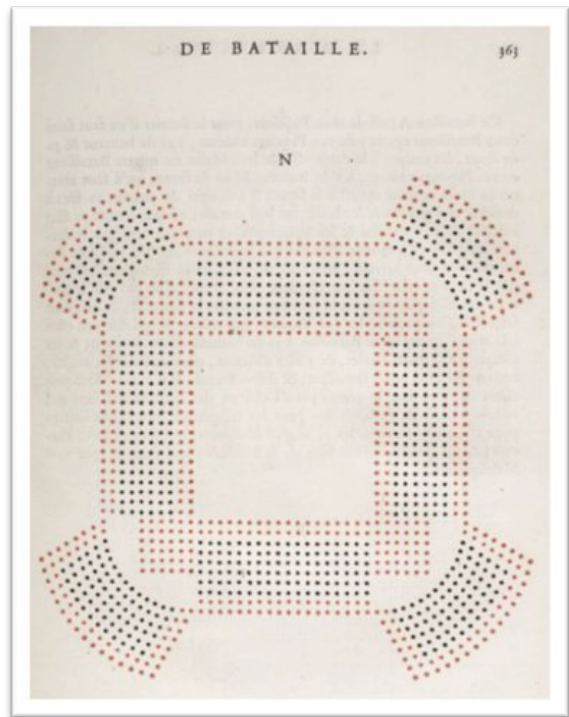


Figure 24. "Bataillon N-Radieux"

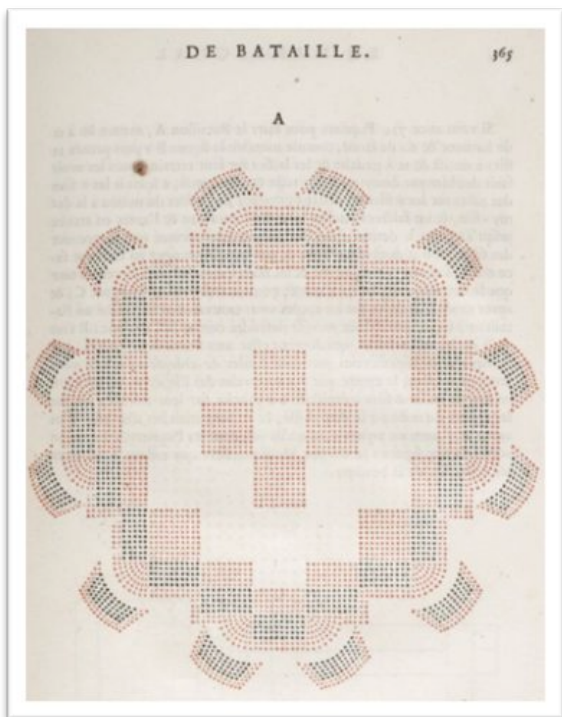


Figure 25. "Bataillon A" "Cross"

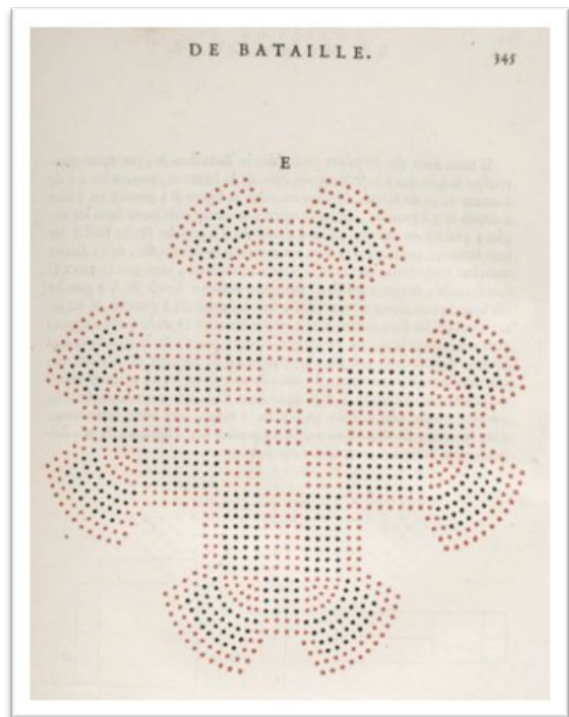


Figure 26. "Bataillon E"

De Lostelneau's instructions for bodily execution, patterns for movement, and visual choreography for "corps" of soldiers find partnership in corollary concerns that dance masters were confronting, both theoretically and corporeally, in the mid-17th-century. Historian William H. McNeil remarks on this confluence of drill formations and dance during precisely the same time period in *Keeping Together in Time: Dance and Drill in Human History* (1995). McNeil affirms the thesis of this chapter that dance and drill were mutually informative, particularly during the reign of Louis XIV, and argues:

The consequences of systematic drill for European society were much enhanced by another kind of muscular exertion that simultaneously altered the behavior of the topmost nobility. Courtly dancing took new and self-conscious forms in Italy during the Renaissance, and by the sixteenth century efforts to introduce Italian sophistication into trans-Alpine Europe produced a series of manuals about how to dance in the new styles. [...] But it was in the next century, at the French court of Louis XIV (r. 1648-1715), that dancing and associated courtly rituals achieved their classical expression. [...] His first line of defense was to maintain a well-drilled standing army, perpetually at the ready to nip revolt in the bud. [...] But a second tactic was no less effective: to wit, the king's requirement that powerful French noblemen live at his court for long periods of time. There they took part in continual rituals, dances, formal levees, military displays, and the like, both passively as spectators and actively as participants. (133)

The dimensional geometry of coordinating 17th-century French military units in both space and time also finds explicit relationship to dance wherein, as posited by Mark Franko, "Dancers performed geopolitical configurations of the king's space" (68). In his essay "The King Cross Dressed: Power and Force in Royal Ballets," Franko compares the performances of the Valois Court and reign of Louis XIII to those later performed by Louis XIV under the last decade of Chief Minister Mazarin's rule (1643-1661) and Louis XIV's personal rule (1661-1715). Franko observes that earlier performances emphasizing geometrical dance represented the composition of sovereignty through choreographed spatial arrangements. Franko argues:

In geometrical dance, bodies were given over to the strategic project of royal self-representation, their movements organized to spell the monarch's name or visually to symbolize his presence. Such "figures" were composed by group patterns within which the body lost its distinctively individual traits. Dancers performed geopolitical configurations of the *king's* space—the provinces, for example, whose cooperative spatial arrangement produced the nation. Composite spectacle was thus a spectacle of the power in the spatial coordination of bodies, and geometrical dance was its choreographic realization. The dancers' discipline addressed a highly coordinated "division of the terrain" according to which certain points in space were to be marked and occupied with an acute awareness of proportionate spatial relationships and the timing necessary to assure each figure's visual coherence. (Franko 68)

While Franko refers to dances performed in the late 16th century, the possibility for military formations to serve as "cooperative spatial arrangements [that] produced the nation" may also be theorized in relation to coordinated military movement in early to mid 17th century France. The organization of military units was not the result of efficacy alone; rather, the displays were intended to overwhelm the enemy through the power and force—the display of the military sublime—that such a geometrically complex display provided. One example is de Lostelneau's illustrations of the "Orders of Battle" wherein he suggests that the geometric prowess of the formations alone will deter the enemy (Figures 21-24). Some of de Lostelneau's geometric "Battalions" and "Orders of Battle" formations were physically impossible to enact, which de Lostelneau acknowledges, thus the manual must also be explored for the artistry of the military imaginary that de Lostelneau appears to inscribe. Much like a dance or painting viewed from various angles, de Lostelneau employs a variety of strategies to represent not only the complex, linear advance of battalions wherein the directional movement is suggested by the frontal orientation to the enemy, but also depicts the configuration of battalions as viewed from above and the sides in a "theater of war" (Figures 27-30) to best illustrate the relationship of thousands of soldiers to one another in configured space.

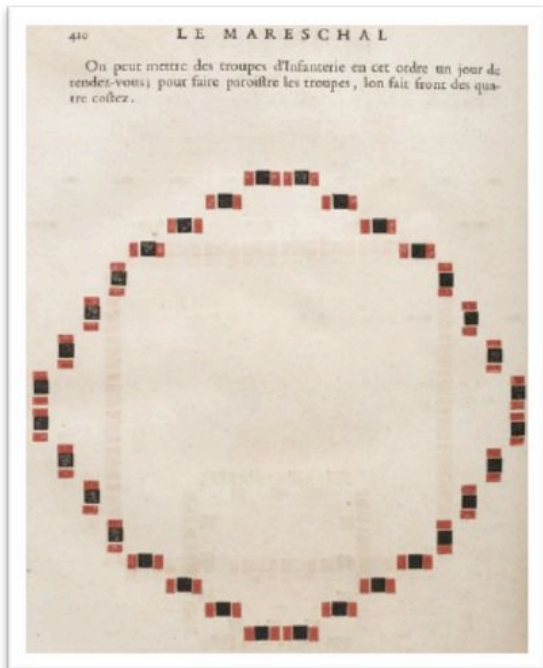


Figure 27. Orders of Battle. "Front facing on four side"



Figure 28. "22 Battalions of infantry, 29 Squadrons of cavalry"



Figure 29. Orders of Battle. "12 Battalion formation"

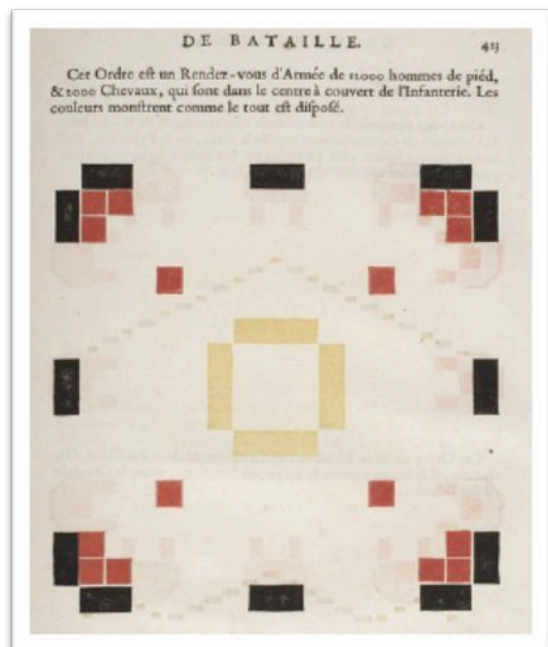


Figure 30. Orders of Battle. "Horses under the cover of the infantry"

Through shared and divergent pedagogical strategies, de Lostelneau and de Lauze both composed instructional texts with a distinct emphasis on what is termed in this chapter the “force of bodies in motion.” Both authors considered the moving body as a primary site for embodying types of performative force, at war and court respectively. De Lostelneau depicted soldiering bodies as living instruments to apply direct force for state or sovereign (in the form of military action), while De Lauze instructed dancing bodies to appear as indices of social position or accomplishment, potentially capable of performing force for a court or sovereign (in the form of danced action). Significantly, de Lostelneau’s training manual, like de Gheyn’s, does not provide extended, philosophical reflection on strategy or the mentality of soldiering; rather, the body stands in, literally, as the locus of skill acquisition and coordinated performance. With certainty one can claim: 17th-century wars were wars of maneuvering and choreographing armed bodies. However, in considering the patterned images throughout de Lostelneau’s work, it’s productive to move beyond studying the body as an inert, physical “prop” to be manipulated in service of king or country, and to consider how individuals may also have acted as subjective, resistive, and creatively contrarian agents, even within seemingly prohibitive physical or political structures. The embodiment of war that de Lostelneau presents to readers is one wherein the body of each individual soldier is accounted for, and even the space each soldier moves through within complex, geometric field patterns is carefully inscribed in symbolic detail. This attention to detail of each individually drawn and drilled body hints at the challenges of training soldiers who were variously assembled and cohered across the 17th century

from disparate mercenary bands, military enterprisers (private contractors), noble allied troops, conscripted foreign forces, and a sovereign standing army. Bodies did not assemble themselves, and the level of geometric coordination found in French drill manuals would have required active engagement from 17th-century soldiers. David Parrot, in his essay “From Military Enterprise to Standing Armies: War, State, and Society in Western Europe, 1600-1700,” examines the general shift from mercenary forces to standing armies in France. Parrott argues that this transition has been insufficiently analyzed to account for the complexity of French state formation in relation to established and shifting social systems that informed the composition of French armed forces across the century. Parrott argues:

The creation or transformation of an army is not some act of will imposed by the ruler on a passive body of subjects. Armies and military institutions represent the relationship between rulers and political elites, whether of traditional nobilities; provincial aristocracies; administrative, legal, or financial corporations; or fiscal-mercantile interest groups. (77)

Parrott’s analysis is preoccupied with the relationship between sovereign rulers such as Louis XIV, social elites, and military enterprisers (private contractors). However, his analysis also applies to the “body of subjects” of infantry soldiers who would have had their own competing interests for financial and familial advancement, albeit on a far smaller scale than French elites and nobles. Scrutiny of mid 17th-century French military manuals adds another valence to Parrott’s argument: the manuals suggest that physically coordinating soldiers for the embodiment of force, especially as their employment by different mercenaries, military enterprisers, and sovereign standing armies shifted, remained a persistent concern. Parrott argues that military enterprisers were, in

particular, economically vested in having well-trained soldiers: “Far from filling the ranks of bloated armies with cheap, poor-quality recruits, enterpriser-colonels were strongly motivated to use experienced veterans who could ensure that these small, highly mobile armies were hard-hitting and tactically flexible forces” (84). Parrott’s research provides one indication that expert training was, at least, economically valued. The most obvious, though not entirely fulsome, answer to why the visual force of the body appears across a group of 17th-century military manuals is because waging war at the time necessitated the elaborate drill of bodies in motion series, as well as complex, geometrical assemblages to execute military tactics, devise siege strategies, and conduct battle operations. That is, war needed group choreography. And yet, what archival evidence suggests that theoretical maneuvers were actually performed on the battlefields?

In *Richelieu’s Army: War, Government and Society in France, 1624-1642*, David Parrott addresses this query, suggesting that military manuals, while referenced extensively, often theoretically reflected the religious and dynastic alliance of their authors and routinely included organizational tactics that were seemingly at odds with one another within the same text and were difficult to execute in the field. He offers:

In so far as any attempts have been made to examine French military activity in the period of Richelieu’s ministry, historians have relied upon military sources, and particularly tracts on the art of war. Such military tracts can provide useful insights into contemporary warfare, but it can be misleading to take their elaborate and frequently impractical theoretical prescriptions as an actual account of a cruder and much more diverse military reality. (Parrott 24)

Parrott dismantles a predominant view in military studies that France’s military practices under Cardinal Richelieu (Chief Minister to Louis XIV from 1624 to 1642), including transitions in French tactics, strategy, and organization, were the inevitable extension of

military reforms by Maurits of Nassau, Frederik Hendrik, and Willem Lodewijk (the princes of Orange) and later Gustavus Adolphus of Sweden, whose collective efforts to amend battalion organization, change officer oversight of reconfigured tactical units, and systematize mass drill are often considered to be catalysts for broader changes in European militaries in the first half of the 17th century. Parrott denounces this view as an established assumption “that France stands in some form of apostolic succession” to these reforms. (23). Rather, Parrott proposes a number of delimiting factors that likely had greater impact on French warfare, particularly from 1624 to 1642, including: military hierarchy and *bataille* placement, (for example, the location of noble *gardes* and *gendarmes*) (37); veteran experience (44); propensity for dynastic siege warfare (58); a shortage and expense of cavalry (62), and general administration and logistics (83). To understand why the theory of military manuals may have been at odds with actual operations in the field—and thus present context for the guiding query of how soldiering bodies were trained and tasked to embody force—it is useful to consider the basic structure of 17th-century French military forces, including their size and composition during the historical period from 1592 to 1714. While addressing the complexities of each engagement is far beyond the scope of this dissertation, the question of why military training manuals placed the body “center stage” and envisioned elaborately choreographed geometric configurations cannot be approached without a basic understanding of 17th-century French armed forces.¹⁵¹

As John A. Lynn notes in his preface to *Giant of the Grand Siècle: The French Army*

¹⁵¹ Given the scope of this chapter, the focus will be restricted to a brief examination of the personnel in the French army, rather than the larger sociopolitical reasons for, and dynastic involvements in, individual battles and wars.

1610-1715, assaying the importance of the army in relation to its size during the 17th century, “The army of the *grande siècle* was the largest institution created by the monarchy; in the 1690s its paper strength climbed to 420,000 men, over six times larger than it had been a century before” (ix). During this period, it is estimated that the number of French troops during Louis XII’s invasion of Italy was 23,000 in 1499, rose to 48,000 during the French Picardy campaign in 1558, expanded to over 100,000 during the Thirty Years War of 1618-1648, was estimated at total effectives of 190,000 in 1691, and was temporarily as high as 310,000 in 1710 during the war of the Spanish Succession¹⁵² (Tallett 6). While these numbers are select data points, they consistently reflect one aspect of the French army during this period: it was not static and changed markedly in relation to individual wartime requirements and dynastic and ministerial predilections. Tallett notes that official, governmental publications documenting the size of the army throughout this period were often desired estimates or highly inflated, and accounts for the discrepancies in the fighting armed forces versus their “paper strength.” He suggests that not until the early 17th century, under Cardinal Richelieu and during de Lostelneau’s tenure, did estimates appear to match the numbers documented in diverse sources. Tallett observes:

By 1626 Richelieu estimated peacetime requirements at 22,000, a figure which may actually have been attained. After the Peace of the Pyrenees (1659) the size of the army, which had expanded enormously during the Thirty Years War, was reduced to a strength of 55,000, being built up again during the Dutch and Devolution Wars, to be held at a peacetime level of 130,000 after the Treaty of Nijmegen in 1678, at about which level it hovered for the next one hundred years. (7-8)

¹⁵² Tallett provides these figures in *War and Society in Early Modern Europe, 1495-1715* in Table 2, which he suggests have been “culled from a number of sources and which I have sought to adjust up or (mainly) down in the interests of accuracy” and thus “must be regarded as very approximate” (7).

In comparison, in the volume *European Warfare: 1350-1750* (edited by Tallett), Parrott ascribes to Louis XIV's in 1672 army an infantry of 70,000 and a cavalry of 35,000 against the Spanish Netherlands, increased to an "operational strength" of 250,000 against the United Provinces between 1672 and 1678.¹⁵³ By 1690, Parrott cites the number to be 340,000 effectives throughout the Nine Years War¹⁵⁴ (76). John A. Lynn's scholarship, notably in *Giant of the Grand Siècle*, has worked to reconcile the differences among modern as well as contemporary sources from the period of 1610 to 1715, augmenting official prognostications with those suggested by a collection of other primary sources, including lists of *étapes*,¹⁵⁵ financial *états*, military ordinances, and by specifying the terms of comparison, for example Louis XIV's standing state army versus active field army, the time of the census (e.g. immediately before or after the declaration of a campaign), and types of forces (e.g. infantry, cavalry, *Gardes Françaises*, *Maison du Roi*, *Gardes Suisses*, etc.). These numbers are productive because they suggest how many soldiers may have composed the geometric battalions and linear evolution variations that 17th-century military theorists proposed.

Battles that appeared to lead to more decisive political or territorial victory characterized warfare before and after Louis XIV's reign (e.g. Louis XIII and Napoleon). Warfare under Louis XIV is often described as "war-as-process," implying uncertain outcomes for siege and battle, high attrition, prolonged operations, and extended efforts at diplomacy (as contrasted with Napoleonic "war-as-event," characterized by rapid battles, decisive outcomes, and minimal diplomatic resolution). While the differences in

¹⁵³ Parrott's footnote implies these numbers may be from Louis XIV, *Memoirs for the Dauphin*.

¹⁵⁴ Parrott's footnote cites John Lynn's *Giant of the Grand Siècle* for this number, page 53.

¹⁵⁵ Supplies provided to soldiers.

dynastic orchestration of these wars cannot be overstated, there are some patterns of military tactics that, with caution, may be observed and would have been experienced by contemporary soldiers. Parrott summarizes the general organization of European armed forces into the 17th century, providing a succinct digest of the causality of and change to battle formations and weapons. He observes:

What was required, and provided by Maurits of Nassau's reforms, was a new conception of battlefield deployment which would take full account of warfare dominated by the killing power of firearms. The result was the radical rethinking of infantry. In place of the massed square, the Orangist reforms substituted shallow formations initially ten rows deep but progressively reduced to eight, then six, rows. The proportion of musketeers rose in these formations to become two-thirds of the total, and instead of being spread in a girdle around four sides of a square so that the great majority were unable to use their firearms unless the formation were completely surrounded by enemy troops, they were placed in increasingly elaborate deployments against smaller groups of pikemen, deployments whose primary intention was to ensure that all of them should have the opportunity to fire their muskets. (Parrott 20)

Parrott's 21st-century description of French battalion organization is nearly identical to that of de Lostelneau's 17th-century description of their composition and function, suggesting that de Lostelneau's contemporary theoretical manual does offer significant insight into military officers' perception of the importance of new tactical options, particularly as they impacted strategy. In the introduction to the "Battalions," de Lostelneau describes the tactical significance of Maurice of Nassau's reforms in 1647, offering an early concurrence with Parrott's modern assessment in 2005:

[The Battle Marshal must] arrange his infantry so that it is capable of defending itself while remaining organized without breaking apart under any but the greatest frays, even such that it is possible to successfully confront a larger enemy with a smaller number of Troops. Different battalion formations have been invented by those knowledgeable in the art of war, which their Successors have perfected, adding in their own way whatever improvements might make them better. In ancient times we found the Round, Oval and Square formations. The earliest lords of the land, Cyrus, Alexander and the Caesars, never attained the perfect knowledge that we now possess and employ to form our battalions. The fair Maurice of Nassau, Prince of Orange, was one of the first men to make use of these techniques, enabling his soldiers to resist against Cavalry even in open terrain, as he found a way to bring his soldiers out from the center and have them face the enemy on all sides, allowing

the Pikemen, who have more defensive capabilities, to cover the Musketeers, and to make use of this formation by sending out his Musketeers in between the ranks of his Pikemen and bringing the Pikemen back into formation by the same route, after they were called out of battle. By using these tactics, he not only protected his Musketeers but also his flags and his supplies.

[Le Marechal de Bataille doit sçavoir] ranger son Infanterie de sorte quelle puisse se defendre sans desordre & sans estre rompuë que par de grands efforts; meisme qu'un petit nombre puisse combattre & resister contre un plus grand. De temps en temps les sçavans dans le Meftier de la Guerre ont inventé des differents Bataillons, que leurs Successeurs on perfectionné, en adjouftant à leur forme ce qui les pouvoir rendre meilleurs. Dans l'Antiquité il n'y avoit que le Rond, l'Ovale & le Quarré qui fussent connus: Et le premiers Maiftres de la Terre, les Cyrus, les Alexandres & les Cefars ne font point parvenus à la parfait connoiffance que nous avons à present de les former. Le feu Prince d'Aurages Maruice de Nassau, est un des premiers qui a trouvé l'usage de les mettre en estat de resister meismes en pleine champagne contre la Cavalerie, ayant trouvé l'invention de vuider les centres, leur faire face par tout, mettre sa Moufqueterie à couvert de ses Piquiers qui ont plus de defenfe; & rentrer en leur place par la meisme chemin après avoir fait leur decharge. Il n'a pas seulement mis par ce moyen ses Moufquetaires à couvert, mais meismes ses Drapeaux & ses Bagages. (de Lostelneau 243)

Despite their descriptive similarities, what is unusual in Parrott's thesis is his subsequent claim that theoretical and training manuals—given their elaborate geometric formations, impractical application in the field, and incompatibility with the actual, hierarchical structure of the French army wherein veterans and elite officers were not likely to be widely distributed among new units to enforce complex drill—present a gap between the philosophy and praxis of 17th-century warfare. Parrott asserts, “Understanding the nature of warfare in early seventeenth-century Europe entails making a distinction between what is said in contemporary theoretical tracts and what can be inferred from the evidence of how war was waged in practice” (82). In fact in a footnote, Parrott suggests that there is no archival evidence of the use of Dutch and German drill manuals beyond, assumedly, their preponderance as published texts and internal referentiality to one another's images, tactics, and strategic recommendations.¹⁵⁶

¹⁵⁶ Parrott asserts, “Despite frequently reiterated claims that these [de Gheyn and Wallhausen] manuals were used to train French recruits, evidence for such a contention is non-existent” (38).

And thus arises an unusual intersection of dance and military studies. Visual representations and figurations of soldiers undeniably appear in military manuals as “instruments of force”; their very presence on the page is intended to figuratively and symbolically represent their capacity to embody and deploy force. As Smith states, force has always been both “the bullet, the bayonet—and the body that applies it” (8). And yet if few, if any, of the complex, geometrical patterns and battalion arrangements pictured in French manuals could be executed in practice by 17th-century French armies, then these representations may also be assessed as aesthetic choreographies, envisioned in the political imaginary and composed of intricate steps, spatial patterns, and elaborate, ensemble collaboration. If military manuals’ exhaustive descriptions of individual arms handling and coordinated drill *en masse* were not used ubiquitously in day-to-day operations, then they are even more intriguing as evidence of a decidedly choreographed approach to training and organization—one that reveals as much about the theorized capacity of an ideal body in motion to signify force as it does about the actual body in the field as an instrument of the state. If the choreography of drill, particularly in elaborate battalion formations, was impractical for deployment, and likely subject to improvisation on battlefields, then the complex choreographies of bodies acquire a decidedly performative charge. They offer kinship with the preoccupations of contemporary dance manuals and performances wherein dancers, like soldiers, are envisioned as choreographed agents, performing arcs of sociopolitical meaning in motion.

1.5—Bodies as Choreographed Agents

For dance historians engaged with Early Modern Europe, the perennial dilemma of archival research—what do historical materials reveal, as interpreted by peering through an extant, epistemological lens—is exacerbated when the moving arts persist only in a selection of printed ephemera that have survived, improbably, centuries of custodial intrigue and upset. This predicament also applies to the study of moving drill and military training. Conditions of war, revolution, government, infrastructure, climate, natural disaster, temperament, taste, and curatorial peccadillo must all collude to allow one instructional manual or costume etching to escape destruction. And then, how does the page testify to individual embodiment—the subjectivity, agency, and contradictions of living movement and movers? This methodological paradox is well-rehearsed in dance studies, wherein each scholar must negotiate a curious, necessarily tenuous, rapport with the dearth of archival materials and the inevitable hauntings of once-breathing choreography and corporeality, studied in absentia. Mark Franko summarizes one facet of this quandary succinctly in *The Dancing Body in Renaissance Choreography* when he remarks of 17th-century dance manuals, “The dancing body is conspicuous by its absence. There is no connection between the effect and its technique of performance. Both lead separate existences, pursue separate paths. The dancing body is posited only in order to cede its place to a theory without an object” (9). André Lepecki, in turn, frames the seeming disavowal of the body from its presence as a critical moment for dance studies, presaged in the 18th-century dance manual of Feuillet, but only “recently problematized.” Assessing his own titular choice, *Of the Presence of the Body*, as derived

from the caption “*De la presence du corps*” in Feuillet’s *Chorégraphie ou l’Art de Décrire la Danse* (1700) wherein a single square and schematic arc stand in for the vast complexity of space and movement, respectively, Lepecki observes of the figure: “This representational body that distances itself from its anthropomorphic source is nothing more than a body detaching itself from the certainty of its presence” (3). Both authors’ reflections indicate that evaluating 17th-century dance is not simply a task limited by archival assemblage, deceptively implying that a sufficiency of materials might allow one to exhume or conjure the training, technique, and meaning of dance (or military drill) “as it was.” Rather, the methodological gap between what the materials are and what one struggles to infer illuminates a more pressing, phenomenological dilemma—one must consider what the materials imply regarding embodied experience, as well as what their authors explicitly argue. More specifically, the gap bestows a responsibility to excavate the subjective, potentially disruptive agency of embodied performance, in this case, dance or military movement, not simply as an extended body politic of sovereignty or a coercive mechanism of the state, but as embodied politics for individual dancers and soldiers. To theorize the 17th-century body as an agent of force requires moving beyond a tactic that views performance as a primarily aesthetic or diversionary preoccupation from the “work” of war, politics, and governance, and instead embraces a strategy that attends to the constitutive role of both dance and military arts as physical, sociopolitical praxis. This orientation finds symmetry with Randy Martin’s description of dance as a “social kinesthetic” wherein movement has “the capacity to move an idea in a particular direction through the acquired prowess of bodies in action” (Martin 48), and

is echoed in Kate Van Orden's argument that in 17th-century France the power of the body was derived from an "emphasis on action" (11).

The acquisition of power—for an individual performer or corps—is not axiomatic: both dance and military movements gain power because they are imbued with the kinetic potential of force. Action accumulates power because of the force it portends, whether this force is symbolically, physically, or performatively used, for example, to influence change in an audience or influence change for a regime. In war, force is the ontological precept that gives war meaning: without force, there is not war. In *The Utility of Force: The Art of War in the Modern World*, General Rupert Smith (UK, NATO) designates military force as the singular, most profoundly misunderstood component of war. Smith asserts:

Force is the basis of any activity, whether in a theatre of operations or in a skirmish between two soldiers. It is both the physical means of destruction—the bullet, the bayonet—and the body that applies it. It has been so since the beginning of time. Indeed, the essence of force and its military uses are identical now to that described in the Bible, Sun Tzu's *Art of War*, the Greek or Nordic myths, and just about any historical book on battle and warfare. [...] It follows that to apply force with utility implies an understanding of the context in which one is acting, a clear definition of the result to be achieved, and identification of the point or target to which the force is being applied—and, as important as all the others, an understanding of the force being applied. (8)

Smith's concern for the utility of force in war—that is, its appropriate application to the circumstances and to achieve the desired outcome—is so urgent its theorization is the subject of his entire text. Published ten years earlier in the prologue to *Dance as Text: Ideologies of the Baroque Body*, Mark Franko—working in a discipline not generally allied with military theory—inquires if researchers can move beyond the aesthetics of dance and “delve beneath its surface to recover the performance's original lines of force?” (1). Thus, it is not only in 17th-century France that dance and military arts share similar,

theoretical preoccupations with the role of the body as an instrument of force. Force has always been a compelling, indelible facet of embodied life, particularly for dance and military arts wherein the body, whether by individual choice or by instruction, carries potential as an instrument of force. While Franko examines textual lines of force inscribed as Baroque dance¹⁵⁷ moves between text and performance, the term “lines of force” may also find literal, productive application when examining 17th-century training for bodies in European theaters of court and war. In these spaces, individuals would have had opportunities to embody force through physical lines, moving choreography, and geometric configurations; dance and military arts thus share spatial and political possibilities to depict or demonstrate force.

In France, dance instructional manuals compose a small oeuvre of dance treatises that include Thoinot Arbeau’s *Orchésographie* (1588), de Lauze’s *Apologie de la Danse* (1624), the early 18th-century notation works of Raoul Auger Feuillet which detail a style of Beauchamps-Feuillet dance notation initiated at the behest of Louis XIV, including *Chorégraphie, ou L'art de décrire la danse* (1700), as well as Pierre Rameau’s French dance manuals, *Le Maître à Danser* (1725) and *Abbrégé de la Nouvelle Méthode* (1725).¹⁵⁸ These manuals provide insight into the pedagogical and cultural role of dance and dance training in the 16th through 18th centuries for kings, courtiers, and soldiers, including during times of war.

¹⁵⁷ Baroque periodization as deployed by Mark Franko in *Dance as Text* is defined between 1580 to 1660. He writes of this selection: “My use of the term *baroque* coincides more exactly with its use in the context of French literature and cultural history. Rather than speak of the period often associated with baroque dance reconstruction (1660-1750), I am concerned with the preceding period (1580-1660)” (3).

¹⁵⁸ For a useful entrée into primary source writings on French dance, see *French Court Dance and Dance Music: A Guide to Primary Source Writings-1643-1789*. Dance and Music Series No. 1. Eds. Judith L. Schwartz and Christena L. Schlundt. Stuyvesant: Pendragon Press, 1987.

In *Le Maître à Danser*, Rameau reflects on the role of dance at the French court, and specifically for Louis XIV. During Louis XIV's lengthy monarchy (1643-1715), elaborate court dance proceeded against the backdrop of continuous territorial battles and major wars, including those waged during the time of the king's chief minister, Cardinal Mazarin (1643 to 1661),¹⁵⁹ Queen Anne of Austria's role as regent (1643 to 1651) and those of Louis XIV's legal rule (1651 to 1715).¹⁶⁰ Rameau retrospectively describes dance's significance at the court of Louis XIV during an era of unprecedented orientation towards the dancing arts:

The reign of Louis the Great will ever be regarded with justice as the epoch of the most illustrious men. Among all the arts which have flourished through the encouragement and liberality of so powerful a monarch, dancing has made the most rapid progress; everything has contributed to this end. That prince, endowed by nature with a noble and majestic bearing, loved from his cradle all manner of bodily exercises, and to his natural gifts added all those that can be acquired. (Rameau, *Dancing Master* xii)

Rameau's assessment that dance is the most evolved art form of Louis XIV's reign also draws attention to the monarch's love for "all manner of bodily exercises," and thus suggests that dance occupied a relational position to other embodied practices, such as fencing or drill, in contemporary thought. Rameau continues to observe of the king, "His passion for dancing induced him during periods of peace, to give magnificent ballets, in which this sovereign himself did not disdain to appear with the princes and nobles of his realm" (Rameau xii). In this passage, Rameau's observation includes an inaccuracy now established: the many balletic productions and dance accomplishments of Louis XIV's reign, including elaborate productions by Jean-Baptiste Lully and Pierre Beauchamps, as

¹⁵⁹ Cardinal Mazarin served as Louis XIV's Chief Minister from 1643 until his death in 1661; however, Mazarin became Chief Minister of France, under Louis XIII, following the death of Cardinal Richelieu in 1642.

¹⁶⁰ Louis XIV, born in 1638, became the King of France in 1643 when Louis XIII died, began his legal rule in 1651 when he came of age at thirteen, and began what may be called his personal rule, without a chief minister, in 1661 when Cardinal Mazarin died.

well as the founding of the *Academie Royal de Danse* in 1661 and a specialized dance academy within the *Académie Royale de Musique* in 1672, occurred during times of peace and during pending and declared war. Specific performances produced during France's active and anticipated military conflicts provide insight into the artistic and political import of the movement arts. One ballet performed in 1651, *Ballet des fêtes de Bacchus*, occurred amidst the turmoil of the second of the divisive, civil Wars of the Fronde, the *Fronde des nobles*. Reflecting on the ideologically persuasive role of this particular ballet, music scholar Georgia J. Cowart argues in *The Triumph of Pleasure: Louis XIV & The Politics of Spectacle* that the ballet's noble characters, opulence, and even the performance of the thirteen-year-old king himself served to politically assuage a wider audience and divert their concerns from war to pleasure. Cowart suggests, "Equating the court and wider realm with the peace and plenty showcased in the ballet, its artists and image-makers offered reassurance to a kingdom in the midst of armed rebellion and to a court aristocracy in the midst of profound social, political, and cultural change" (5). While Cowart correlates this ballet with pleasurable appeasement, David Parrott, in his essay "Art, ceremony and performance: Cardinal Mazarin and cultural patronage at the court of Louis XIV," dispels the idea that dance primarily served a diversionary function throughout Mazarin's tenure, both while he was at court and in exile. Parrott denounces the argument that, "to gain the political acquiescence of hostile nobles and angry bourgeoisie, and to stop them meddling in public affairs, Mazarin believed it was necessary to offer them a diet of frequent and novel musical and theatrical performances" (11). In fact, Parrott decries an analysis of court dance that equates

performance with pleasurable appeasement: “Implausible and hopelessly generalized, such an explanation would nonetheless strike a chord with a readership nurtured on the myth that, two decades later, Louis XIV had constructed the palace of Versailles as a means to distract the factious and disruptive nobility” (11). Parrot’s critique is a reminder that while diversion was certainly one function of court dance, the complexity of the evolving styles of dance at the French court, particularly in relation to discrete historical events, patrons, and personages, meant that dance performed subtle and shifting roles in court and state political functions, resisting generalization.

Parrott further remarks on the danger of generalizing in regards to the role of nobility at court when he analyzes why Mazarin may have returned to staging *ballets de cour* in 1653, particularly those that were less politically instigative than previous Italian productions. He suggests it was a political strategy of appeasement amidst dissent and should not be read as an affirmation of complete allegiance from “the court” to Mazarin and the regime. Parrott observes:

Not only were they [*ballets de cour*] a less provocative, French, art form involving the use of comprehensible texts which could be used to convey political messages, but they were a crucial means to involve courtiers in validating the regime. But the ballets of the 1650s were not the staging of royal triumph before a now thoroughly subdued and overawed elite of nobles and *officiers*. What is spoken of as “the court” in the 1650s is little more than a rump of loyalist *grands* prepared, for the time being, to accept the authority of Mazarin. (17)

Parrott parses the role of “nobles at court” to clarify that this designation represented a few individuals who showed support for a political regime, rather than a paradigmatic state that could be considered a historical norm. Parrott’s argument that any discussion of “the court” or “nobles” must be scrutinized for greater specificity, with increased

attention to the individuality of nobles in regards to discrete historical events, stresses the empowered role of dance as a movement art for individuals. Dance, like military arms handling for an officer, was distinctly capable of embodying ideas of personal or projected force within larger sociopolitical architectures. Bearing in mind this political situation while examining both de Lostelneau's and de Lauze's treatises, it's important to recognize that trained bodies were not necessarily liberated bodies, but nor were they "docile" ones wherein individual subjectivity was entirely lost in service of the state.

In its challenge to extant printing techniques, de Lostelneau offered his own authorial, material resistance to the idea that individuality was entirely lost in service of the sovereign in 17th-century French military arts. De Lostelneau's demand for novel technical innovation to design printing blocks that artistically rendered soldiering formations—in configurations that he required must symbolically represent every soldier as an individual body—created a text that publically insisted on the presence of individual bodies moving intricately through space. In comparison, de Lauze's text, though lacking pictorial representations of the body, provides its own celebration of bodily capacity through exposition. De Lauze steadfastly maintains his aversion to any kind of pictorial or symbolic representation for bodily instruction in *Apologie de la Danse* and even admonishes his readers:

I make bold to maintain that whomsoever has the imagination full of one science or another can make himself understood either through speech or in writing, if not to all, at least to those in his profession. I admit that the Dance has something particular which ennobles and animates it, such as a certain air, or a bearing sometimes sedate and sometimes negligent, which the pen cannot teach, but [to say]¹⁶¹ that beyond the steps one is unable further to teach the more necessary actions, which give an easy progress towards this perfection, and that it consists in seeing a good master demonstrate, are

¹⁶¹ Brackets inserted by translator, Joan Wildeblood, in translated English text of *Apologie de la Danse* (1952).

difficulties which I shall show in this Treatise to be imaginary, from which not only many who profess to teach, but Scholars themselves, may derive great benefits. (79-81)

De Lauze's argument that dance can be inscribed, in prose alone, renders the moving body a premier site for intelligible transfer, and lauds the body as a subject preeminently worthy of reflective erudition. De Lauze offers early kinship with 20th-century dance studies' efforts to relocate the body in prose, and also consider the agency and agenda of diverse kinds of bodies, in a continuum of critical scholarship. Despite the absence of representational and symbolic figures, moving bodies are nonetheless imbued with scholarly force and sagacious aptitude, and the manual may be viewed as a commendation of the dancing body. The absence of images in *Apologie de la Danse* may also suggest that many of the dances were so well-known, and dancing as an art form so ubiquitous for its intended audience, that de Lauze was freed, or believed himself to be liberated, from illustration in order to provide a philosophical, opining text on the meaning of dance and dancing bodies, although certainly within particular, classed environs and informed by his personal agendas.

Both authors distinctly situate the body at the center of their instructional and theoretical concerns through another unusual omission—neither author makes extended mention of movement in time or rhythmic cadence. All of de Lostelneau's linear "Evolutions" and "Battalions" inscribe increasingly complex field patterns for soldiers to perform in symbolic, three-dimensional space—they weave, fold back into themselves, and separate and realign in elaborate configurations. And yet what of time? De Lostelneau repeatedly emphasizes that soldiers must begin on the same foot and step with equal distance aligned with one another, and he instructs soldiers to shoot

upon hearing a drum beat in various Battalion instructions,¹⁶² yet there is no mention of specific musical scores in *Le Mareschal de Bataille*.¹⁶³ Rather, like de Lauze who does not discuss musical accompaniment, the physicality of the body appears to exist outside of time even while soldiers (coordinating firing) and dancers (coordinating footwork) perform complex movements that could not be synchronized with partners or in large numbers without rhythmic cadence. De Lauze instructs the reader when performing the *Courante Reglée* to physically determine the number of steps of the sliding *chassé-coulant* only “according to the size of the space” (de Lauze 93) and in instruction for the *Bransle Gay* in the *Method for Ladies* suggests only that “It is necessary that the Lady also begins the *Bransle Gay* by the last step, in order to get the cadence” (137). In their exacting focus on the learning body as the primary site of embodied intelligence, both authors prioritize the body’s dimensional agency to perform social and political accomplishment.

Bodily discipline in 17th-century movement arts did not simply signify control over one’s immediate physicality and coordination within a unit. De Lostelneau reminds the reader of the explicit, requisite role that soldiers play in the embodiment of war for the French sovereign in the mid-17th century. Remarking on the role of individual physical discipline, he suggests that insufficiently trained or insubordinate soldiers have forgotten that “they owe serving their Master and honoring him with their body, which

¹⁶² “They will leave to shoot their salvos as soon as they hear the drums and will retreat when they hear the drums’ call to go back to the field, all this with promptitude and judgment.” “*Ils partiront pour aller faire leur salve, aussitost qu’ils entendront battre l’allarme, & se retireront quand on battra aux champs; le tout avec promptitude & jugement*” (268).

¹⁶³ In comparison, Kate Van Orden analyzes the varied ways in which musical scores appeared in Early Modern French military manuals, including those of Johann Jacobi von Wallhausen (a diagram from his manual appears as Figure 8 in this chapter), of whose instructions she writes: “The musical point is that this choreography was performed in time: drums beat the *ordonnance*, forming the troops and ordering their movement according to rhythmic commands. The social point that follows from this is that drummers formed a crucial link in the chain of command, for which reason Wallhausen and Montgomery devoted whole chapters of their treatises to the fifes and drums” (207, original emphasis).

is their own” (“*Oubliant en cela ce qu'ils doivent au service de leur Maistre, & l'honneur de leur corps, qui est le leur proper*”) (446). In 17th-century movement arts, physical discipline and intricately crafted displays of force—in both dance and military arts—played a complex role in the construction of sovereignty in France, for king, populace, and enemy, particularly since the king’s body was theologically sanctioned as two distinct bodies—both a natural (mortal) body and a spiritual (eternal) body manifested through juridical doctrine as the body politic.¹⁶⁴ Dance and the military arts offer representations of and challenges to the materiality and political projection of both of the King’s bodies, particularly as individuals begin to move and march through space, thereby setting in motion political performance.

An orientation towards politicized embodiment was not only restricted to systematized military training; a focus on discipline, conduct, and bodily control was part of a larger concern in contemporary society and literature, particularly for the nobility. Guy Rowlands, in *The Dynastic State and the Army under Louis XIV: Royal Service and Private Interest, 1661-1701*, argues that a distinct shift in mentalities occurred in the mid-17th century, one that in particular impacted those nobles serving in the army under Louis XIV. He proposes:

At the very heart of the change in moral values was the belief that people—especially nobles serving in the army—should subjugate themselves to the supreme authority, and that the *grands* should bow to the will of the king in all matters. Louis XIV was fortunate in that the ethos of non-resistance, ‘politesse’ and ‘honnêteté’ was beginning, in the decade or so after the Frondes (1648-53), to gain a grip on the imaginations of the upper echelons of French society. To appreciate the change in cultural attitudes one needs to be aware of the emergence in the first half of the seventeenth century of a powerful strain of conduct literature which sought to prescribe a reformed ideal of the

¹⁶⁴ Theorization of the king’s “two bodies” across disciplines is extensive; however, for initial theorization, see Ernst H. Kantorowicz. *The King’s Two Bodies*. 1957. Princeton: Princeton UP, 1997.

nobleman. Complementing the printed word and the theatrical play, the appearance of several dozen academies for the education and refinement of the young nobility served to instill these new codes of conduct in the wealthier members of this Order. (7-8)

Rowlands' observation confirms one idea suggested in this chapter. Military instruction was not simply a process to ensure physical conformity, but rather revealed a more pervasive orientation towards embodiment found in both war and performance that reflected concerns for the body as a representative, and potentially resistive, agent of the state and sovereign. This conceit was also informed by developing theories of the body in fields of art, science, and law. For example, in the edited volume *From the Royal to the Republican Body: Incorporating the Political in Seventeenth- and Eighteenth-Century France*, editors Sara E. Melzer and Kathryn Norberg argue that the body became pivotal in juridical state functions in France. The editors remark:

Few states were as body centered as seventeenth- and eighteenth-century France. Political discourse abounded in body metaphors. Under the Bourbon monarchs, guildsmen spoke of their "corporation" and magistrates, of their "corps." Legal theorists talked about the "body politic," while royal apologists described the king as the "head" and his subjects as "members." [...] If the king's body had great political significance, so too did the bodies of his subjects. As sites of signification and symbolization, subject bodies constituted a valuable "political resource," one that neither the old nor new regime could afford to ignore. (3)

In placing the body in direct social and political lines of sight—as "sites of signification and symbolization" at court or in the military—both dance and military movement arts demonstrate the force of the presence of the body in performance theaters. And yet while dance and military manuals may have been extensively printed and widely circulated, their practical application is less certain—valuable historical details including how widely they were read, by whom, and how the tactics were deployed or deliberately misdirected have remained elusive. Archival evidence that traces the day-to-

day use of specific manuals, for example, their documented use in French military and dancing schools, their appearance on a military or academy “reading list,” and evidence of their use in letters, correspondence, and official publications is similarly scarce. Thus, the manuals provide a window into how training for the movement arts was deliberately conceived. Later readers must use a sufficiency of circumspection concerning their concretized *praxis*. However, the manuals’ theoretical suggestions, particularly regarding contemporary, philosophical concerns for embodying force, have been undertheorized. First, 17th-century dance and drill manuals evidence significant, shared concerns for the dilemma of training bodies in art forms that were otherwise transmitted through physical demonstration, that is were physically embodied. And second, the manuals share preoccupations regarding the body’s primary role as an agent of transformative force, whether that force is deployed through violence by soldiering bodies or depicted through performance by dancing bodies. These 17th-century preoccupations help to illuminate and sharpen the contrast with embodied practices explored in the next chapter. In 21st-century, U.S. military training practices, the individuality of bodies has been so seemingly elided that thousands of soldiers are referred to in the singular and the visual representation of individual bodies, as found in de Lostelneau’s manual, has been replaced with the “body” of lethal technology.

Chapter 2: Counting Bodies of War

I am an American Soldier. I am a Warrior and a member of a team. I serve the people of the United States, and live the Army Values. I will always place the mission first. I will never accept defeat. I will never quit. I will never leave a fallen comrade. I am disciplined physically and mentally tough, trained and proficient in my warrior tasks and drills. I will always maintain my arms, my equipment, and myself. I am an expert and I am a professional. I stand ready to deploy, engage, and destroy the enemies of the United States of America in close combat. I am a guardian of freedom and the American way of life. I am an American Soldier.

—*The Soldier's Creed, U.S. Army*

We don't do body counts.

—*Tommy Franks, Bagram Air Base 2002*

2—Introduction: Marching Through War in the United States, 1776-2014

As European warfare and its soldiers have resolutely marched across history, the emergence of the nation-state, radical changes in state alliances and geopolitical theaters, and new training methods, tactics, and technology have uncoupled court choreography from battlefield formation. While 17th-century European military engagements were enacted alongside embodied military arts, as European tactics and training methods moved across the Atlantic to America, the military theaters and requirements of 18th- and 19th-century U.S. domestic wars and late 20th- and 21st century international wars radically changed military formation, arms, and their relationship to one another.

Renaissance European warfare, despite its historical influences on extant U.S. Military organization, is too divergent in time and sociopolitical milieu to suggest that 17th-century conceits of the body find explicit comparison in the 21st century. However, French military tactics were imported and adopted to facilitate 18th- and 19th-century

wars in the U.S. and therefore the philosophies and praxes that inform a modern American way of waging war do find antecedents in French military practices. In addition, the discoveries of the first chapter direct attention to the principal query of this chapter: if the soldiering body is no longer center stage—privileged in training, performance, and presentational politics—how has the role of the body changed in relation to, or as a representative of, the force of war? The previous lines of inquiry thus guide the investigation of the soldiering body in 21st-century theaters of war: Has the physical body remained the primary agent for delivering force in 21st-century combat? If military training no longer prioritizes extensively choreographed drill, how does 21st-century training create a sense of military embodiment? In an era of warfare conducted with the unprecedented use of robotic and remote-operated technology, will soldiers—“boots on the ground”—be requisite to wage war in the later 21st century? This chapter suggests that although soldiers no longer engage in hand-to-hand combat and military occupational specialties (MOS) are primarily defined by the technology soldiers use—infantry officer, weapons sergeant, armor officer, field artillery officer, cyber network defender—late 20th- and early 21st-century warfare continues to prioritize the soldiering body as a primary site of innovation and experimentation for the force of war. However, as technologies such as wearable robotics, enhanced prosthetics, embedded virtual reality, and unmanned aerial vehicles (UAVs) have become integrated with U.S. combat operations and portend to replace soldiers with their robotic counterparts, the discursive language used to describe soldiering bodies has changed and often refers to

soldiers in terms that erodes their subjectivity or disassociates the violent labor of war from its physical and psychological consequences.¹⁶⁵

Methodologically, “Counting Bodies of War” draws from primary documents and scholarship to briefly examine late 18th- and 19th-century conceits of the American soldiering body, and pivots to consider late 20th- and early 21st-century evidence and theorization of the embodiment of war in the United States.¹⁶⁶ The chapter examines military publications, soldier memoirs, and modern scholarship, and includes first-person interviews I conducted with U.S. Military soldiers between 2008 and 2014; in these, soldiers examine their active-duty experiences in the Middle East and assess the broader ethical, legal, and mental health effects of waging war on behalf of the United States. There are two primary groups of bodies at war: active combatants and non-combatant civilians. The interviews provide insight into the experience of U.S. soldiers who are tasked to deploy the force of war, but also disproportionately endure the embodied consequences of physical and psychological injury for the apparent safety of a larger society. The second community gravely harmed in 21st-century military engagements

¹⁶⁵ Jaron Lanier, often designated as the “father” of virtual reality has written extensively concerning the elision of human agents from the theorization of virtual reality; a paradigm he refers to as “antihuman” in its inaccurate removal or implied erasure of humans—programmers, designers, and users—from the “reality” of virtual reality. Lanier’s critique is echoed in this dissertation, which suggests the “virtual” always remains irrevocably bound to the “real” in the form of embodiment by programmers coding technology, engineers designing technology, and users deploying technology. In *You are Not a Gadget: A Manifesto* (2011), Lanier writes: “The antihuman approach to computation is one of the most baseless ideas in human history. A computer isn’t even there unless a person experiences it. [...] This is not solipsism. You can believe that your mind makes up the world, but a bullet will still kill you. A virtual bullet, however, doesn’t even exist unless there is a person to recognize it as a representation of a bullet” (26).

¹⁶⁶ This scope of this dissertation is restricted to consider the relationship between dancing and military arts in 17th-century France, as a historical counterpoint to ponder ways in which soldiering bodies were differently shaped and shifted representationally as these techniques moved across the Atlantic to America, and then shifts to early 21st-century engagements. However, the scope does not include examination of the U.S. soldiering body during World War I, World War II, Vietnam War, and the Korean War—these engagements would each require an individual dissertation. When possible, observations from scholars working on these periods are provided. For examples of scholars’ concern for the soldiering body during this period see: Joanna Bourke. *An Intimate History of Killing: Face to Face Killing in 20th Century Warfare*. London: Basic Books, 1999.; Christina S. Jarvis. *The Male Body: American Masculinity during World War II at War*. Dekalb: Northern Illinois Press, 2010.; Maria Höhn and Seungsook Moon, eds. *Over There: Living with the U.S. Military Empire from World War Two to the Present*. Durham: Duke University Press, 2010.

includes non-combatant civilians. This chapter engages with the experiences of non-U.S. civilians in combat zones obliquely, as described from the perspective of U.S. soldiers who served tours of duty in Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF) and Operation New Dawn (OND); however, it proceeds from the position that non-combatant, civilian injuries and casualties—bodies of war who have not elected to participate in state and societal acts of war—represent an unacceptable consequence of the morally ambiguous act of employing violent force in the name of peace.

“Counting Bodies of War” is principally concerned with counting—in the sense of *giving meaning to the experience of*—bodies at war. In a decade wherein new and anticipated technologies have augmented the body as the primary instrument of force, it is increasingly vital to attend to the lethal and post-traumatic effects for both soldiers and civilians as war is transformed by new technologies. In the absence of clearly delineated battlefields and conventional set warfare, 21st-century war still appears to have shifted casualties from combatants to civilians, despite the apparent ability of technologies to target only enemy combatants with far greater tactical and technological precision.

The object of this English translation is to display the whole French system, as it is established, so that the judicious mind may judge of it as a whole, which could not be done so well if it were abridged or mutilated. In its perfect state, the skillful disciplinarian will perceive what is applicable and what is not, to the circumstances of the United States.

—John McDonald, *Note to the Reader, 1807 English Trans. of 1791 Règlement Concernant L'Exercice et les Manoeuvres De L'Infanterie*

2.1—Alignment of French Training into the Civil War

In the 1770s, Early American soldiering bodies received the same medical, social, and governing scrutiny directed at other recent European immigrants: orderly, cleansed, and groomed bodies were increasingly equated with the basic establishment of civilization in the growing colonial settlements. Historian Kathleen M. Brown observes in *Foul Bodies: Cleanliness in Early America*, that “body work”—the care, cleaning, and cultivation of a refined body—emerged in mid 18th-century America as a central preoccupation of daily life, professional labor, and institutional decrees. Brown remarks that attention was particularly directed at Revolutionary War soldiers:

The war’s mobilization of large numbers of men into military service provoked an unprecedented public discussion of the importance of cleanliness of the health and morale of the troops, and by implication, the nation. [...] The concerns with the cleanliness of quarters, garments, and air reflect the effort to improve the health of the troops. Bodily postures required for marching in formation and ceremonial parades were similarly unfamiliar impositions. The Continental Army’s attention to the men’s appearance and demeanor reflected beliefs that in addition to improving health and discipline, maintaining well-regulated, neatly dressed troops would have a positive impact on morale and win divine support for the American cause. (166)

Brown’s scholarly examination of the Army’s practices of cleanliness links body care to a wider scope of constructing “the meaning of citizenship, society, and nation” (160). Contemporary anxieties regarding soldiering bodies were often manifested in the form

of military or institutional issuances. In January 1776, a series of decrees delivered by Washington to soldiers tied military service to the elimination of slovenly behaviors and admonished: “If a Soldier cannot be induced to take pride in his person he will soon become a Sloven and indifferent to every thing else” (Fitzpatrick 207).

The need to cultivate bodily routines that were practical for and performative of an emerging, national identity was on full display in contemporary debates regarding how citizen-soldiers, specifically, should be drilled and disciplined. These debates demonstrated colonial antipathies to British military methods, despite the continuance of a generally European style of linear warfare,¹⁶⁷ as well as political quarrels about how Continental Army soldiers should appear as embodied representatives of a nation on the precipice of formation. Responding to the British Coercive Acts of 1774, colonial representatives considered a dearth of military arms, inadequate supplies, and general disorganization to all be potential threats to America’s military successes. However, deficient methods for physically training soldiers emerged as a primary issue for organizational and procedural angst. On December 10, 1774, the First Provincial Congress of Massachusetts urgently instructed colonial militias to be “immediately equipped with an effective fire arm, bayonet, pouch, knapsack, thirty rounds of cartridges and balls and that they be disciplined three times a week, and oftener, as opportunity may offer” (“Journal of Provincial Congress of Massachusetts” 71). Pressing concern regarding the supply and training of colonial militias, minutemen, and the Continental Army would characterize the next four years of war until more

¹⁶⁷ See: Guy Chet. *Conquering the American Wilderness: The Triumph of European Warfare in the Colonial Northeast*. Amherst: U of Massachusetts P, 2003.

comprehensive French aid arrived in 1778 with the signing of the Treaty of Alliance and Treaty of Amity and Commerce. Historian John Ferling states unequivocally in *Almost a Miracle: The American Victory in the War of Independence* (2007) that, “French help was the single most important factor in determining the War of Independence. [...] With the American economy in ruins after 1778, it is inconceivable that the rebels could have waged war...without a French ally” (564). By 1779, much of the Continental Army wore uniforms styled on French patterns or fabricated in France, handled weapons of French-design and supply, and drilled in French and Prussian tactics.¹⁶⁸ And by the 1790s, French drill manuals and tactical methods had become inextricable from an American way of warfare. Drill training and tactics did not transition seamlessly from 17th-century European warfare to 18th- and 19th-century American engagements across the Atlantic. European tactics underwent radical change during the Napoleonic wars, and were again transformed during 18th and early 19th-century American battles, including ongoing wars with U.S. American Indians, Mexico, and Great Britain. Nor did the influence of French military instruction in the U.S. originate from one literary source, diplomat, or officer.¹⁶⁹ However, by the early 1800s the impact of French tactics on American warfare was, in the words of military historian Donald Graves, “a flood tide” (1).

In 1803, British Lieutenant-Colonel John MacDonald translated the 1791 French Regulations *Règlement Concernant L’Exercice et les Manoeuvres De L’Infanterie* into English

¹⁶⁸ Christian M. McBurney. *The Rhode Island Campaign: The First French and American Operation in the Revolutionary War*. Yardley, PA: Westholme, 2011. Jason Lane. *General and Madame de Lafayette: Partners in Liberty’s Cause in the American and French Revolutions*. Lanham, MD: Taylor, 2003.

¹⁶⁹ For example, for an analysis of the influence of Benjamin Franklin on the French role in American warfare by the lifelong curator of his Yale Collection Papers, see: Claude-Anne Lopez. *My Life with Benjamin Franklin*. New Haven: Yale UP, 2000.

and an American edition was published in 1810. The editions were so popular that MacDonald translated the 1792 French Regulations, *Règlement provisoire sur le service de l'infanterie en champagne*, in 1807. William Eustis of the Democratic-Republican Party was selected by James Madison as the Secretary of War in 1809. Eustis worked to revise and update U.S. Military tactical and drill manuals and in 1810 commissioned Colonel Alexander Smyth to produce a revision of the 1791 French Regulations specifically for the American military termed the *Regulations for the Field Exercise, Manoeuvres, and Conduct of the Infantry of the United States*. Published in March of 1812, only a few months prior to the June commencement of the War of 1812, the manual incorporated specific elements of Prussian Baron Von Steuben's *Revolutionary War Drill Manual*, otherwise known as the "Blue Book," thus bridging a theoretical gap between two prominent instructional systems. Letters to Eustis during his tenure as Secretary in the fall of the War of 1812, six months into the war, suggest that training and disciplinary methods were still disorganized, despite ongoing efforts to implement more rigorous French drill and training exercises. For example, Commander Lewis "Lew" Cass of the 3rd Ohio Volunteer Regiment laments to Eustis that the soldiers are "Men without energy, talents, or weight of character"¹⁷⁰ (84). And a letter by Brigadier General James Winchester informs Eustis of the dire physical conditions of his Northwest regiment, suggesting that the *esprit de corps* of his men is intact, though not

¹⁷⁰ "Sir, I have since my return made particular enquiry into the present situation and future aspect of affairs in this Country. Sorry I am to be compelled to say, they by no means appear so favourable as I could wish. I much doubt if anything is to be expected this fall. You may rely upon it, the militia are not to be depended for an offensive campaign, I really cannot describe to you the kind of field officers in the Regiment from this Division. Men without energy, talents or weight of character. I am informed by persons from the Camp, that a spirit of insubordination is universally prevalent." Lewis Cass. *Letters to the Secretary of War, November 6, 1812*. Web. 12 Nov. 2013. <<https://ia600301.us.archive.org/1/items/letterstosecreta56eust/letterstosecreta56eust.pdf>>

their attire or health: “I am sorry to inform your Excellency that the 17th Regiment is still without winter clothing, their summer dresses are in rags; most of them without shoes to their feet” (1272-1273).¹⁷¹ The letters’ observations concerning regiments’ lack of supplies, deficit health conditions, and the ongoing need for additional drill and discipline indicate how central soldiering bodies remained to the fundamental operation of waging late 18th-century war. While the nascent U.S. Military was struggling to implement French drill and tactics, they were also gradually adopting an institutional orientation towards soldiering bodies that prioritized their health, physical techniques, and performance as indicative of national accomplishment. Brown observes of soldiers’ corporeality in *Foul Bodies*, “Relationships between freedom and discipline, manhood and gentility, were all realigned as a consequence of war and nation making” (161). While Brown notes this alignment in the 18th century, in fact, heightened attention to properly groomed, drilled, and coordinated soldiering bodies as emblematic of the state would indeed persist into the 21st century for the U.S. Military.

In 1813, John Armstrong was selected by President Madison to replace Eustis as U.S. Secretary of War and designated Lieutenant Colonel William Duane’s French-influenced tactical manuals, already in print and circulation for a number of years, as the modern tactical manuals for the military. In 1809, Duane wrote *The American Military Library, or Compendium of the Modern Tactics, Embracing the Discipline, Manoeuvres, and*

¹⁷¹ “Sir, Yours of the 21st Inst is received: I am sorry to inform your Excellency that the 17th Regiment is still without winter clothing, and that their summer dresses are in rags; most of them without shoes to their feet: notwithstanding in high spirits, and anxious to advance. I hope Sir, you will do me the justice to believe, that the detention of this wing of the N.W. army in the neighborhood of this place, for more than forty days, has been owing to causes not within my control. I moved the army to this place, for the convenience of firewood, and dry land to encamp upon. At the Fort, twenty odd teams were employed in hauling fuel — and they became so weak, that I found it necessary to send them to the settlement to recruit. *Letters to the Secretary of War, November 20, 1812*. Web. 12 Nov. 2013. <<https://ia600301.us.archive.org/1/items/letterstosecreta56eust/letterstosecreta56eust.pdf>>

Duties of Every Species of Troops. Infantry, Rifle Corps, Cavalry, Artillery of Position and Horse Artillery, in which he reflected on the tactics of the Revolutionary War and argued that embodied training and tactics must evolve if the United States was to be prepared for future, seemingly imminent engagements. Duane was a military officer and scholar during the Jeffersonian era and well-known editor of the *Aurora*, an Anti-Federalist newspaper that Duane co-edited with Benjamin Franklin's grandson, Benjamin Franklin Bache.¹⁷² Duane suggested his manual encompassed the most relevant and efficacious French tactics to date:¹⁷³

The tactics of our revolution would not answer in the present times. There is no discipline; there is even no system; and there are gross misconceptions on the subject.¹⁷⁴ [...] [This manual] comprehends the whole of the most approved systems of tactics and discipline, that have been produced within the last century and the present; and particularly, that which is the simplification of all others, the French system, which has as well by that simplicity, as by its success, demonstrated its superiority." [...] It is particularly necessary to remark, that as the French system is now adopted by all the nations of Europe, it is essential, that whatever nation is in danger of being attacked by that system should understand it: this work will embrace all that is in modern use. (ii)

Duane revered the French system and found it preeminent as a replacement for Prussian tactics, used intermittently during the Revolutionary War under the guidance of Baron Von Steuben. Duane acknowledged that the Prussian system initially provided a more systemized cadence and precise geometry to marching armies,¹⁷⁵ yet he argued that these advances "were rather suggested by the Prussians than perfected; but the

¹⁷² Duane's son, William J. Duane, was also U.S. Secretary of Treasury for Andrew Jackson.

¹⁷³ Duane's insistence throughout his instructional manual on the importance of French tactics for the United States' military is so significant that he reproduced an English translation of the 1791 French manual, *Règlement Concernant L'Exercice et les Manoeuvres De L'Infanterie*, as a full supplemental in Part III.

¹⁷⁴ Duane's observation continues: "When it was begun, the presence of danger seemed to be immediate, and, as no discipline existed, it was at once resolved to begin the work at a point suitable to the exigency; that is, with the tactics and discipline of light troops, so well adapted to our country, entering so largely into the modern tactics, and the only tactics suitable for undisciplined troops. [...] The discipline of light troops being published, it was followed by a translation of the French modern discipline of infantry" (ii).

¹⁷⁵ Duane conceded that the Prussian system's "great features" included: "the introduction of *cadence* and *measured* pace, in which Saxe had said, consisted the great secret of tactics; the principles of manoeuvre; the display of columns and lines with ease, and unprecedented rapidity and precision" (40, author's emphasis).

French...on the field have demonstrated that though the Prussian theory was profound, it was susceptible of being succeeded by a better” (40). Donald Graves argues in “The Flood Tide of French Influence: The Work of Tousard and Duane, 1807-1810” that the growing impact of French tactics on early 19th-century military operations was caused by a general preoccupation with Napoleonic warfare, an influx of expatriate French revolutionaries to the U.S., and the translation into English of seminal French military treatises, such as those of MacDonald, Smyth, Duane, and Louis de Tousard.¹⁷⁶ However, the divisive, Constitutional ratification debates of the 1780s divided the military corps over the preferential adoption of British versus French tactics and ensured that French methods were not unilaterally embraced, particularly as political discretion continued to guide military appointments and philosophy into the 1810s.¹⁷⁷ The dissent regarding which appropriate system of tactics to implement became so great that Bonura terms the War of 1812 a “Period without a Paradigm” (46), and suggests that manuals produced during the time, such as Duane’s *A Handbook for Infantry*, were “too French for the Federalist officers and not French enough for the Republican officers” (47).

And yet despite political disagreements at the beginning of the century, by the start of the American Civil War, an acceptance of French tactics had become militarily

¹⁷⁶ Tousard was commissioned by George Washington in 1795, and he not only translated but produced original French tactical materials for an American readership, including the *American Artillerist’s Companion, or Elements of Artillery* (1809). Graves suggests that this text, though not officially printed by the U.S. War Department, was so popular it must be considered the “fourth semi-official” reference text for the U.S. Military at the time (3).

¹⁷⁷ Military historian Michael Bonura, in *Under the Shadow of Napoleon: French Influence on the American Way of Warfare from the War of 1812 to the Outbreak of WWII*, suggests that while military appointments immediately after the American Revolution were primarily given to Federalists, Jefferson sought to systematically diversify the army with a broader socioeconomic range of officers and also ensured through a system of targeted promotion that “politically appointed Republican officers superseded their more qualified and capable Federalist peers” (45).

de rigueur. In May of 1861 in the opening weeks of the Civil War, the United States War Department authorized and adopted the military infantry tactical manual, *United States Infantry Tactics for the Instruction, Exercise, and Manoeuvres of the United States Infantry, Including Infantry of the Line, Light Infantry, and Rifleman*. The manual was intended to provide an updated, contemporary text for U.S. military training and drill tactics. More than two centuries after the publication of *Le Mareschal de Bataille* in France in 1647, the *United States Infantry Tactics* remained decidedly preoccupied with appropriate drill exercises that explicitly relied on French drill and military techniques. War in the late 19th century in a nation with, comparatively, a dearth of institutional history to organize and deploy large war campaigns, would primarily rely on the French legacy of infantry drill as a requisite of day-to-day military training and operations. The War Department affirms the importance of aligning U.S. Military tactics to French methods in the first lines of the 1861 “Preface”:

The following system of Infantry Tactics is based upon the latest improvements in French military experience, and adapted to the peculiar wants of our service. The work as originally published under the title of “United States Infantry Tactics” was prepared by order of the United States Government, and, after the most satisfactory evidence of its efficiency, was authorized and adopted, May 1, 1861, by the Secretary of War, for the instruction of the troops in the military service of the United States. The advantages claimed by this system of tactics over former ones are numerous and decided: greater celerity in movements, forming in line from column without halting, changing direction from front to rear while marching, doubling the files when marching by a flank, the omission of unnecessary commands, or parts of commands, more varied formation of squares against cavalry, and many others. (9)

The new manual was nearly identical to U.S. Lieutenant Colonel William J. Hardee’s *Rifle and Light Infantry Tactics*, commonly referred to simply as “*Hardee’s Tactics*,” which had been the official U.S. infantry manual in wide circulation since 1855. Hardee’s manual, originally commissioned by U.S. Secretary of War Jefferson Davis, required swift

replacement when Hardee, a veteran of the Mexican-American war, former West Point graduate, and tactics commander sent to France in 1840 to study French military operations, resigned his U.S. Military appointment and become a Confederate Colonel in his seceding state of Georgia in March of 1861. The War Department approved a subsequent edition in 1861¹⁷⁸ from which Hardee's name was summarily removed as author. In a pedagogical gloss to the edition, U.S. Lieutenant Colonel H. B. Wilson tasked readers to answer questions and summarize important points of (French) drill. The questions required readers to calculate the pace of marching across a set distance, determine the appropriate bodily positions for manning arms, and explain the subtle motions required for balance, stamina, and coordinated movement during tactical maneuvers. The section titled "Position of the Soldier" tasked soldiers to analyze their own posture and movements by posing questions such as:

Why should the heels be on the same line? Why should the feet be equally turned out, and not forming too large an angle? Why should the body be erect on the hips? Why should the upper part of the body incline forward? Why should the arms hang naturally, elbows near the body, the palm of the hand turned to be a little turned to the front, and the little finger be behind the seam of the pantaloons? (26-28)

The answers, unchanged from Hardee's text, dictate the need for rigorous alignment:¹⁷⁹

Heels [must be] on the same line; Because, if one were in the rear of the other, the shoulder on that side would be thrown back, or the position of the soldier would be

¹⁷⁸ More than one edition of the 1861 publication of Hardee's manual, sans any attribution to Hardee, circulated. Even those published at a later date generally included the extended title: *Prepared Under the Direction of the War Department and Authorized and Adopted by the Secretary of War, May 1, 1861*. The edition with Wilson's pedagogical gloss includes this extended title, as well as a Preface signed by Wilson in April of 1862, and a publication date by J. B. Lippincott & Co. of 1863.

¹⁷⁹ The manual also suggests: "*The body erect on the hips*; Because, it gives equilibrium to the position. The instructor will observe that many recruits have the bad habit of dropping a shoulder, or drawing in a side, or of advancing a hip, particularly the right, when under arms. These are defects he will labor to correct. *Shoulders square*; Because, if the shoulders be advanced beyond the line of the breast, and the back arched (the defect called *round-shouldered*, not uncommon among recruits), the man cannot align himself, nor use his piece without address. It is important, then, to correct this defect, and necessary to that end that the coat should set easy about the shoulders and armpits; but in correcting this defect, the instructor will take care that the shoulders be not thrown to the rear, which would cause the belly to protrude, and the small of the back to be curved" (40, original emphasis).

constrained. The feet [must be] equally turned out, and not forming too large an angle; Because, if one foot were turned out more than the other, a shoulder would be deranged, and if both feet be too much turned out, it would not be practicable to incline the upper part of the body forward without rendering the whole position unsteady.¹⁸⁰ (26-27)

The *1861 United States Infantry Tactics* manual situates the training and detailed discipline of soldiers' bodies—posture, alignment, coordination—at the center of the treatise because infantry drill of thousands of assembled bodies on the battlefield *remained significant* for organized movement across terrain, the effective manning of arms, and the coordinated act of firing and defense in 19th-century warfare. Military drill was ubiquitous in soldiers' daily life: in the words of Oliver Wilcox Norton, a Civil War soldier with the 83rd Pennsylvania infantry who published a memoir of *Army Letters: 1861-1865* in 1903, "I commenced writing yesterday, but was obliged to stop to attend drill, a very common incident in soldier life. The first thing in the morning is drill, then drill, then drill again. Then drill, drill, a little more drill. Then drill, and lastly drill. Between drills, we drill, and sometimes stop to eat a little and have roll-call" (Norton 28). While drill was routine for enlisted soldiers, by the spring of 1862 it was hoped that young men would also vigorously train in anticipation of military service. As Wilson notes in his "Preface," signed on April 7, 1862 (the second day of the two-day Battle of Shiloh which would result in the most Union and Confederate casualties, approximately 24,000, up to that point), tactical drill required both theoretical study and community practice by young men likely to serve in the future for a "military country":

The young men of every neighborhood in our country may be induced to organize

¹⁸⁰ Students of classical ballet will likely have heard these exact instructions, with a similar anatomical logic, for example, for standing in first position with the heels slightly apart if one is knock-kneed or hyperextended and reducing the open angle of the feet if one is not able to control one's balance without pitching forward or backward.

winter schools, and meet together in the evenings for the purpose of studying and reciting the tactics. By doing this, they will acquire much theoretical knowledge, and can acquire practical information whenever it is convenient for them to meet together and drill in squads or companies. They may thereby qualify themselves to serve their country when, at a time like the present, she may need their services. This has become a military country; and the attention of young men is called to these suggestions. ("Preface")

To understand why French influence, particularly on instructional manuals, became so significant during military engagements leading up to and throughout the Civil War, it's important to understand what a basic "French system" of tactics suggested that was appealing to U.S. military officials, and how these tactics, in particular, changed after the French Revolution. Bonura argues that French influence not only informed tactics, technology, and training, it paradigmatically shaped American intellectual thought about a national "way of warfare" until World War II (3). Bonura asserts:

From 1814-1940, the U.S. Army organized, trained, learned, and fought according to an understanding of war imported directly from the armies of the French Revolution. The fundamental elements of the American way of warfare remained French, unaffected by battlefield events or advances in technology, for over 100 years. (2)

Bonura is not alone in his modern assessment that institutional paradigms within the 19th-century U.S. military were derived directly from the French, if not always successfully.¹⁸¹ Military theorist Paddy Griffith addresses the tactical and strategic failures of the Civil War in *Battle Tactics of the Civil War*, including the influence of French instructional manual imprints:

It is easy to recall that the drill books used in the Civil War were almost verbatim translations of French originals, leading to a set of European tactics being artificially imposed upon the armies of a completely non-European continent. Equally, the higher

¹⁸¹ Griffith suggests that unsteady American results in the field, despite the dissemination of rigorous French tactical manuals, occurred because the tactics were not deployed effectively and there is always an impasse between a manual for physical instruction and its application: "The reason why they seemed to be unsatisfactory was rather that they were placed, without further clarification, into the hands of an exceptionally well educated army which had exceptionally few experienced officers. [...] On the other hand, it may be that the problem really had more to do with the eternal dilemma facing all writers of military manuals. They know they must offer a recipe for action, yet they also know that in real battle this recipe will fall apart (115)."

theories of war allegedly applied by many American commanders in the 1860s were almost entirely made in France. [...] There is no avoiding the fact that American military institutions before the Civil War were most profoundly moulded by the military theories of the French, and it is therefore the French who take a major part of the blame for the military disasters. (21-22)

The strategies Griffith refers to that American military officers inherited or adopted from 17th -and early 18th -century French warfare were based on tactics designed for extended siege warfare: French linear maneuvers required generals to determine the order of battle prior to engagement and were conducted with set arrangements for cavalry, musketeers, and pikemen who maintained position and reformed into large, shifting formations.¹⁸² The dominance of European standing armies with these coordinated linear formations continued to influence the tactics of the Revolutionary War and the War of 1812. In Europe this tactical paradigm changed, however, as professional French soldiers were replaced by highly mobilized citizen soldiers during the French Revolution. Bonura attributes the fervent patriotism of French revolutionaries, as well as specific tactical changes, to the success of the French Revolution. In turn, these two qualities—keen patriotic spirit and the need for adaptive tactical methods—also characterized the American Civil War and made the specific methods of the French Revolution ostensibly serviceable for U.S. Military generals. During the French Revolution, the massive, geometric linear arrangements of De Lostelneau's time, which required entire armies to advance, maneuver, and defend

¹⁸² Describing the influence of French warfare from the *Ancien Régime* on the American tactics, Bonura writes: [The general] deployed his whole force into a single formation, and launched his infantry against the enemy. When the two formations collided, the better trained and drilled units produced a higher volume of fire by continuing to operate their muskets amid the carnage created by short-range volley fire of smoothbore muskets. The harsh discipline required to create effective infantry on the linear battlefield became a requirement for victory and a limiting factor of eighteenth-century warfare. Once the commander determined his order of battle and issued his orders, victory came down to a single blow by the entire army, even if this blow took hours to land. (16)

ground under strict rules for assembly, were deliberately replaced by smaller units, often in primary column formations, that were able to react and respond with some independence within the context of the larger operation. New drill and maneuver regulations issued in the 1860s provided theoretical synthesis and analysis of France's previous campaigns, while recommending modern changes for the new composition of a citizen army that embraced philosophical changes aligned with revolutionary principles of independence and citizen action.¹⁸³ In the United States, this shift represented a turn away from the ancient paradigm of human phalanx formations for combat and presaged the gradual disappearance of elaborate infantry alignment for battle and combat after the Civil War in what would become, in the 21st century, the world's largest military.

In the 21st century, the U.S. Army manual *TC 3-21.5: Drills and Ceremonies* contains the comprehensive regulations for U.S. Army drill. Published in July 2003 and updated as of January 2012, the manual includes detailed instructional steps for individual drill with and without weapons, ensemble drill for platoon, company, battalion, and brigade, and ceremonial drill for parades, honor guards, reveilles, funerals, and military colors. In the introduction, the historical origin of institutional military drill in the United States is presented as follows:

The drill procedures initiated at Valley Forge were not changed for 85 years, until the American Civil War, and many of the drill terms and procedures are still in effect today. Drill commands are about the same as a the time of the War of 1812, except that then

¹⁸³ In practice in the U.S., some of these changes included multiple training camps for citizen soldiers, diversified options for non-specialized infantry roles, and flexibility for units to act independently in battle in smaller arrangements. The U.S. was also influenced by specific tactical configurations from the French. For example, The French Revolutionary military retained linear arrangements (*ordre mince*), and added the flexibility of maneuver by offensive columns (*ordre profond*) that could respond, reconfigure, and improvise in smaller sets without the requisite coordination of thousands of individual soldiers, marching in massive geometric battalions. Bonura argues that there was "no more revolutionary tactical innovation in the Regulations of 1791 than the development of the small attack column" (21), still in use up to and during the Civil War.

the officers and NCO's began them by saying, "Take care to face to the right, right, face." Also, during the American revolutionary period, troops marched at a cadence of 76 steps a minute instead of the current cadence of 120 steps. Then units performed precise movement on the battlefield, and the army that could perform them best was often able to get behind the enemy, or on his flank, and thus beat him. (1-2)

Today, infantry drill in the U.S Military serves a primarily organizational function (during military training) and ceremonial function (throughout military life). As the modern U.S. Army drill manual suggests, performances of "precise movement on the battlefield" timed to complex cadence to outmaneuver the enemy have diminished in combat, though not in training, in 21st-century military practices. Drill has been used consistently without interruption by the U.S. Military since the War of 1812 to effectuate discipline, cohesion, indoctrination, and *esprit de corps*. And while the explicit role of choreographed drill has evolved, U.S. warfare remains preoccupied with the coordinated control of individual bodies as an indispensable training tactic to ensure civilians are indoctrinated to a profession that may require the sacrifice of their own life, and those of enemy combatants and civilians, in service of violent force for the state. The U.S. Military functions based on detailed regulations, disciplinary language, and paradigmatic terms to effectuate its institutional goals. The language pertaining to the body found in U.S. Military training manuals, juxtaposed with the language U.S. soldiers use to describe their own bodies and embodied experience, is thus productive to consider here. It illustrates the gap between documents and technologies that produce, or absent, bodily discourse, and narratives that bring it forward, making the body count as a primary agent in warfare.

2.2—The Terms of Training Bodies for War

In addition to his treatises on military drill and training, in 1810 William Duane produced a comprehensive military dictionary of terms titled, *A Military Dictionary: Explanation of the Several Systems of Discipline of Different Kinds of Troops*.¹⁸⁴ The dictionary provides multiple entries for the term “body” and “corps” and insight into early 19th-century terminology for conceptualizing bodies of war. He issues the following definitions related to the soldiering body:

BODY, in the art of war, is a number of forces, horse or foot, united and marching under one commander.

Main BODY of an army, sometimes means the troops encamped in the center between the two wings, and generally consists of infantry. The main body on a march, signifies the whole of the army, exclusive of the van and rear-guard.

BODY of a place, is, generally speaking; the buildings in a fortified town; yet the enclosure round them is generally understood by it.

CORPS *de bataille*. Fr. the main body of an army, marches between the advanced and rear guard.

RESERVE, *corps de réserve*, Fr. any select body of troops posted by a general out of the first line of action, to answer some specific or critical purpose, in the day of battle. The French likewise call that body a *corps de réserve*, which is composed of the staff of the army, and moves with the commander in chief, from whom it receives the parole or word; but in every other respect it is governed by its own general. (Duane 55)

Throughout Duane’s 750-page text, the term “body” has two distinct representations: it refers to a *collective* military body, emphasizing how soldiers’ individual bodies were absorbed into a coordinated and far larger marching and firing military mass, and to an *individual* soldier’s body, emphasizing the requisite health, drill, and discipline required for each soldier. For example, the term SOLDIER¹⁸⁵ has multiple entries, including its culturally applied usage to designate the quality, character, and social standing of a man.

¹⁸⁴ With the extended title: *For the Infantry, Artillery, and Cavalry; The Principles of Fortification, and All the Modern Improve.*

¹⁸⁵ See Duane’s entry on *soldat* and *soldier*, page 645-646 of *A Military Dictionary*.

The term is first defined as a “piece of money” (from the Fr. *soldat*), indicating the origin of the term: “originally soldier meant only one who listed himself to serve a prince or state, in consideration of daily pay” (645). Following this, a CITIZEN soldier, “In the general acceptance of the term, signifies any man who is armed for the support and vindication of his country’s rights.” A REAL SOLDIER is defined as “a term among military men to mark out one who knows and does his duty.” The designation NO SOLDIER is considered to be, “An expression of familiar currency in British service. It is sometimes used as a term of reproach, and sometimes of harmless irony; as, ‘you are a dirty fellow and no soldier.’” The term SOLDIERSHIP denotes the reputation attributed to soldiers, including “The profession, character, and qualities of a military man,” and the term SOLDIER’S FRIEND characterizes the duty of care towards soldiers from higher-ranking officers:

A term in the military service which is generally applied to such officers as pay the strictest attention to their men; granting them seasonal indulgences without injuring the service; seeing their wants relieved; and, above all things, having them punctually paid and regularly settled with. There is much confidence in the multitude when they are justly dealt by, and every soldier fights well under the guidance of a soldier’s friend! (646)

The definitional language used to refer to 19th-century soldiers is significant because it reveals, as does 21st-century institutional military language, considerations for how the body was theorized or treated as an instrument or agent of war. Of note in Duane’s work, in accordance with the continued use of mass drill and large-scale, infantry maneuvering in the early 19th century, the individual soldiering body still appears as the primary agent of force, consistently represented in the language and terminology of the period referring to the body, corps, and physical discipline, and individual character.

Military exercise was considered the most urgent requirement for a successful soldier, and thus a delimiting factor for a military's success during war. Duane's entry for EXERCISE, which extends across five full pages, affirms how critical the embodied discipline of soldiers was to the philosophy of 19th-century American warfare. In an excerpt from the entry, Duane provides:

EXERCISE, in military affairs, is the practice of all those motions and actions, together with the whole management of arms, which a soldier is to be perfect in, to render him fit for service and make him understand how to attack and defend. Exercise is the first part of the military art; and the more it is considered the more essential it will appear. It disengages the human frame from the stiff rusticity of simple nature, and forms men and horses to the evolution of war. The honor, merit, appearance, strength, and success of a corps depends wholly upon the attention which has been paid to the drill and exercise of it, according to prescribed rules and regulations, while on the other hand we see the greatest armies, for want of being exercised, instantly disordered, and that disorder increasing in spite of command; the confusion oversets the art of skillful masters and the valor of the men only serves to precipitate the defeat: for which reason it is the duty of every officer to take care that the recruits be drilled as soon as they join the corps. (143)

Here, the need for rigorous training and the drill of soldiers is listed as the preeminent factor in the success of the American military, thus rendering soldiers the most important political weapon of the state. In 19th-century warfare, bodies, not technologies, were the primary, national weapons to deliver and execute force. Duane argues in the Preface to the *Military Dictionary* that *only* a system of coordinated discipline will enable commanders to maneuver thousands of men successfully through battle. After outlining how disciplined drill and training have aided 19th-century European armies, Duane asks the reader, rhetorically, “*What is then requisite for the United States?*” (vii, original emphasis). He affirms that the answer must be embodied training regimes:

The government possesses the power, and the army is bound, and the country is anxious to possess a more complete system in lieu of the once useful but at present useless tract of baron Steuben. [...] The elements of modern exercise must be first

introduced, they are neither so numerous, so perplexed, nor so unnatural as the old forms; neither are they so tiresome to the teacher or the taught. They have also another advantage, that the soldier is not as heretofore stiffened and set up like an embalmed Egyptian mummys; the modern method takes any number from 10 to 100 men, and places them in an easy position erect without constraint of head, or limbs, or body; and proceeds by familiarizing the ear to equal time by the action of the feet of the whole squad or company. [...] The next process is advancing, at a given length of pace in equal times and this is combined with facings, and at last with wheelings, in whole ranks or in actions of any given numbers, always varying, diminishing, and augmenting at discretion the numbers of the sections. (viii)

In Duane's estimation, physically disciplining the body is primary because this kind of military instruction "is the point at which every military body must commence" (ix).

Language to describe the soldiering body in 19th-century military manuals extends to detailed aspects of bodily health. Healthcare instructions for long marching, sleeping, bathing, diet, preventing disease, caring for bowels and wounds, and libations for dying comrades are routinely found in informational and training manuals throughout the 19th-century. In the 1862 *Military Hand-Book and Soldier's Manual of Information*, author Louis Le Grand, M.D. offers a continuum of advice to soldiers in the "Health Department" section. The text notes:

Soldiers should recollect that in a campaign, where one dies in battle, from three to five die of disease. [...] Wear flannel all over in all weathers. Have it washed often when you can; when not, have it hung up in the sun. Take every opportunity to do the same by all your clothing, and keep every thing about your person dry, especially when it is cold. Do not sit, and especially do not sleep upon the ground, even in hot weather. Spread your blanket upon hay, straw, shavings, brushwood, or any thing of the kind. [...] Take every opportunity of washing the whole body with soap and water. Rinse well afterward. If you bathe, remain in the water but a little while. If disease begins to prevail, wear a white bandage of flannel around the bowels. (Le Grand 69-70)

In the 1884 *Soldier's Handbook for the Use of the Enlisted Men of the Army* the section titled "Take Care of Your Health" provides the following instructions to soldiers from Dr. Hall¹⁸⁶:

17. If from any wound the blood spurts out in jets, instead of a steady stream, you will die in a few minutes, unless it is remedied; because an artery has been divided, and that takes the blood direct from the fountain of life. To stop this instantly, tie a handkerchief or other cloth very loosely BETWEEN the wound and the heart, put a stick, bayonet, or ramrod *between* the skin and the handkerchief, and twist it around until the bleeding ceases.

20. Whenever possible, take a plunge into any lake or running stream every morning, as soon as you get up; if none at hand, endeavor to wash the body all over, as soon as you leave your bed: for personal cleanliness acts like a charm against all diseases, always either warding them off altogether, or greatly mitigating their severity and shortening their duration.

27. The greatest physical kindness you can show a severely wounded comrade is, first to place him on his back, and then give him some water, to drink from a canteen or ambulance-bucket. I have seen a dying man clutch at a single drop of water from the finger's end with the voraciousness of a famished tiger. (54)

Conditions of disease, extreme seasonal weather, basic hygiene and nutrition, insufficient medical attention, and inadequate attire are no longer the determining factors in American military success at war, particularly in Middle Eastern theaters. In fact, U.S. soldiers no longer die from the environmental conditions that have generally accompanied waging war for centuries. Soldiers primarily die from injuries so catastrophic, so instantaneous and fatally wounding to vital organs, that there is no chance for survival. In this regard, LeGrand's observation, "where one dies in battle, from three to five die of disease," seems anachronistic. And yet 19th-century training instructions indicate how profoundly the history of war for soldiers—regardless of an army's strategy and tactics—has been a war waged entirely upon soldiers' bodies.

¹⁸⁶ Dr. Hall, author of "Dr. Hall's Journal," was widely reproduced in various medical journals, even twenty years later. These instructions are also found in Le Grand's text from 1862.

An examination of 19th-century training terms, particularly compared to 21st-century manuals, provides two important optics. First, it offers a historic context to understand how a philosophical paradigm for training U.S. soldiers evolved and was disseminated through circulating military texts. Second, the term “training,” like collateral damage, must be interrogated for its explicit sociopolitical, rather than merely technical, meaning. U.S. soldiers are not primarily training for cultural diplomacy, though this may be a corollary or tasked function of their work: they are *training to kill state-designated enemies*. As military historian U.S. Lt. Col. Dave Grossman argues in *On Killing: The Psychological Cost of Learning to Kill in War and Society*, “The history of warfare can be seen as a history of increasingly more effective mechanisms for enabling and conditioning men to overcome their innate resistance to killing their fellow human beings” (13). Grossman specifically cites American Civil War training as an important example of the ways in which physical drill and military exercise, specifically, encouraged killing to become automatic:

Imagine a new recruit in the American Civil War. Regardless of the side he was on, or whether he came in as a draftee or volunteer, his training would have consisted of mind-numbingly-repetitive drill. Whatever time was available to teach even the rawest recruit was spent endlessly repeating the loading drill, and for any veteran of even a few weeks, loading and firing a musket became an act that could be completed without thinking. [...] Today we understand the enormous power of drill to condition and program a soldier. The Civil War soldier was, without a doubt, the best trained and equipped soldier yet seen on the face of the earth. Then came the day of combat, the day for which he had drilled and marched for so long. And with that day came the destruction of all his preconceptions and delusions about what would happen. (18)

The “destruction of preconception” that Grossman refers to is somewhat startling, particularly given the evidence of nearly unabated warfare throughout recorded human history, yet it is the thesis of his text: although soldiers may be meticulously trained to

kill, evidence suggests that even in active combat situations where it should be requisite, soldiers work very hard to avoid killing, often through misdirection, disobedience, and deliberate subterfuge. The preconception Grossman describes denotes the gap between being trained to kill and actually killing: even when soldiers are exhaustively trained for the job, in the moment that they must actually kill an identified enemy, many soldiers labor arduously to avoid this option. In the Civil War, for example, Grossman argues that evidence—thousands of loaded (but unfired) weapons found on battlefields, assistant loaders (soldiers who helped load weapons but did not themselves fire), and records of deliberately misdirected and mock firing—indicates that Civil War soldiers openly disregarded their meticulous drill and arms training and disobeyed official orders to kill other soldiers. Grossman observes, “Secretly, quietly, at the moment of decision, just like the 80 to 85 percent of World War II soldiers observed by Marshall,¹⁸⁷ these soldiers found themselves unable to kill their fellow man” (26). Grossman’s argument extends beyond the axiomatic logic that soldiers, even if trained to kill, likely do not wish to, summarized succinctly in General MacArthur’s observation that, “The soldier above all others prays for peace, for it is the soldier who must suffer and bear the deepest wounds and scars of war” (MacArthur I). Grossman contends that once battle has begun—when praying for peace is no longer an option and violent defense of the state is imminently required—soldiers’ natural instinct, the essential condition, is to avoid killing, even in a profession where killing is the explicit mandate of the job. In fact,

¹⁸⁷ Grossman refers here to U.S. Army Brigadier General S.L.A. Marshall, a military historian who prioritized the study of theater operations of World War II, including rates of infantry fire and causality. Marshall argued that many soldiers do not fire weapons in combat, which must be corrected through training methodologies if the rates are to increase. The TRADOC manual that refers to his influence is: “SLAM, the Influence of S.L.A. Marshall on the United States Army.”

Grossman argues that a military paradigm that inures soldiers to killing is the result of inherited strategies from European warfare that must be continually cultivated: “The existence of a powerful, innate human resistance toward killing one’s own species and the psychological mechanisms [to achieve it] have been developed by armies over *the centuries* to overcome that resistance” (xxxix, original emphasis). Grossman’s extended examination of the overt resistance to killing that highly trained soldiers exhibit, even when legally and vocationally required to do so, is significant because, as argued in this chapter, waging war has historically relied on bodies to enact violent force in the name of the state. While strategic decisions about U.S. wars are often determined by U.S. congressional, juridical, and defense personnel, Grossman’s argument is a reminder of the critical decisions made by individual soldiers during U.S. combat operations and how they actively participate in deliberating, analyzing, resisting, and determining combat decisions in real-time. Soldiers’ embodied relationship to both dying and killing remains one of the most significant determinants in how wars are fought, and will continue to be fought, as long as soldiers are present to make ethical deliberations in combat situations. An alternative paradigm to this scenario is explored in Chapter 3: what does war look like without flesh and blood soldiers who must consider the consequences of wounding or killing enemies and civilians? While the embodiment of force during war is inevitably violent, how violent might war be without the bodies of soldiers to determine the course of their actions during combat? Might war be even more violent if human soldiers were not physically present to deliberate, or resist, acts of killing? It is far harder to die in active combat in the U.S. Military today than in centuries past. Thus,

while the definition of war as the deployment or threat of violent force conducted by and waged upon bodies has not changed, the combat conditions and consequences for soldiering (and civilian) bodies have undoubtedly been altered. Since U.S. soldiers no longer die from starvation, disease, lack of shelter, inadequate attire, or extreme weather while marching in masse, and technological advances in detection, enemy identification and elimination, protective equipment, and medical treatment have transformed 21st-century soldiering, how is the U.S. soldiering body envisioned in 21st century discourses—where does the body appear and disappear in 21st-century instruction and institutional doctrine?

The U.S. Department of Defense annually publishes a modern *Dictionary of Military Terms and Associated Terms* (JP 1-02) that, unusually, does not provide a single term associated with the soldier's *body* at war. For example, the terms *body*, *corps*, *esprit de corps*, and *soldier* are notably absent. In fact, there are very few references to the term "body" in the online military dictionary that refer to soldiers' individual, physical bodies, updated monthly and current through August 15, 2014,¹⁸⁸ and the term only appears in entries that are concerned with injury, chemical warfare, and mortuary affairs. For example, the dictionary provides these five records:

Antemortem Data: Medical records, samples, and photographs taken prior to death. These include (but are not limited to) fingerprints, dental x-rays, body tissue samples, photographs of tattoos, or other identifying marks. These "pre-death" records would be compared against records completed after death to help establish a positive identification of human remains.

Acute Radiation Syndrome: An acute illness caused by irradiation of the body by a high dose of penetrating radiation in a very short period of time. Also called ARS.

¹⁸⁸ U.S. Department of Defense (DoD). "Dictionary of Military and Associated Terms." Amended by DoD as of 15 Nov. 2014. <http://www.dtic.mil/doctrine/dod_dictionary/> Web. 24 Nov. 2014

Blood Agent: A chemical compound, including the cyanide group, that affects bodily functions by preventing the normal utilization of oxygen by body tissues.

Hazards of Electromagnetic Radiation to Personnel: The potential hazard that exists when personnel are exposed to an electromagnetic field of sufficient intensity to heat the human body. Also called HERP.

Wounded in Action: A casualty category applicable to a hostile casualty, other than the victim of a terrorist activity, who has incurred an injury due to an external agent or cause. The term encompasses all kinds of wounds and other injuries incurred in action, whether there is a piercing of the body, as in a penetration or perforated wound, or none, as in the contused wound. These include fractures, burns, blast concussions, all effects of biological and chemical warfare agents, and the effects of an exposure to ionizing radiation or any other destructive weapon or agent. The hostile casualty's status may be categorized as "very seriously ill or injured," "seriously ill or injured," "incapacitating illness or injury," or "not seriously injured."

What is suggested by the fact that the body seldom appears as a referent in the 21st-century military dictionary of terms, and when it is mentioned, it only appears in the guise of being fatally wounded or deceased? The entries above, if read in the future to discern how the U.S. Military considered the soldiering body, would certainly indicate that major concerns for the body, when mentioned, were related to chemical and biological warfare. However, the soldiering body physically in motion as described in earlier manuals—exercising, maneuvering, and choreographing action—has disappeared entirely. Institutional language is revealing, particularly for the U.S. Military wherein operational doctrine is the epoxy that governs all procedures and policies. General John Winthrop Hackett remarks on the import, for example, of a “corpus” of doctrinal language in the military in *The Profession of Arms*:

The function of the profession of arms is the ordered application of force in the resolution of a social problem. It has evolved into a profession, not only in the wider sense of what is professed, but in the narrower sense of an occupation with a distinguishable corpus of specific technical knowledge and doctrine, a more or less exclusive group coherence, a complex of institutions peculiar to itself, an educational pattern adapted to its own specific needs, a career structure of its own and a distinct place in the society which has brought it forth. (9)

Hackett's observation affirms that institutional priorities generally infuse technical literature and doctrine. The military dictionary may be viewed alongside other military manuals wherein the technical language suggests that soldiers' bodies in later 21st-century warfare will be so reconfigured that the body will no longer even be necessary as the primary agent of force. For example, the U.S. Army Future Soldier Initiative (FSI) provides recommendations to train, equip, and deploy the future U.S. Military. FSI suggests that a new soldier "ensemble" with an electrochemical skin and bio-vascular augmentation will systematically reconfigure or replace the natural functioning of the bodies of U.S. Soldiers by 2020. FSI affirms that in the next decade:

The basic needs of the Soldier will be provided by the Soldier *ensemble*. The ensemble will feel like a second skin, instilling confidence in the system without inhibiting physical activity. Bio-inspired artificial vascular systems in materials will provide active multifunctionality for chemical/biological protection, climate control, and autonomic trauma care. The power and data network will be integrated into the textile as a self-forming network across the body without bulky cables and connectors. Power generation, energy storage and signal transduction will be provided by textile-integrated batteries, piezo-electrics, fuel cells, photovoltaics, bionic energy harvesters and electrically conductive fibers. Biometrics will be employed within the ensemble, ensuring that it is matched with a known friendly Soldier. If a Soldier expires, the system will provide a security-based zeroize function so the enemy cannot exploit the ensemble's technology. (5)

FSI presents one vision of how bodies will be seemingly augmented or replaced in 21st century warfare: future U.S. soldiers will be artificially reconfigured, electromagnetically networked, and capable of posthumous "zeroization" (self-destruct) functions such that their bodies will act as both technologically "skinned" operators and satellite-networked operands. Of course, the prophesy of technological alacrity is not intended to be a substitute for deliberative strategy—officers must still be present to organize these new hybridized soldiers. However, the language for improved efficiency at war (a

technology's function) may sometimes disregard the outcome of improved efficacy at war (a technology's consequence) for both soldiers and combatants. As conceived, the FSI ensemble replaces the natural body as both a mobile defensive system and an offensive weapon—the individual soldier's body as an “ensemble” thus becomes the site for integrated networked and prosthetic technology, a shift from viewing complex weapon and communication systems as separate from, or an armed extension of, soldiers' material bodies. The FSI ensemble is a highly advanced permutation of the U.S. Marine creed, “My rifle is human, even as I, because it is my life.”

The complications of military doctrinal language in referring to the body extends to both living and deceased soldiers. Consider, for example, former U.S. Marine Jess Goodell's description of her deployment in the U.S. Military Mortuary Affairs (MA) Unit at Camp Al Taqaddam in Iraq. Goodell chronicles her job in *Shade it Black: Death and After in Iraq*. On official U.S. Military forms, recovered and “processed” individual body parts are required to be “shaded in black” to denote recovered remains. U.S. Military Mortuary Affairs documents eschew the use of the term body in institutional descriptive language. In the MA U.S. Army *Mortuary Affairs Operations (FM 4-20.64)*, the word body only appears four times in eighty-four pages, and only once is it used to refer to a deceased soldier, when describing the procedure for identifying “body markings.” In Department of Defense Joint Publication *Mortuary Affairs (JP 4-06)*, the document's glossary specifically suggests that “remains” must be used in place of body: “Whenever used within this publication, remains will mean a dead human body, or a portion thereof. (This term and its definition are applicable only in the context of this publication and

cannot be referenced outside this publication.)” JP 4-06 outlines the procedure for the initial retrieval and inventory of human bodies/remains:

Once the human remains are received at the MACP [Mortuary Affairs Collection Point], the human remains are logged in; a case file is established; classified documents and/or hazardous material, weapons, and munitions are removed. Human remains are handled with great care in regard to preservation of forensic evidence. Organizational clothing and individual equipment will not be removed in the operational area without approval of the AFME [Armed Forces Medical Examiner]. The human remains are not to be washed/cleaned or fingerprinted. PE [personal effects] will be inventoried for accountability and establishing a chain of custody without cutting clothing or pockets. PE will remain with the body during evacuation. The human remains are tagged, placed in a human remains pouch (HRP), and stored in refrigeration until transportation is coordinated and human remains are recorded for manifest. Photographs are taken to document the human remains without removal of clothing, equipment, or further manipulating the body. (24)

In contrast to this instructional manual for processing, Goodell describes the physically and psychically arduous task of reassembling bodies for identification and preparing deceased comrades for return to the U.S. and subsequent military ceremonies. In the chapter she also titles “Processing” Goodell writes:

We had to set up everything from scratch. We designed and built rooms we needed, made the tables we’d use for processing, ran electrical wires, and hooked up lights and phone. Then the bodies started coming in. And we kept getting bodies, and more bodies, so we never really finished the construction work. When the first body came ...We just couldn’t...We knew how to complete the paperwork and what had to be done, but when it’s real, when it’s no longer an abstract thought, you stand there motionless. The Sir had called in every person in our platoon and designated people to particular tasks. [...] We may have known that the Marine was hit by bullets or a grenade, but not known where. And when we tried to turn him over, we couldn’t. Rigor mortis was setting in and he was already beginning to stiffen, except for his waist, which was like a pivot point. Even when we strained to turn him over, we could not. It was awkward and we were silent except for The Sir’s slow, calm, firm instructions. “C’mon guys, you were trained to do this and you know what to do” he reassured us. And so, eventually, we did. “Now, write down any distinguishing marks, any tattoos.” So we did. “Now, write down which body parts are missing and shade the missing parts black on the outline of the body.” So we did. [...] Before the Corps and the war and Mortuary Affairs, death seemed to occur rarely and to people who were old; another’s body was off-limits, often sacred, and not to be touched without permission, and certainly not to be pieced together like a sad, gruesome puzzle. (36-39)

Goodell's memoir of her Mortuary Affairs work provides the embodied counterpart to the institutional language of "processing." The labor of recovering and memorializing bodies in U.S. warfare affirms one grim reality of war—bodies have surely not yet disappeared from 21st century engagements—and also suggests the effects of war for professional soldiering tasks other than direct killing. Journalist Michael Sledge reports in *Soldier Dead: How We Recover, Identify, Bury, and Honor our Military Fallen* (2005) that U.S. Military personnel who handle remains have among the highest rates of post-traumatic stress syndrome (PTSD) of military occupations (61). While studies link this to proportionate exposure to the "gruesomeness" of the images, one suggested proposal to assist military personnel from the Iraq War provides a recommendation that soldiers be mentally "inoculated" to ensure "desensitization" to gruesome images (qtd. in Sledge 61) This proposal, however, advocates that the way to cope with the trauma of the embodied experience of soldiering is to actively train to suppress it. To become entirely inured is thus to have been successfully trained. This discursive paradigm seeks to disassociate soldiering bodies from the "feeling" of embodying war by transposing their pain with institutional rhetoric of "inoculation" against brutality.

In *The Body in Pain*, Elaine Scarry argues in the chapter "The Structure of War: The Juxtaposition of Injured Bodies and Unanchored Issues" that the institutional terms of war "quietly registered in the language of theaters of battle, international dialogues, scenarios, and stages" facilitate disembodiment during warfare, generally in the interests of the state, by disassociating the body from both its own pain and the suffering of others. Scarry observes, "The incontestable reality of the body—the body in pain, the

body maimed, the body dead and hard to dispose of—is separated from its source and conferred on an ideology or issue or instance of political authority” (62). One way the process of transference from an individual body in pain—combatant or civilian—to the state is facilitated is by disregarding soldiers’ narratives of their own experiences of soldiering. Soldiers’ own stories often powerfully contradict institutional discourse that suggests soldiers can either disavow their own embodiment or disregard or erase that of others. This erasure is literal—injury, torture, and death—but also extends to symbolic but critical representations of selfhood and embodiment. As a corollary to Grossman’s suggestion that at the moment of killing many soldiers actively avoid violence, soldiers from the Iraq and Afghanistan operations share stories of trying to turn away or disobey orders to harm designated “enemy” combatants. In the essay collection assembled by Iraq Veterans Against the War (IVAW), *Winter Soldier: Iraq and Afghanistan: Eyewitness Accounts of the Occupations* (2008), essays by American soldiers, many of which were presented at the U.S. Congressional “Winter Soldier” hearings in 2008, appear alongside personal accounts from Iraqi and Afghani civilians describing the trauma of the U.S. Military occupations. U.S. Marine Corps Corporal Bryan Casler, deployed to the Middle East between 2003 and 2006, writes in the chapter “Racism and the Dehumanization of the Enemy” he wishes to reflect on the “smaller” but disturbing aspects of this service in relation to the treatment of Iraqi civilians. Casler offers:

I want to talk about some of the smaller things that occurred throughout my three combat tours. These are things that I left out of the letters home and I rarely mention because they’re not things I’m proud of. Whether I participated or not, I never stopped it. [...] I returned to Iraq for my third deployment in 2005. We were stationed in downtown Fallujah, at the mayor’s compound. We had a couple of marines that were being punished and one of their punishments was to remove all the paperwork from the

top floor of the mayor's compound and bring it down to our dumpsters while in full gear. This took hours, and I think it might have spanned across days. Well, after all the paperwork was gone, I finally had a chance to sit down with my interpreter and ask, "What was all that paperwork?" We had destroyed all the birth certificates for the city of Fallujah. (80)

Casler's account of the destruction of these life-affirming documents seems incomprehensible; however, destroying a culture's records of existence is a tactic of war to erase embodiment, both of the "enemy" and, in this case, of the occupying soldier. Another soldier, Sergeant Andrew Duffy writes of his work as a medic in the Iowa Army National Guard stationed at Abu Ghraib's in-processing center, and his attempts to resist the dehumanization of detained prisoners that he witnessed. Duffy writes:

I got a call saying there was an unconscious detainee in one of the camps that usually held very docile prisoners. We attempted to ventilate him on the way to the hospital but we could not. The mask was so deformed due to the heat and because it was so old. I ended up performing mouth-to-mouth resuscitation. A lot of people called them hajis. We got to the hospital to find them very apathetic. In the emergency room I had to continue performing mouth-to-mouth resuscitation on this detainee. I later overheard many comments about how "That medic made out with a haji." To me, this detainee was just an old man that could've been somebody's father, grandfather, or uncle. I remember exactly how he looked, and I remember exactly how he felt, dying in my hands. [...] As a medic and a professional I needed to treat these people the same. They are human beings, and I couldn't treat them like subhumans. (87)

Duffy's concerns illustrate the professional conflict of a medical officer, caring for bodies designated as enemies of the United States who may not be afforded appropriate medical care or may be designated as unworthy of hospice or end-of-life care. Although U.S. Military soldiers killed in combat are initially designated as "remains," the U.S. has a committed history of caring for, retrieving, and memorializing soldiers killed in combat.¹⁸⁹ In contrast, many U.S. Soldiers serving in Iraq expressed dismay or horror at the way civilians were treated by fellow soldiers, and also how the deceased were (not)

¹⁸⁹ See: Michael Sledge. *Soldier Dead: How We Recover, Identify, Bury, and Honor Our Military Fallen*. New York: Columbia UP, 2007.

cared for. In the same volume, U.S. Army Specialist Jeffrey Smith describes what he calls “the hardest incident for him to talk about”—watching U.S. soldiers desecrate the bodies of deceased Iraqi citizens:

I was on the last security post behind the front gate. I saw a Humvee coming through the gate towing a blue mini pickup truck. [...] As the Humvee pulled past, I realized that the pickup truck was full of dead people killed in [an] attack. They had obviously been engaged with large-caliber weapons, probably Mark 19s, .50 caliber. There were several decapitated corpses with large holes through their bodies. I'll never forget this. There was one very young PFC standing in the back of the pickup truck. As they rolled by, he lifted one of the decapitated heads up in front of me and he said, in much rougher language, “We really screwed these guys up, didn't we?” There was another enlisted member in the back of the truck with him, and they were celebrating on top of those bodies piled up in the back. These “insurgents” didn't appear to me to look like the hardened terrorists everyone says they are. These were mostly teenage boys and young men who looked like they were from the local community. (77)

As with many of the memoirs in the volume that were presented at the 2008 Iraq Veterans Against the War U.S. Congressional hearings, Smith concludes his testimony with an apology: “I want to take this time to apologize to the Iraqi people for the things that I helped to do and the actions that people in my unit and myself did while I was there” (77).

In juxtaposition to the institutional discourse that disregards or diminishes soldiering and civilian embodiment—suggesting “bodies don't count”—soldiers' own memoirs frequently emphasize their own bodily experience and physical trauma for occupied communities. In U.S. military operations in Iraq and Afghanistan, bodies have been variously engaged, searched, threatened, attacked, scarred, wounded, disabled, dismembered, “shocked and awed,” and tortured. Advances in battlefield medicine and trauma care, as well as the requisite demands of theater peacekeeping, have ensured that bodies have also been operated on, rescued, nourished, held, adored, mourned, and

revered. Even an abbreviated list of active possibilities—from catastrophe to care—reveals multiple ways to consider the embodiment of soldiering and those they “engage” with—the term used by the U.S. Military to designate hostile interaction with enemy combatants. It is illusory to imagine that decision-making during U.S. Military warfare is ceded exclusively to American politicians. This presumption fails to consider the irrefutable role of *bodies of war* in day-to-day conduct and action.¹⁹⁰ Critically, it also undermines and disavows embodied subjectivity, offering instead a facile argument of disciplinary or institutional state control. Deployed on behalf of the majority of an American society that stands, at best, at a safe if critical distance from the embodied force of war, soldiers’ physical, philosophical, and political actions have shaped the course of U.S. war and have the potential to do so in the 21st century *if they are accounted for*. The voluminous production of memoir and non-fiction literature from veterans of U.S. occupations in Iraq and Afghanistan—much of it critical—demonstrates soldiers’ own concerns with communicating the experience of soldiering and U.S. Military operations to a wider population. Soldiers’ deliberations should inform the paradoxical position of many U.S. civilians who physically offer up—even while decrying war a moral offense—soldiers who fight on our behalf.

¹⁹⁰ While Chapter 2 directs its primary focus on U.S. soldiering bodies of war, Chapter 3 considers the discourse and decision-making of the “bodies of war” who design and engineer U.S. technologies of war, primarily as communicated through published statements and press releases. These bodies create different discourse communities of scientists, government officials, and corporate professionals who act as individuals and also represent larger institutional and governmental “bodies.” The production and circulation of discourse among scientists who design military technologies offers productive ground for a different study. Scholars such as Sharon Traweek have conducted immersive interviews within physics labs to examine scientific discourse and disciplinary paradigms in relation to science and gender. See: *Beamtimes and Lifetimes: The World of High Energy Physicists*. Boston: Harvard UP, 1988.

2.3—U.S. Military: Embodied Narratives

Hannah Arendt, in her introduction to the World War II memoirs of J. Glenn Gray, *The Warriors, Reflections on Battle*, directs readers' attention to the uncomfortable position that civilians occupy—overeager, reluctant, or unable to engage with the consequences of war that soldiers regularly confront. Quoting Glenn Gray, Arendt suggests that we must accept the lesson his memoir offers:

The first lesson to be learned on the battlefield was that the closer you were to an enemy, the less did you hate him—"a civilian far removed from the battle area is nearly certain to be more bloodthirsty than the front-line soldier," unless, of course, the soldier happens to be a killer, and only pacifists who hold abstract notions and emotions about war will mistake the one for the other. (ix)

Arendt's observation that the facile designation, or conflation, of a soldier as a killer can only be made by those who hold "abstract notions and emotions about war" is what catalyzes the concerns of this section: What obligations do civilians have to understand the experience of soldiers who are tasked to kill in the name of our individual safety and state security? Samuel Adams offered the following observation in 1776: "A standing Army, however necessary it may be at some times, is always dangerous to the Liberties of the People. Soldiers are apt to consider themselves as a Body distinct from the rest of the Citizens" (Adams). Consider, however, that in 2014, less than .5 percent of the U.S. population serves in the armed forces. This chapter thus suggests the inverse of Adams' warning may be far more imminent and imperative to consider: What happens when civilians consider themselves as a body distinct from the soldiers who nonetheless must deploy force on their behalf?

Between 2008 and 2014 I conducted fifty interviews with active-duty, reserve, and retired U.S. Military personnel. U.S. service members were solicited by a posted flyer or email request through the Iraq Veterans Against the War organization, U.S. Army and U.S. Marine Corps Reserve Centers in New York City, the U.S. Army Training Center in New York, and personal referrals from interviewees, generally for colleagues they had trained or served with, which drew participants from around the country often on active-duty or leave from tours in the Middle East. No particular attempt was made to solicit a particular demographic, including the potential selection for gender, service branch, geographic location, rank, military occupational specialty (MOS), or years of service. The numerical composition of the interviews followed the general profile of the U.S. Military itself. Eighteen interviews were from the U.S. Army, also the largest service branch. Thirteen interviews were from the U.S. Air Force, the second largest service branch; twelve interviews were from U.S. Marine Corps; four interviews from the U.S. Navy; and three from the U.S. Coast Guard. Eighteen interviews were conducted with women, and thirty-two interviews were conducted with personnel who identified themselves as non-white. Thirty-four interviews were conducted in person and sixteen interviews were conducted in recorded telephone conversations. Prior to the interview, service members read a description of the project, selected their level of disclosure for identifying information such as branch, rank, years of service, gender, and active-duty locations, and signed a consent to have the audio and/or video recorded. See Appendix D for basic demographic information service members consented to be made public. After the interview, participants signed a

second consent form confirming their permission to have the interview transcribed and granting permission for either specific questions or any portion of the interview to be published in accordance with their consent level. See Appendix C for sample interview questions.

The following excerpts from four interviews have been selected from among fifty interviews to evoke concerns or themes that were expressed across the set of interviews, and yet were also uniquely described in these soldiers' individual narratives: for example, assessments of current U.S. Military engagements that appear to require the U.S. Military to shift from a combat task force to a "police force"; the role of gender as women have entered specific military combat occupational specialties (MOS); the possibility to train for war through video games; and the ethics of U.S. soldiering on behalf of state interests. All interviewees were initially asked a scripted set of questions regarding their U.S. Military training, deployment, and equipment, and experiences, but follow-up questions often prompted new dialogue that was guided by concerns important to individual service members. The service members' observations regarding their training, deployment, and the culture, philosophy, and future of the U.S. Military affirm the distinct subjectivity of each soldier and suggest why it is important to consider individual embodiment as primary evidence, rather than anecdotal contemplation, in understanding the force of war.

It is important to remark in the context of this dissertation that interviewing, for both participants, is a decidedly embodied experience. It includes the physicality of arranging interviews, coordinating parties to arrive at interview locations, ensuring

technology is working to record the experience, and establishing a tone and guiding language that offers a “comfortable” opportunity for dialogue.¹⁹¹ During the interview, it also requires responding, improvisationally, to the content of an interview, “leaning in” to read bodily or vocal cues such as individuals’ interest, enthusiasm, hesitation, uncertainty, and discomfort, and the emotional reactions that reveal their subjective experiences being remembered and bodily recalled into presence. After the interview, it entails transcribing oral interviews, with their complexly nuanced timing, emphasis, and phrasing, into representative prose; this assumes not only potential errors in grammar and syntax, but also the loss of inflectional information and embodied intent. Transcripts do not offer the bodily knowledge and evidence provided in interviews: in these cases, how interviewees themselves moved, gesticulated for emphasis, varied their intonation and, in some interviews, got up to demonstrate training steps, exercises, the physicality of moving with equipment and weapons, or how they were trained to kill with specific equipment. Composing a film of the interviews would, of course, present a different valence and would provide opportunities for reading the soldiering body as a different form of bodily writing.¹⁹² As one explicit concern of this dissertation is to give voice to U.S. soldiers, the interviews are presented as complete threads to preserve the soldiers’ own way of contextualizing and considering their own experience. The first interview, in contrast to the next three, is from a U.S. Air Force Staff Sergeant whose service

¹⁹¹ For a useful survey of scholarly techniques, dilemmas, and methods specifically directed at academic researchers, including specific chapters on methodological issues such as what is “lost” in the process of transcribing an interview and how video recording may influence interviewees’ answers, see: Bill Gillham. *Research Interviewing: The Range of Techniques*. New York: Open University Press, 2005.

¹⁹² As Susan Foster observes in “Choreographing History,” “The act of writing about bodies thereby originates in the assumption that verbal discourse cannot speak *for* bodily discourse, but must enter into “dialogue” *with* that bodily discourse. The written discourse must acknowledge the grammatical, syntactical, and rhetorical capacities of the moved discourse” (9, original emphasis).

occurred in the 1980s. His consideration of the psychology and physicality of military training as a cohering tactic as well as the military's anticipation of "enemy" theaters following Vietnam suggests the ways in which U.S. Military culture, tactics, and training are diachronic—timeless traditions remain—and are also continually adapting to the "new" or anticipated enemy *du jour*. The second interview with a female U.S. Army Military Police Corps Lieutenant provides one vantage for examining the role of women in the U.S. Army, particularly since women serving in Military Police Brigades and Companies were not officially "in combat" at the start of the Iraq War in 2003, but were likely to see the highest rates of direct engagement because they frequently accompanied units and convoys tasked with specific combat duties. The third interview with a U.S. Army Specialist provides an optic that the soldier believed was common among his generation of colleagues, despite the stark differences in geographic region and race awareness he also experienced—he had become interested in, and felt he was psychologically and physically prepared for, military service as a result of long hours playing military-themed video games. The final interview is with U.S. Marine Corps Sergeant Adam Kokesh, who became a dedicated anti-war political activist after leaving the Marine Corps, ran for U.S. Congress in New Mexico in 2010, hosted his own television show, and has authored a number of articles and the book *FREEDOM!* (2014). Kokesh also participated in the Iraq Veterans Against the War (IVAW) 2008 U.S. Congressional hearings and his essay appears in the edited volume *Winter Soldier: Iraq and Afghanistan: Eyewitness Accounts of the Occupations* (2008).

JA: U.S. Air Force, Active-Duty 1980-1985—Interview Conducted November 1, 2013

Q1: What were your years of service and unit and rank in the military?

A1: I was in the U.S. Air Force from 1980 to 1985. I enlisted. I started off as an E1 at basic training, and exited as an E5 staff sergeant. I was with the 96th Civil Engineering Squadron in the Strategic Air Command (SAC).

Q2: Was there a particular reason that you joined the military?

A2: My father was in the military and served in World War II. At the time I joined we had just come off the debacle in the Iranian Hostage Crisis. And it seemed likely that we would be in a war in the Gulf, and I wanted to serve. I had just missed the Vietnam War—the war ended in 1975. I would have just become eligible for the draft. I grew up through the Vietnam War. I enlisted because at the time I thought we were going to go to war and I wanted to serve.

Q3: Can you tell me about the path you took to the military? You said you enlisted. Were you recruited?

A3: I enlisted like most young men of my background. You go the recruiting office. You listen to the recruiter tell you about the different branches. I picked the Air Force because the job offerings they had seemed to be more technical, and more in line with the skills that I had. You take a test and they supposedly tell you what skills you would be good at and what jobs you can train for. Because of the score I received, I was eligible to take anything. I looked through all of the jobs and found one that was very interesting in the engineering department.

Q4: Can you describe your military training, in boot camp or after basic training?

A4: I completed basic training at Lackland Base in San Antonio, Texas. I had my first plane ride in my life to go to the base, which I'm sure was the case for many of us. You arrived at this large Air Force base. They herd a bunch of young guys, mostly guys, but there were a few women, and they separate the men and women. You see just a bunch of scruffy kids from all over the country lined up on the tarmac. They're very nice to you on the first day. They line you up. Show you the bed. They tell you to get a good night sleep and that tomorrow is going to be a very busy day. You're very nervous. You look around. You don't know what to expect. You're chit-chatting with kids from Chicago, LA—from all over the country. There's a tremendous amount of nervous energy. You can tell all of the guys are trying to be tough, but they're scared. There's a lot of false bravado in the room that first night. You try to go to sleep, but it's very difficult to sleep with the tension and the anxiety. You ultimately drift off. You're still in your civilian clothes. At some point, in the early morning hours, 3 or 4 maybe, you're woken up by the loudest racket you've ever heard. The training instructors are banging garbage cans, yelling and telling everyone to get out of bed. So they rouse us out of bed and make us line up—make us stand in some kind of formation. The yelling is incessant. The confusion makes it almost impossible to understand what to do next. From that point forward, it's a never-ending series of marching from one place to another to get your clothing. Within a matter of hours you've gone from civilian clothes to being told what to wear, how to wear it, when to wear it. You just march from one line to another. You come out with a green uniform and a shaved head. Everyone looks almost identical, whatever the difference in the color of your skin. It's amazing how a green uniform, from head to toe, and a shaved head takes away all of the dissimilarity between people.

Q5: Why do you think the military trains recruits in the specific ways that you experienced?

A5: It's clear from my reflection upon my time, that's it necessary to break recruits down so that they forget all of the things that they've learned and all of the ways of living, so that they can start from scratch and build you into a soldier. A person who can take orders, who can react instinctually and instantly, who can follow the directions and the training that you're given without question, without dissent, almost automatically.

Q6: Did you feel your basic training prepared you for the duties you later performed?

A6: Of course when you start you don't understand this, but over time you come to learn why it's important—when you're responsible for other people and other tasks, when you're part of a large group, of a much larger plan. You don't know what's happening on the other side of the engagement. You have to handle your equipment and your duties, and your failure to do so could jeopardize everyone else. It's so important to focus on your tasks, your duty, because if you fail, everybody fails. And they teach it in very subtle ways, such as learning how to dress, to march, and to work in a group. We were always accountable for our weakest link. We would have to help the person that was failing. That was drilled into us. It was the attention to detail that they also fostered—you had to read the manuals, you had to know the rules. You had to know your responsibilities and you could not fail. The training was very detailed and precise. Everything, even as simple as how you salute, was teaching you how to be complete and rigorous in every action. It wasn't apparent at the time, but after my service, and in every area of life, I've learned the value of execution. The other thing that we learned: because we were all the same we were all treated as equal—it didn't matter where we came from or our color. We were all the same.

Q7: Given, however, that you were not all the same, how do you think different recruits or soldiers responded to the training process?

A7: It seemed clear to me that the military had so much experience taking people from so many different backgrounds and skills that they had learned specific techniques to bring them all along, not necessarily at the same time, but to get them to the same point at different rates. So take physical training, for example, they didn't start out with us all running 1.5 miles on the first day, but you did it every day and you were pushed farther and farther so that in a matter of days or weeks everyone was at the level that was required. You were pushed to the extreme, but it was clear that they understood how far you could be pushed, safely, for the most part. For example, they used sleep deprivation very effectively.

Q8: After basic training, what were your duties and position in the military?

A8: After basic training, most airmen will go to technical training school, which can be from weeks to months, depending on how complicated the skill you were going to acquire was. I trained in Wichita Falls, TX. We went to class for 8 hours a day, with a break every 50 minutes for 10 minutes. It was grueling.

Q9: What were you studying, specifically?

A9: I was in construction management. I had to learn how to do mechanical and architectural drafting. I learned how to draft and read blueprints. I learned how to do soil and materials testing. I had to learn how to manage large-scale construction projects. And engineering. It required a lot of math, including trigonometry and geometry, and we had a test every five days and if you didn't pass you didn't move on. The failure rate was around 95%.

Q10: Was this your job for the duration of your time in service?

A10: It was. I aced my exams and they asked me to stay and become an instructor.

Q11: Where were other service members being deployed at the time? Or, what theaters were a priority from your perspective?

A11: Europe and the Pacific. We didn't have anything in the Middle East at the time.

Q12: As a follow-up to that question, was it your sense that there was a specific enemy at the time?

A12: At the time we were winding down from our focus on the Cold War and jungle warfare. We trained at the time with two kits. We had a jungle kit and an arctic kit. There was no desert kit. Our camo fatigues were green and our arctic kit was white.

Q13: Your uniform was also white?

A13: Yes, it was what we had in the arctic kit. If you got deployed in the jungle—you had your jungle bag. For the arctic—your arctic bag. You had to have two packs ready at all times in case you got deployed.

Q14: Was it your sense in the Air Force that training and tactics were oriented towards a specific enemy?

A14: Yes, in the beginning, clearly. We were still focused on the Cold War and jungle. We trained every year at Eglin Air Force Base in Florida for the jungle, where the 82nd Airborne trains. We were camped out in a jungle environment and my military job was very different than my engineering job. I was on a special team that did rapid runway repair, or “Triple R.” Our job was to be dropped into forward enemy airbases right after they were bombed by our aircraft. The first thing the Air Force does is to suppress an enemy’s air capability. That’s obviously the biggest issue. To destroy their aircraft and bomb their airfields. And then we would be sent in to fix the airfields we’d just bombed so our aircraft could land, distribute supplies, and bring troops to the front lines. So while the first mission was to blow up the airfield, our second mission was to fix it. We had to get it up and running in four hours. Our team was a multidisciplinary team of engineers. We brought heavy equipment, engineering capability, surveying capability, and bomb-damage assessment. Which was one of my jobs. We were deployed without any support. We were the first ones in. No army. No marines. Just a bunch of Air Force guys with heavy equipment. And we provided our own security, so we carried our own weapons. We would then try to find the easiest way to map out a 5000-foot runway. So we would survey the existing runway, search for any ordnance, chemical weapons, any danger that would impact the incoming work crews. You had to walk the entire runway to call in every crater, every bomb, every problem. Plus we had to wear chemical warfare suits, heavy charcoal-filled gear. Not the light, yellow suits they show in movies. It was a very physical job.

Q15: Did you feel you changed throughout the course of military training?

A15: Not at first, but over the course of basic training. You can feel that you’re changing. And as you marched around the base—each flight is at a different stage of training—you can tell who was the first flight, and who was about to graduate. The first flights had newly shaven heads, very sloppy, and their marching was horrible. You could tell people who were in the last week. They marched differently. They sang their songs correctly. They were just totally in sync. They were a unit. You could see it, feel it, and sense it. By the time we got to that week, we knew we were ready. I still remember, it was so exciting to put on your dress uniform for the first time and march in the parade on graduation day.

Q16: How do you feel you became prepared to work, individually, as a soldier?

A16: I think for most of us that came into the military at that time, most of the men were in fairly good shape. So the physical part wasn’t that daunting, and we got used to constant drilling. Even if you weren’t in shape, you got in really good shape quickly. It was the mental challenges that were more difficult. For example, lack of sleep—which is really both mental and physical. I think, although I never experienced combat, we trained a lot for it and felt like we were in combat with live fire. Drill is intended to train you to be able to deal with the stress of combat. For example, we often had to do guard duty. We had to stay up all night and be prepared. We were always on alert. You could be called at any time. You had to have your bags packed and ready to deploy at any time, and they often tested that.

Q17: How do you feel you became prepared to work as a unit of soldiers?

A17: Over that period of time, you could see in the beginning how confused and disoriented we were, at even executing the most basic maneuvers and tactics. But by the end, after all the drill and instruction

and training, we learned how to execute our tasks as a unit. Everyone seemed to know how to get it done. And we were very proud to feel that we didn't fail ourselves or each other.

Q18: What specific kinds of drill did you complete?

A18: I used to have to march 1600 kids in formation to class every day. I was also in the honor guard. We had to learn all sorts of interesting tactics. I wish we had pictures of us in those uniforms. We had little white ascots, you bloused your pants over your paratrooper boots—which were highly-glossed, we had to melt the polish on, so it looked like patent-leather, we did it with a candle to make it hard and shiny, then we had our blues, and berets.

Q19: What other kinds of physical routines do you recall?

A19: We had to complete a lot of tasks like cleaning your weapon under very difficult circumstances. So there was a lot of manual dexterity tasks under extreme conditions, when you're sleep deprived, under physical stress, without having eaten. In order to be able to navigate at night, you also have to drill with a lack of sleep and food and water—they want you to learn to work under extreme circumstances.

Q20: Since drill has been such an important part of U.S. Military history, what role do you think it now plays, or played in your training?

A20: When I look at basic training, the institutional goal is to break you down, to train you to do things their way, without question. At the same time they have to build you up, they can't force that kind of discipline on someone. They do the same thing in prisons, but it's being done by force. In the military, while they're breaking you down, they're also building you up to make you understand it's a necessary action. You learn to want to do it to save your comrades, and the esprit de corps you develop to save your comrades is all about that.

Q21: Was your personal experience of training informed by the theater you thought you might be deployed in?

A21: We did all the training leading up to the Gulf War. It was after the Iranian Hostage crisis that they shifted their focus to the desert. We were probably one of the first cohorts to train for desert warfare. That mission was called Bright Star, which was the precursor to the first Iraqi war. The first thing they did in the desert was to knock out all of the physical barriers and buildings—infrastructure. We practiced that—I was in the Engineering Department—which is part of why they were so successful. You think they were using tanks, they were actually using bulldozers. That was construction equipment, not military hardware.

Q22: Were there any women training with you and would they have been deployed?

A22: I'm not sure if they would have allowed them to go into combat situations, at that time, but women did train with us.

Q23: If you can recall, what are your reflections on the experience women might have had in the Air Force—did you have conversations and contact with them?

A23: Yes, in fact I married one. Women were typically in jobs that were non-combat role. They worked in the base hospital, food services, admin jobs—most admin jobs were women. I'm fairly confident that one of the first women explicitly in combat, as an Air Force flight surgeon, was in the first Gulf War. My experience was that none of the women I knew wanted to be in combat—most them appeared to be there for financial reasons. Just like the men in a lot of respects—but while the men may have been fantasizing about war, for most of the women it seemed like it would have been a disaster. Especially if they had a child. Although clearly this is no longer the case today—I think there are women today who clearly want to be in combat. Back then they knew they wouldn't have to be deployed. Today they know they likely will have to go, and still sign up.

Q24: What do you think will be the role of the military in the future?

A24: It seems to me there will be two militaries—two types of jobs. One type will conduct the attack portion, which will be done largely remotely. Aircraft, missiles, drones, and it will be done from computer screens. First will be that wave, which will often be the defining moment for the mission. Then, they will send ground troops in to police the situation. Because what's next is really a policeman's role. They're acting as guards. And that's a very different role, and not one that the military was ever very good at.

Q25: Without meaning to ask a leading question, is that what you think may have happened in Iraq?

A25: Absolutely. For a military man, you're not expecting to be driving around on patrol waiting to be picked off by IEDs from insurgents. We're an attack force. Not a police force. And that role has not been well-defined. It's clear that throughout the last ten years in Iraq that we haven't been in a role that the military is really designed for. And in these situations, when we withdraw, the vacuum that is left is horrendous.

Q26: What do you think will be the physical effects on a soldier for policing situations like this?

A26: Although I haven't been in theater, if you're acting as a police force, for example in the U.S., you work in the community. You live in the community. Hard to be there as a military combatant in that role—impossible actually. We're generally not engaging with the civilian population in that role when we're attacking as a military. We're there to kill the enemy on sight. Not to police a population long term and keep them from being harmed by insurgents.

Q27: What do you think will be the most significant determinant for the future of the U.S. Military?

A27: I think it will be our ability to adapt to the new reality of what our role in warfare is, particularly as we appear to be moving forward without having declared wars. In Iraq and Afghanistan, we've been at war a long time. The rules of engagement are unclear. I think of all the guys I've ever talked to or been with in the military—understanding rules of engagement are everything. Being able to defend yourself and fellow comrades. Having the proper equipment and training. That is all essential to having a voluntary army, but you must trust that your government and the military leadership are putting you in harm's way to accomplish a mission without you dying in vain. For us, after Vietnam, I don't think most soldiers worried about dying. But we didn't want to feel we were dying for nothing. But since Vietnam, the lack of clarity of our missions has been the biggest knock on the U.S. Military. I served in the interstitial period between the Vietnam and Gulf wars. Then, being in the military was highly stigmatized; it was not considered a good thing. It's changed, now there's a sense of pride. But when we went to town, off base, we were treated very badly by the civilian population. It was very different during that period. I'm glad I don't see that anymore. I'm proud of the way the average American citizen treats the military. There's an incredible outpouring of love, affection, and concern. However, I still don't think the government has caught up to support returning troops. When they come back and don't have sufficient health care, benefits, education, opportunities...

Q28: You mean that the soldiers are really not taken care of by society or the government?

A28: No way, they're not. And they'll have to be better taken care of in the future for their service.

Q29: Do you think the same kind of training that you received will still be used effectively to train soldiers of the future?

A29: I think they will have to reduce the physical training and do far more psychological training. Because the job won't be as physical—we were expected to be constantly in the field, marching, and living off the land. We were training for harsh circumstances on the body. If you think about our arctic gear and jungle gear, and at the end, we were the first group to start desert training, all of it was directed for bodies in very harsh environments. Today I think the training has to be much more focused on remote technology like drones and smart bombs. War will of course look very different than what we trained for in extremely close combat.

Q30: What do you think will be the role of the flesh and blood soldier in the future, particularly given the discussion of replacing soldiers with robots?

A30: You have to remember, for most of our fighting history, the body has been the main weapon in war. The military has studied it like they study any other technology. The first thing they do is teach you posture. And you don't understand where it came from at first, but at the end of your experience, you do—it's about being disciplined. They do the same thing in sports—how you guard someone, how you defend—there's a system for the body. For a lot of time in sports they were using ballet training, which makes sense for balance and dynamics. In the military, they also use music and a lot of organized drill—again, it's about the physical discipline. If we don't have soldiers in the future, I don't think we'll need that kind of discipline in our robots.

SJ: U.S. Army, Active-Duty 2002-2012—Interview Conducted September 12, 2012

Q1: What were your years of service and unit and rank in the military?

A1: Before we begin, I should say I'm aware that I'm giving this interview just a day after 9/11. I think some of my answers will be different than if I was answering questions at a different time or not with 9/11 on my mind.

R1: I'll keep that in mind. Please let me know if there are any questions you'd prefer not to answer, that might be informed by the date.

R2: No, I'm fine answering any questions—I just think I'll be more thoughtful about how important the military is, whereas sometimes I can be rather cynical about what I do.

Q2: Understood. What were your years of service and rank?

*A2: I'm active-duty now, but in the States for what I think will be a very short break before going back to the Middle East. I enlisted in 2002. I served two tours in Iraq. I'm an MP (military police) **** Lieutenant with the ***** MPC (Military Police Company). I was on leave in the middle as I had my daughter.*

Q3: Can you tell me about the path you took to the military? Did you recruit and complete basic training or did you attend a U.S. war college?

A3: No college, enlisted first. I went back to school after. My father, grandfather, two of my brothers were—one brother still is—in the military. We're a military family. It wasn't expected that I would go, but I expected it of myself. I didn't want to go to college and just do ROTC, and when it became clear we were going to war in Iraq, I really didn't want to sit out and go to college for four years and not experience being deployed.

Q4: Is there any history of women in your family in the U.S. Military?

A4: No, but my mother and sister-in-laws are big supporters. When even one person is in the military, I think it changes how you see service, and war. When a lot of people in a family are in the military, it's a way of life.

Q5: So, the official day of invasion for Operation Iraqi Freedom was March 20, 2003, when did you enlist?

A5: I graduated from high school in June 2002 and I enlisted in July 2002. So, I had been in the Army about eight months when the invasion happened. BCT, Basic Combat Training, was nine weeks, then I did AIT, that's advanced training for about 3-4 months, and then I waited on base for something to happen.

Q6: From your description, for example being anxious to sign up, it sounds like you were interested in being deployed?

A6: Absolutely. I was very competitive with my brothers. Anything they could do, I wanted to try. They're both older and had already gone into the Army, one through West Point and one through enlisting. It was drilled into us, literally, that to be an American meant we had to serve our country through military service. Again, I wasn't pressured to go, but I wasn't interested in any other options for my immediate future. I can't say I went for financial reasons, my brother got money to go to West Point but I didn't get those kind of grades, but I did feel that I would prefer making money and getting an education while being a part of the military than not. It's not like you make much in the military, particularly when you start, but at least it's steady, if you don't die. Sorry, there's the cynicism starting... You'll hear more of it as I get more comfortable.

Q7: Can you tell me a little bit about your basic training?

A7: It was rough. There's no other way to describe it. I felt I had an advantage because of my brothers and my father. We even sang in cadence at home when I was a kid! They definitely prepared me for it—don't ever disobey an instruction, don't spend time with recruits who don't want to be there and aren't committed, close your eyes whenever you can, even if it's for a few minutes during mess, because you won't sleep at all. Don't forget that nothing is personal and it's all about becoming better at your profession. We practiced a lot of the physical training before hand, so I felt like I really had a leg up. But, so did recruits who also came from military families, or had close friends in the military. And in truth, nothing really prepares you because it's such a personal, psychological onslaught. My drill sergeant was really intent on being tough on the women, really tough, which offended me because I was happy to do equal, but I didn't feel I had to do more to prove myself. Some women feel like they need to do even more than the guys, especially the ones who may be genuinely weaker than they are, but if the Army wants us to be equal, than I think they should treat us equally, not as lesser members who have to work twice as hard. But...that's another answer to a different question I guess.

Q8: I would like to circle back to your impressions of the differences between men and women serving in the Army, but I'd like to know a little bit more about your training experience first?

A8: Well, BCT is pretty much the same, I think, for everyone and it's been that way for a long time. That's the point, in a way, to make everyone go through the same experience. Treat you like shit, disorient you, stress you out, demean you, throw every kind of physical exercise they can think of—from crawling through mud obstacle courses to doing jumping jacks like a kid if you're called out for something—and then they congratulate you when you've survived it without crying or quitting. See, cynical note again.

Q9: Since you've mentioned it a few times, do you think some cynicism about the military, or your job, is an issue?

A9: No, in fact, most people I know in the military, who I talk with and interact with regularly, are somewhat cynical. It's hard to do this job and not be cynical. Even when you believe in needing a military, even when you believe that someone has to serve, and you're ok—extremely committed even—to serving, you see so many disconnects between how things should be and what actually happens, that it's really hard not to want to throw in the towel sometimes. I think anyone who denies there are contradictions is being dishonest. But I guess I'm cynical about that too.

Q9: I'm going to note here that I'd like to return to your observation about the disconnects later as well. Is there anything else you would share with a civilian, or someone who is going to BCT, about what the experience is like?

A9: Well for me, it was really about keeping my head down and performing well, even when I disagreed or thought something was unfair or illogical. This is tricky, and once you serve for a while you understand

why you're trained the way you are, but you also understand why there are issues with it. If you enlist—you're essentially signing up to die for your country. And in 2003 this was a lot more likely than it was at any other time since Vietnam. In the first Gulf War, it was swift and successful, on a whole for the mission, without a lot of casualties. For NCO's, you're basically highly necessary, but highly expendable. So first they have to train you to get you to be completely destroyed, and then they have to build you back up to feel you're part of something profoundly meaningful—so meaningful, in fact, that you'll die for the cause. Not only willingly, but whooping and hooah-ing as you go. It's some complicated, psychological shit. What's even more complicated is that even when you know that's what's going on, you come back for more, like those of us who do multiple tours in what has been an unexpectedly very deadly conflict for the U.S. and have re-signed. Guess those military psychologists did a really good job on us!

Q10: How much of the training process do you think is physical versus psychological, or would you make any distinction?

A10. No distinction. Everything in the military is a combination of psychological conditioning through physical torture, or physical conditioning through psychological torture. But this is what I meant earlier by saying you understand it when you've been deployed in combat. They do it for a very, very, very specific reason. You have to train young people to endure conditions that, for most of us in America, we just never experience, even if we're poor, which is true of a lot of enlisted folks, guys and gals. It's sad, but if you're a woman in the military, you're even more likely to be poor, honestly, because either you have to really need the money, or you have to really want to fight. I don't say that with any disservice to women in the military—I've met so many who are truly remarkable. In fact, they're remarkable in part because they are poor and enlist as a way out, or to "see the world"—Such a dumb phrase. Nobody sees the world in the military. You see a base, military barracks, mind-numbing admin work, or lethal combat. Those are the options—or to go to school afterwards. If you join the military as your only option as a woman, you have to be tough—you have to have something inside of you that says you're going to make a challenging choice to support yourself, and maybe a family. And I think those kind of women, frankly, make very good soldiers.

Q11: So, returning to your earlier observation, do you think there are unique obstacles, or differences, for women service members?

Q11: Well look. In Iraq we're fucking in combat, so it's just such a joke that the military administration and U.S. government haven't decided to change the official paperwork. There are definitely differences. You need two things in the military—brain, brawn, or both. That's why that Rosie the Riveter campaign was so successful—she looked like a very smart girl, but was showing she also had the muscle and grit for the job. Women are definitely the weaker of the species—it's a basic bone to muscle to height ratio. But through training, you can overcome most obstacles. We may not be able to hump as much weight or bench press as much as men, but we can definitely complete most of the physical requirements for almost any job. But there are some physical differences. Although, it is ultimately relative—there are some women who are in far better shape than guys I see in the Army. Regarding brains, I'm biased—but I'd say we have the upper hand. Can you mark down that I'm smiling when I say that, so anyone reading this knows it's a joke, kind of? Say I'm smirking. That's better. It's only a partial joke. This would be a good time for an emoticon. Women often have to be far smarter in the military to prove themselves. I think the way men see women serving alongside them has definitely changed, even in the time I've been in, but it helps if you're smart. This may be even more important than strength—although strength definitely gets you immediate respect. Like they don't feel you're going to compromise a situation because of your size or strength. More to the point of your question, I think so many barriers have been lifted for women and will continue to have to be—allowing them officially into combat will be a start—that there are now a lot of role models for younger women serving or looking to serve.

Q12: Do you think combat restrictions will change?

A12: Absolutely. They have to. We're there already, especially as MP's because we accompany so many units that are specifically there for combat, but we're literally right next to them, or in front of them in convoys, or alongside of them for so many jobs.

Q13: That's a good transition to my next question, can you describe some of your basic duties in Iraq, on either of your tours?

A13: Well, they were radically different. On the first tour, we were entering an active combat situation that was changing very quickly, and it was already very clear that we were not going to win the hearts and minds of the people, particularly the minds of those who were openly hostile to us and didn't want us there. We did everything you saw on television or have read about since—or I'm sure your other interviews have told you. We rolled in Humvee convoys, we did weapons and chemical weapons checks, we tried to get intelligence, we tried to identify high-risk areas and targets. We were really trying to assess a situation that was very quickly looking like something far different than what we signed up for, which was also far different than what was sold, yah told, to the American people. On the second tour, we were like the NYPD. We were there as police, especially as MP's. Even though we're military police, that's really not our role, I mean, to be like police in the United States. But in Iraq on my second tour, in 2009, we definitely were. We were patrolling all the time. We were trying to guard Iraqis from Iraqis.

Q14: I'm going to ask a few specific questions about your feelings about being a woman deployed to Iraq. Please just say pass if there's any question you'd prefer not to answer or discuss.

A14: Sure.

Q15: Generally speaking, did you experience any difficulties related to your gender that weren't universal to deployment or the combat environment?

A15: Many. Look, any reading of basic military history tells you—we were mainly nurses, secretaries, or support staff. The military is not yet fully prepared for women in the military—the housing, equipment, machinery, vehicles, protocol—it's mostly designed for men living and working with men.

Q16: What were some of the difficulties?

Q16: Let's see, clothing, gear, and operating weapons. Just the basic things that soldiers have to work with every day! No, it's a lot different now than when I entered. I've seen a lot of changes, and they have study groups and mentor groups that work to try and make things better for women, so it's definitely improving.

Q17: How are interpersonal relationships in the military? That's discussed a lot these days.

Q17: You're stuck there, like a family, but in really miserable conditions. So you have to make the best of it. Look, I think women are basically gatherers—we stick together, share photos, I read a lot, you try and make friends with people you feel you can trust and have things in common with. The guys do the same, but they're like trapped hunters. They work out a lot, make up bullshit things to do on YouTube or online. Like in any group, there are individuals who try to flirt, or make things difficult, but overall it's not that much different from any other job. You like some people. You don't like others. But you still have to work with them. Difference here, is the stakes are much higher. You might actually have to save their life. But this is the military mission, so you can do both—save someone if you don't like them personally. It doesn't matter. Liking people is not our job. Saving lives is.

Q18: Ok, last question. What do you think the future of the U.S. Military will look like, particularly as women move into more combat roles?

A18: The military knows women are here to stay. And in the end, they need us. In an all-voluntary force, you can't just ignore 50% of the population. Even if you really didn't want women in the force, and some men don't, you'd be stupid not to consider the facts—face it, we can probably recruit a lot more people

if we open up the force to women. I think we'll look back at the military, just like we look back at the draft, and realize it was really bizarre that it ever happened—that women were excluded from serving. Look, if you can do the job, why not. Of course, there are some jobs women can't do. I'm strong, but I can't bench-press as much as some guys. But neither can half of the guys in the military! You have to place people where they'll fit as cogs in the military machine. That's what aptitude tests are for. That's what advancing people is for. And if you can't make it, that's ultimately what honorable discharge is for—for men and women—you've done your best, you've served your country. You've survived and been willing to die for something you believe in, and to protect it for people who maybe or maybe don't understand or appreciate what you do. When I look back, despite the things that don't work—I guess it's good we didn't get to those questions—service will be the thing I'm really proud of. And my daughter. Military service and being a mom. Those are my two contributions to a better future.

DR: U.S. Army, Active-Duty 2009-2012 Interview Conducted January 8, 2014

Q1: What was your unit and rank in the U.S. military?

A1: I got out of the military as a specialist. My rank and unit was First Cavalry Division, Bravo Company, 2A Cav.

Q2: How many tours did you serve and how long were you there for?

A2: I did one tour for a year in Iraq.

Q3: What part of Iraq?

A3: Baghdad.

Q4: In what year?

A4: 2009 to 2010.

Q5: Were you co-located with any other groups?

A5: The Iraqi Army worked closely with us. We shared an outpost with them. And that's about it. Iraqi police, but we would usually go out and join up with them.

Q6: Can you tell me about the path you took to the U.S. Military? Did you recruit and complete basic training or did you attend a U.S. war college?

A6: I got recruited well, more of a volunteer. I went into recruiting station and pretty much knew the job I wanted.

Q7: What job was that?

A7: Bravo, Infantryman. Which is basically front line. And I was on my way.

Q8: Do you have family members in the military as well?

A8: No. Mostly friends, no family.

Q9: What was the reason for wanting to volunteer in 2009?

A9: Numerous reasons. But I would say more of a selfless thing that I had about me. Still do. And I was always into like military science and things like that. Tactics, all that. As a child, my father built computers. So he always put me onto new military video games and things of that sort. Even fighting pilot planes with real combat simulation. That kind of like pushed it more, you know.

Q10: So how old were you when you volunteered?

A10: I was 17.

Q11: When you completed basic training and went for your first tour how old were you?

A11: 19.

Q12: What was the recruitment process like?

A12: Basically, I basically went on-line, signed up. The recruiter called me. He said are you sure? I said yes, I'm sure. I told my mother. She said no, you're bluffing, but I followed it straight through. I met with the recruiter downtown in Brooklyn in the office. Told them basically what I wanted. Which was a combat job because I wanted to see up close, you know. So he is like how many years you want? He is like we do 3, we do 5. I said 5. But he actually was like, no, do 3, see how you like it.

Q13: How did your family and friends react?

A13: They weren't surprised because I always talked about going. But my father told me not to go. Of course I went. My mother she was proud, she knew I always wanted to go. She was for it. My friends, they didn't like to see me go, but they knew I was going to go anyway. It was kind of like premeditated.

Q14: Had you talked about it with anybody before since you didn't come from a military family necessarily? How did you get a sense of what the experience might be like?

A14: I would say the most sense of the experience that I would feel, like the truth, would be from the History Channel. And the video games that I played were historic, well built video games.

Q15: What does that mean—historic? Well built?

A15: They were historically accurate. And kind of used technology to put you in the edge of what it is like to be there, even the graphics, everything about it. There was a submarine game I used to play, simulation, I can't even say game. I would say more simulations. It was so accurate you would be right there in the video game in a submarine, you know, sunk under the ocean for like two hours in your seat, that is how realistic it was. It gives you that patience, discipline to sit there as if you are actually in a submarine.

Q16: Were there also video games that were doing more of the kind of work you would do in the Middle East or in infantry work?

A16: Yes. Those games were video games such as Ghost Recon which is my first war fighting video game. It really gave me edge of tactical things I seen in, you know, way beyond the mission and whatnot. It is just crazy. That's a big influence.

Q17: I might circle back to a question about video games. But I'd like to ask, what was basic training like for you?

A17: Rough.

Q18: Where were you stationed and how long was it?

A18: Fort Benning, Georgia for four months. It was rough being I had a death in the family as soon as I got there. My father died as soon as I got to basic training. They asked me did I want to go home. I said no. They basically said you already graduated right there because I didn't want to go home. I wanted to finish. The experience kind of broke me down. I left basic training feeling a little less, I had less knowledge of the real world.

Q19: How so? What does that mean?

A19: They say when you leave basic training especially infantry school, other basic training you go there, you do basic training. Then you go to AIT at a different unit, you get more freedom. Not in Fort Benning, Georgia. Fort Benning, Georgia you are there the whole time with these guys. You're close together every day. You don't get freedom. All that is stripped from you. You are going to sit there sometimes and think what did I do? That is the first thing that goes through your mind when you get off the bus to basic training. What did I do? Like what did I just get myself into?

Q20: What did you get yourself into?

A20: You just smell it in the air. Everything I know, forget about it. So I had to deal with that.

Q21: For a civilian who's never been through basic training, what did it look like?

A21: When you first get there what you see is a lot of buildings, like barracks, short buildings, reception halls. You go into reception hall, you sit down. Then you go get stripped down from your civilian clothes. You get gear. Like a uniform. Usually a training uniform to sleep in and whatnot. This is kind of like they file you through. You get your shots, your hearing, everything. Be quiet, stand on the wall for like a week or two. Just do as you're told. Go get that needle. Things like that. You are just in a line like a sardine line. A conveyor belt. Then you think that is basic training, but it's not. That is reception. Lo and behold some Drill Sergeant comes down range, meaning they come from where you are actually going to train, they come down and get you. That is where it starts. That is where it is like what are you looking at? Trying to see who is going to punk out. Who is going to act tough, who is going to despise whatever is going on. They size you up right there. Then when you get there they break you up into platoons. They break you up, make you toe the ground. They dump out all your belongings, take your cell phone, throw it in a closet. Everything you came there with, you go there with nothing. I recommend going there with nothing. I didn't bring a cell phone or anything. I brought one outfit and a drawstring backpack. That's when it gets bad. Constant physical workouts. No sleep, screaming left and right.

Q22: What are the physical tasks you guys have to accomplish?

A22: Push-ups, variations, they make a push-up in a million ways. Upside down push-up. Buddy assisted push-ups. Sometimes feet on your shoulder going down a chain. You are all doing push-ups, all types of craziness. Jumping-jacks, lunges, extend your arms with your weapon for a long period of time. You think you're being punished, but then you feel the difference between when you came and when you're leaving that it is the best workout ever and you want more. Your body is in extreme condition. It is really good.

Q23: What for you was the purpose of doing a lot of those kind of physical tasks and activities?

A23: As far as drill and cadence?

R23: Yes.

R24: Well, we did. Left, right cadence. Typical-like military drills. They are all the same with a cadet unit or real Army unit. Marines focus more on D&C [Drill and Cadence] than the Army does. Non-combat jobs. You got some guys that couldn't even march when they left basic training. We focused on what we are going to go do. We are not going to be on post doing left, right. We are going to be in Iraq. We were more focused on that. But we do it for chain of command, we got a new commander coming in. It is like signs of respect, you know. You got to know when to salute. All that. That's about it. That is all we really used it for. We still did ceremonies for change in command, actually we are in formation for hours in the position of attention. Guys passing out left and right because it is so hot and we got a new commander.

Q24: Did you feel training prepared you for your responsibilities in Iraq?

A24: What prepared me for that responsibility? Medical training more than anything. We had medical training. That was big.

Q25: What did that include?

A25: If a guy took a wound anywhere, pretty much on his body, if he lost a limb you can save it. Apply tourniquet. If somebody gets shot in the chest and needed needle decompression, I got you, buddy, it was simple.

It wasn't as if I was an EMT or surgeon or something like that. It was simple things we did until they got to professionals.

Q26: To save them?

A26: Yes. These were things in previous wars that were not in use. You didn't have medical training. So that helped. That helped. Studies show it helped. Once we learned how to apply a tourniquet higher instead of three or four inches, near the limb, hit it higher at the base, you just saved that limb much better than putting it down here [Gesture to lower leg] Things like that. Little differences than previous wars. We are more prepared to save our guys' lives.

Q27: How would you describe the primary duties of your jobs in Iraq?

A27: Primary duty: I would say perform patrols, security patrols, make sure nothing suspicious is going on in your area. In your AO.

Q28: What is AO?

A28: Area of operations. To basically make friends with the communities. Win their hearts. To kind of thwart the violence or to clear where the violence is actually coming from.

Q29: How often, how many days would you say you were on base versus going out and actually being on patrol?

A29: I went on patrol about every day.

Q30: Every day?

A30: If it is not daytime, it's nighttime. If I didn't go in the daytime, I was on guard in the daytime and then would go on patrol at nighttime.

Q31: Was that common for everyone in your unit?

A31: Yes.

Q32: Were you more actively involved?

A32: Every infantryman goes out there every day. Every day rotations between platoons. You do guard this day, or you go out. But eventually in that 24 hour period you're going to go out.

Q33: How many guys would that be?

A33: So you got a company here on the outpost, right. Roughly 200 people, roughly. You got your company commander, you have four platoons that he commands. My platoon was a blue platoon. In that platoon you had four squads. I was on third squad.

Q34: What is blue platoon?

A34: That is my platoon. We give every platoon a color, blue, green, black platoon and so forth. You got HAC which is more of like the platoon for the company. Basically I was in a room with an outpost with about eight different guys. We set up little hooches with our ponchos. And, you know, made privacy corners and whatnot. I was in the farthest corner. I had audio technology with me there. I kind of kept myself busy with making music, making beats. Recording myself. Making music videos like funny ones I would put on You Tube. I actually found a lizard and made a song right there and recorded and put it on You Tube. That is how confined it was. I had to find things in my little corner to keep me busy.

Q35: In the 24 hour day how would you divide the day up? Meaning how many hours were on patrol, how many hours were sleeping, how many hours were kind of waiting for work to start again?

A35: We have a rule sleep whenever you can. So sleep was basically rare because schedules are always changing. One day you came off a patrol, something happened so you add eight hours. Then you get back. You got to go on guard. They might get somebody to relieve you early so you can get some sleep.

Might not get that lucky, who cares. Just go on guard. You can sleep afterwards because you are going back out the next night. It was always changing. Basically I got sleep about roughly four hours in a day on and off probably. Sometimes I got lucky and I get like a 12 hour, oh, I didn't catch a mission in a 24-hour period, but I caught guard so I am sleeping a good amount of time, 8 hours, 12 hours if you're lucky. Then sometimes we would dream about sleeping on guard.

Q36: I'm sure. In a single day how much variation would you say there was in your specific duties? You said mostly you were on patrol. What would the variation in a day look like?

A36: In infantry we do everybody's job. If the cook needed help, we had to go help the cook. If the mechanics needed help with one of our vehicles, we go help the mechanics, if anybody needed help you send infantryman to help them. It's like the jack of all trades, master of none. We were basically involved in all operations on that outpost. Anything you can imagine, from patrol to surveillance, you know, we were there.

Q37: Did you have an expectation from basic training of what the day would look like, versus how they actually played out?

A37: Yes. Basic training and infantry school, Fort Benning, Georgia, home of the infantry. The training there is more intense I would say. It really prepared me to stay up. When I first got there I probably got like 7 hours of sleep in three days kind of. I was working, working, they were just breaking you down, building you back up. I was ready, you know. I was real prepared. I had my drill sergeants who actually are vets, so they been to the war, Afghanistan and Iraq. The training was top of the notch. Tell you things that the book wouldn't tell you. With their guidance and them being actually with us, letting us know how it really was going to be. They didn't sugar coat it. We were prepared.

Q38: On patrol what did a regular kind of patrol day look like?

A38: All depends. Some patrols were to walk-through a market. Some patrols were to interact. Some patrols were to scout out spots. Some patrols we mine swept or used metal detectors to see if we found any metal in the ground and whatnot. So it depended on the, I would say the time scale which we were on. When we first got there it was more make friends, find out where everything is at. Who knows who, things like that. Toward the end you are still in a deal, you are upholding your image of when you came in there. You just want to start off clean and get out clean.

Q39: How did you deal with the language? Was there an interpreter in your group?

A39: We had interpreters who spoke English and spoke the native language. So they would teach us. They were from Iraq.

Q40: I was going ask, were they usually Iraqi interpreters or U.S.?

A40: Yes. Iraqi. We had some U.S. ones. We used to use some men and woman from Sudan who came into the military. I actually have some friends who are from Sudan and came to the military. They would teach us also. It's basically—we don't sit there with the books and learn. We learn as we go.

Q41: It was immersive when you were there?

A41: Yes. But so many commands you need to know. Basically you want to know commands, greetings, proper gestures, the ethics so you won't slip up. Shake with your right hand, not your left.

Q42: How did you find the reception was generally? What was your sense of how the Iraqi people there received you? This was 2009.

A42: I had a nickname, it was Obama. That is how they perceived me.

Q43: Were you one of the only black infantrymen in your group, or why is it you got the name Obama?

A43: I was tall and black. Tallest one. I got the name Obama, I think they call all the tall black guys Obama. For the simple fact it is like a joke to them. It is funny. It is nothing meant to embarrass you or anything like that. It is: "Obama, hey! What's up, Sudan?" It is like a joke. There were about only seven black people in my company.

Q44: Out of how many in total?

A44: About 200.

Q45: What would you say was the racial demographic for most of the company, so 7 out of 200 were black.

A45: Yes.

Q46: Was that mostly African American or also Caribbean American or from anywhere else?

A46: African American, we had Haitians. Texas, Chicago. All over.

Q47: What about what would you have said in that company was maybe the rest of the racial demographic in terms of Latino, Asian?

A47: I can break it down. I would say Asian was about 2 percent of the company. Latino, a good fifteen percent. Then we had Caucasians. That was majority. We kind of had to learn each others' ways of life, you know. I learned a lot. They learned a lot.

Q48: Would you say about urban versus rural—were people coming from everywhere?

A48: You have urban guy such as myself. You would think I'm suburban.

Q49: Why do you say that, why suburban?

A49: I didn't talk like I was from Brooklyn, that's what they say. You don't act like you're from Brooklyn. I am quiet, laid back, whatever. That is when the issues arise. I was defending myself. I am urban. I am from Bed Stuy, Brooklyn. Things like that. You have some guys who grew up on farms who never even interacted with an African American, ever. We all put that aside. Turning into a big joke after a while. It was more of, "You got my back, I got your back."

Q50: I am going to move into a few questions about the service uniform and some of the technologies that have been developed to work in both Iraq and Afghanistan. For a civilian who may have no familiarity with the U.S. military uniform, can you describe your uniform and basic gear worn with it?

A50: Okay. The basic uniform we wear cargo pants, the blouse, the unit patch. Overseas and during training we wear our armor which has plates inside, you know, protective plates.

Q51: Are the plates bullet resistant?

A51: They are designed to take 7.62 round. That is basically the round that the enemy uses out of AK-47s. Usually the minimum round they use would be 7.62 round.

Q52: And they are front and back?

A52: Front and back. You may be lucky enough to have side plates, which is also new to protect your organs on the side. Studies show a lot of people were getting injured through the sides. They made little plates right here.

Q53: What do you mean lucky enough? What determined whether you got side plates or not?

A53: When the war first started they didn't have side plates. When my generation went, we had upgraded to side plates. So, I say we were lucky to have upgraded equipment on that.

Q54: *The uniform has really been a feature of U.S. soldiers throughout military history from World War I, through World War II, Korea, Vietnam, U.N. Peacekeeping missions. How would you describe the role of your uniform in Iraq?*

R54: *Do you mean how did they see it?*

R55: *Yes, for example, was it the first thing they recognized?*

A55: *Yes. You see that uniform, that is a U.S. soldier. That's what they felt when they seen that uniform. I was talking about the explosion from earlier. To go back to that, I think when we turned that corner and he seen those uniforms he blew the bomb...that is what we were told.*

Q56: *Because he saw the uniform?*

A56: *He was startled.*

Q57: *He detonated?*

A57: *It wasn't aimed at us. It wasn't for us. He seen us and was startled—boom.*

Q58: *When you say he, do you think that was an Iraqi citizen? Who was it aimed for?*

A58: *The explosive was aimed for a spiritual leader who was driving up the road.*

Q59: *Was the individual captured?*

A59: *No. That individual died.*

Q60: *In the explosion?*

A60: *He dropped the bomb at his feet and he died instantly. So they say when we turned the corner, he seen the uniforms and was startled. We were doing patrol about two corners ahead of him. I turned the corner, too.*

Q61: *How far away were you?*

A61: *About two corners away like a city block and a half about out there. We can like see him all the way at the dead end. There is another road, we were right here, there is another road, turn, boom. They said we startled him. When he seen us doing the patrol he just dropped it.*

Q62: *What was the physical response to the situation?*

A62: *To take cover.*

Q63: *Take cover?*

A63: *Yes. When an explosion goes, take cover, get out of the line of fire of which it came. Just let things – catch a tactical pause you would say. I did that instantly, I just paused like wow. At the same time, you know, ducked up on the wall. My team leader just took charge from there. He is all right, called in other vehicles. They rode in. We got out of there. We went around later to investigate the blast.*

Q64: *How did you feel afterwards?*

A64: *Truthfully I felt I was lucky. Nothing was wrong with me. I saw what was wrong with that individual. So I felt lucky. That's it.*

Q65: *Did the other guys in the company have a response? Were people expecting to see that situation in 2009?*

A65: *Expecting it, always. You're always expecting it. Sometimes you're tripping yourself out thinking something is going to happen. Kind of getting your adrenaline going. You have to get used to being on the ground everyday, at night, daytime sometimes with no night vision. So, the reaction I seen from my*

team members was: we're lucky. That's how it was. We're good, let's go see what happened. When we got on the ground to inspect everything that happened, they are taking body parts off the roof. I am looking at the hole in the ground, the sand dune next to it.

Q66: Was anyone else injured?

A66: I think there were a couple injuries from the surrounding, from shrapnel.

Q67: Going back to your earlier observation about video games. You said you felt some of the video games had kind of prepared you. What do you think was the difference between playing something in a video game and experiencing it?

A67: I would say in terms of being shocked about it, the video games took all the shock out of it. It was just like wow. In my head, silence, this is it. This is what I'm saying inside my head, complete silence, all you hear is a "brrrr-ing" after, that is it. I had one team leader who was there before. He didn't have too comfortable a reaction to it. But for me, it was like a video game.

Q68: What does that mean, like a video game? What does that mean to you?

A68: I think like a suppression thing to tell you the truth. You kind of put yourself in the mindset—it is just a game.

Q69: Can you explain that?

A69: I would say in terms of me, myself, when I did it, it is kind of to block out all the emotional turmoil, things like that to be stressed out. I got comfortable. I got comfortable. Real comfortable. I didn't want to leave, to tell you the truth like that. It was a game, to me it felt like a game. I have certain philosophies on life and whatnot. But it was something I chose to do. Something when I went I felt I was coming home. So that also helped, too. I felt prepared. I felt like I was pulled into doing it. Call it like my path. I knew I was coming home. I knew I would be here today probably having this interview. I wasn't worried about it at all. The video games kind of just took all the surprise out of it. I wasn't surprised about anything I saw at all. A gun, a bazooka, we found a cache, I been doing that for years on my computer. It was like that. It puts you in the mental state things are going to happen you are not going to like. You see, some video games can make you cry as a movie can make you cry, you know.

Q70: So do you still play video games?

A70: Yes.

Q71: You do. So has the experience changed for you at all?

A71: When I'm playing a video game now I feel the physical. It is like I am actually there in the video game. I know how to move. I kind of get into the technology of the video game, the engine they use to design the game. I kind of feel that with the controller I can make actual movements as if I was in the actual war. So it kind of made me a better video game player. I play a lot of battle games. "Battlefield"—which is by far the most realistic combat simulation—I played this since I been young and it feels like you are actually there.

Q72: After having actually been to Iraq the physical sensation is stronger for you or there is now a physical sensation?

A72: There is now a physical sensation. I kind of sway with the controller. I am there, I zone out. A lot of that—I play video games to get that feel back. Especially when you are in combat jobs and whatnot you never lose that feeling, you want to feel it all the time, go to the range, join law enforcement. I'm doing criminal justice as a major in college. It is because I can't let it go. These video games—you are just there. You are not harming anybody. It is just a video game. You are just feeding your adrenaline. Just getting that old feel back.

Q73: Do you think it would have been different for someone who hadn't played video games and went over; would they have been at a deficit or maybe not have had that same relationship –

A73: Of course.

Q74: Did you know people who had a really hard time with the experience while they were there?

A74: Yes. Some were actually video game players. They had a hard time due to accepting the fact of what it actually is like when you get there. It is like oh, my God, I'm here. Some were video game players, some weren't. Some grew up on a farm, couldn't watch TV, never saw Family Guy. Their response was like, I don't know, it was more: I'm focused, man, I am focused, I got to pay attention ten times more. I got to get the hang of this. Some of those guys I was worried about. I was worried about them, you know, I would be like go to the side and ask: Do you think this guy is going to be all right because he doesn't know about interaction with other cultures. He never left the farm. I am from New York City, it is pretty diverse here. At least I knew what a falafel was. Some of the guys went out in the streets just to get a falafel. It is really crazy. It really depends on your background. When gun shots would go off from Bed Stuy, Brooklyn I heard it before. Whatever. Iraq wasn't that different.

Adam Kokesh: U.S. Marine Corps, Active-Duty 1999-2004 Interview Conducted September 1, 2011

Q1: What were your years of service and unit and rank in the military?

A1: I was with the United States Marine Corps 3rd Civil Affairs Group, as a sergeant when I was discharged. I enlisted in 1999 and deployed to Iraq in 2004.

Q2: What month did you deploy?

A2: We got there February, late February 2004.

Q3: Can you describe the process of arriving in Iraq and your initial responsibilities when you arrived?

A3: We got to Iraq after going through Kuwait and everything. We were part of the third soldiers' detachment, that was attached to the first rank division that was responsible for the Anbar Province, which was the Western part of Iraq, Ramallah and all that triangle. So we were replacing the unit that, under the Army model there, had two teams attached to every battalion, and they had a little headquarters team that was like two officers and two enlisted people. And our model was different coming in, we were going to have one team with each battalion and then a headquarters team and then an extra tactical. So, they didn't have anything for us to do, we didn't have anything to fall in on, so we worked with that headquarters team for a few weeks, and we assisted in convoy security.

Q4: What did a basic day look like for you?

A4: It changed frequently. In the beginning, we were learning a lot about Iraq. During those days we'd get up and go to PT. They would give you an order at the end of the day before, "All right, you are to report at 6:00 a.m. 7:00 a.m., whatever it was, for PT." We would go for a run to the gym, we'd go lift for certain. We were a small team.

Q5: How many people?

A5: Six people. It was kind of unusual, normally there would be a captain or a major, a senior staff NCO and then the other four members of the team could be sergeant, corporal, lance corporal, C4. We were unusual though, we were spread more. We had a major, we had a G4 officer, we had a staff sergeant, myself as a sergeant, a corporal and a PFC. So we would go run a mile to the gym and then—it was great, I could lift, I didn't have to do bullshit calisthenics, it was fun. We were a six-man team, so then we were manning military vehicles, driving small convoys, driving people around, you know, base to base, running errands. In down time, you sit around and study, literally sit in the office and talk with

the people the Army enlisted who were reviewing binders and material and saying, "This is what has been going on. This is what these communities are like." They would share their intel.

Q6: And did that schedule change?

A6: Yes, it became radically different because, after two or three weeks, then we got attached to an infantry company. It was a short drive south of Fallujah—that's a relative term—and they were working at an old weapons depot and they were destroying it. They were basically guarding civilian contractors who were trying to locate missile ordnances, and we started doing surveys of the area. So our daily schedule was get up, eat an MRE, and have a daily briefing. The major and the officer would go on a daily meeting with the company, find out what they had planned, what the demand for the civil affairs team was, and they always came up with, like, bullshit for us to do. We were told today you're going to study your Arabic, or you're going to work on this knowledge or that. And so, what I did—I was good at mapping, so I would recreate maps in my notebook from looking at military maps, in different sketch forms. Then I could create maps based on where we would go on our security—oh this facility is here, that building is located at that coordinate. Maps were basically a needs assessment, that was my talent.

Q7: Were you assigned to create maps?

A7: Well, it was sort of that I stepped up. That was my contribution to the civil affairs effort.

Q8: Was there a need for it?

A8: Yeah. And I was teaching myself Arabic.

Q9: Did you use any equipment, or were you mapping by hand?

A9: No, it was archaic. It was like we had paper maps, and we had notebooks. I would sketch, or just scale down, but also create simpler versions of the maps—like, where are all the hospitals? Oh, here are the hospitals, here is a map of just that.

Q10: I'm going to ask a few questions about the gear and equipment you had in Iraq. Can you describe the basic Marine Corps uniform?

A10: Like what I wear at combat every day?

R10: Exactly.

R11: I wore the basic issue boots, which were really good at that point. When I went to boot camp we had shitty, not shitty, but basic lug sole—black rubber with nylon. By the time we got to Iraq, they replaced them. When they replaced them they were awesome, those were great boots. But also having the experience of what we had before, it was like a world apart.

Q11: Because of the quality?

A11: Yeah. I speed lace my boots and they were great for that, but we still had to blouse them with bands.

Q12: Blousing is when you tuck in your pants so they blouse over the boot?

A12: Yeah. It's what the Marines call it, at least they did at boot camp back in my day. I'm old enough, I can say that now I guess. It's a rubber band wrapped in a spiral cloth with metal hooks at the end. You put it around and pull your trousers over it. It was always an unnecessary pain in the ass. If you didn't do it right you'd either have your calf or socks showing. The Army always had this technique where they tucked their pants into their boots, I thought that made more sense, but we weren't allowed to. We had to have that look, bloused to a point, like right there in the boots. The trousers that we wore in Iraq, I thought they were great. Instead of having two buttons on the side, on the cargo pockets, it was one button and a little stretch. I thought that was great, the fabric was decent.

Q13: Do you know what version your uniform was when it was issued? Did it have fire retardant capabilities?

A13: I don't know. Well, it was the first generation digital uniform. In 2004, that's what we were using. But we also had forty to sixty pounds of gear—full gear was always awkward. But I thought the fabric was decent, I thought it breathed okay. The problem was the flak jacket, but the pockets were great, buttons were great on that. We were allowed to wear whatever kind of belt we wanted in combat. I had a bulked up riggers belt, and the riggers belt is the standard issue they started around the time. The point of it was because of the Marine Corps martial arts program, you know what I'm talking about? They created a belt system and everybody gets the same belt. So if you graduate from boot camp and there is a point, at least—I don't know how it is now, but this is how it was when I got out—you go through boot camp and then you go through hand-to-hand combat training and then they give you the colored belt that replaces the web belt. I also wore a pistol. In civil affairs we all used side arms, we were all Class B. Essentially, they give you a holster, but it's the shittiest, simple thing, and this is weird because it's pretty essential equipment. Let's see, I wore Under Armor shirts, because you sweat so much, it was nice to have that instead of the cotton. After awhile, though, they told us you're not allowed to wear Under Armor because if you get lit on fire, they will melt to your skin, or if you get hit with a blast, it would make things worse for you. So then we got Under Armor that was fire resistant. The camis didn't have that problem, they tested that at least. And the blouse, I mean, compared to the stiff, you know, four color, tri-color pattern before that, it was great. It breathed. It moved. It was the next proper evolution of that uniform.

Q14: What other gear was included in your uniform?

A14: We were required to wear a first aid kit. I think I had one on a cargo pant pocket. And then I had my main strip of ammo pouches on one strip. I bought a high-speed magazine holster that had three double pouches. I had a grenade, binoculars, a bayonet, and on the right side, because it was my shooting side, I would try to keep this a little lighter so I could have ammo in the left hand, so you can get to it anyway. I had a single pocket for my pistol. I had the magazine in the pistol, I had a magazine on my holster, and I had a magazine on my chest.

Q15: Did you feel like you had everything you need for combat and that it worked?

A15: Yeah, except, and this might be interesting. The flak jackets were an issue for a lot of guys—you know, the main protection you're supposed to have from shrapnel and IEDs. The plates, have you seen them? They are designed with a little curve—it's fucking retarded.

Q16: Why is that?

A16: You're supposed to put the same one on your back as on your front, and the only way it would fit your back—you turn it one way and it's convex, the other way and it's concave. It was almost like it was supposed to come over boobs. For the front plate it was okay. It was not great, but it was okay, it reasonably sat where it was supposed to. The thing is, the back one would dig in your back, and especially if you're sitting in a humvee a lot. What I did, and I know a lot of guys did this too, we found different things to accommodate. Shorter guys and taller guys had to have different solutions. What I did, I turned it around so it wouldn't make me sore. I'd wear it this way for a week, and when I got sore I'd turn it around, and it's great, until I had to turn it around again. It was a constant struggle, and a lot of guys just took them off altogether—that was really dangerous. Also our helmets had to be re-padded, multiple times so we would avoid brain injuries. Oh, I forgot an important element of the uniform. We also had what was called the cock flap, the groin protector, which, as a driver I wore it on my left shoulder because there was a guy, the story got around, shrapnel came in and punctured his lung, it went through the armpit hole in his flak jacket.

Q17: Were there requirements for maintenance of your uniform while you were there?

A17: You won't believe this. We had laundry, we had laundry service. I was shocked. Boot camp, when I went through boot camp, we had to scrub our underwear. We had to scrub everything by hand against concrete with a brush. We got to Iraq and we had Filipina maid service. They hired a contractor service—sent someone to Iraq to make a lot of money to bring Filipinos in as a team to run the laundry service.

Q18: Was this men or women? Did you see them?

A18: Yeah, I think it was mixed, I think it was a mixed gender crew. And then for a while it was Army doing laundry. We were like, You can go to the Army, the military, to do laundry? That's cool. Making fun of them for that stuff, but it was nice.

Q19: So the Army was doing the Marines laundry?

A19: Very appropriate. I mean, well, the Air Force... I'll let that go. Trash between branches.

Q20: Was it folded?

A20: No, wait. It was weird, it was inconsistent, that was the thing. I'm pretty sure with the Army it was you drop off a bag and they throw the bag in the machine and you pick up the bag and that was it. But at one point, I think it was with one of the weird contractors that we had for a while, it came back all neat and organized. We were like—there's no way. I mean, I'm going to go get shot at and blown up, but at least my underwear will be fucking folded.

Q21: I'm asking a few questions about the uniform because historically in World War I, World War II, and Vietnam, for example, the uniform had a significant function for identification. Did you find that?

A21: In Iraq? Well, during the siege in Fallujah our team commander decided to order us all to grow our moustaches, within the military regulation, you know, not past the corners of the mouth, not touching the lip, not entering the nostril area. And the idea was, I suppose, if we are all wearing equipment and goggles and reflective glasses and bandanas, in this uniform that is totally foreign, and carrying guns around—well, if we just grow our mustaches, they'll perfectly be able to relate to us like brethren and everything will be hunky-dory and civil affairs will do its job admirably, but that didn't work.

Q22: Was there anything else you did to subvert their impression of the American military?

A22: Unless you're going in civilian attire, somehow saying you're there representing yourself as an individual human being, doing something of your own volition, like a contractor in a sense is, you're really just saying I'm just here taking orders, at the mercy of my government. It's hard. Because you're there to interact, but not to be so visible you become a target. For example, rank sniper awareness. You don't wear shiny bars when you're out in the field because it makes you, it points you out as a target. We didn't, and all the officers adhered to that, they never wore rank or identification markers that stood out visually. They wore patches. They called it subdued as opposed to shiny.

Q23: How similarly did your initial time there conform to what you thought it would be like, or what you were told it would be like?

A23: Because it was civil affairs, I really didn't form a specific expectation. It changed for the eighteen days I was in combat during the siege of Fallujah. Every day was different. You know, first thing is get up and take care of yourself, make sure that your combat gear was in order. For one week we slept in holes, the next week we were able to sleep in a building. You know, your day-to-day routine changed drastically. Sleeping in a hole just takes more time to get everything situated. You have to be awkward in your personal hygiene, you know, with your flak jacket on because you're outside in a place with live fire or awake at random times, versus being inside in a proper building.

Q24: What was your sense of how organized the operation was at that time?

A24: To what level? I mean, in the Marines they create an expectation that your equipment and deployed situation is going to suck, but you're going to kick ass anyway. They are very successful in teaching Marines, you'll be grateful for every single fucking bullet we let you have. They teach you effectively to adopt that mentality. So, I wasn't really thinking about those terms, I was always the guy who woke up singing, because everybody else was miserable, and I was like, what can I do? I can sing, I can tell jokes. I was always that guy.

Q25: What is your opinion of the technologies you used in Iraq?

A25: Well, for the Marines, I can show you an example, I think it's really amazing, actually. They taught me fifty ways to kill a man with one of these [Shows nail file]. We have really passed the point, since I enlisted, to a point where technology is more critical in the fight than the overall military capabilities of the personnel, by far. As a turning point, there was a point during World War II, maybe the atom bomb was the ultimate turning point, or the implication of it, and unfortunately the implementation of it. But I think, there's a point at which technology is more defining of your capabilities than how many well-trained men you have. And we, I think that captures sort of my overall answer to your question. But we were in a unique position and in our occupation, it's almost like a step backwards when you're forced into situations in which human reaction and hand-to-hand combat is still necessary. Don't ask me to get into why, I'll sit here and talk for hours. As well, I think as soon as the Atom bomb was dropped, every military conflict really fears biotechnology, first and foremost, that's the ultimate missile.

Q26: What technologies that the U.S. military has right now, or had in Iraq or Afghanistan, do you think are the most relevant?

A26: Air strikes. The technological ability to make a phone call and drop a bomb somewhere. That's not entirely new, but each week we seemed to get better and better at perfecting it there. Of course, there's our ability to move around, to use maps, to navigate, to communicate, to get things done. But at the end of the day, it's really about our ability to better kill people, I think. And that means doing it in a way where they can't see it and don't have any idea it's coming. I'm not saying I agree with it, but it is the most relevant.

Q27: When you were there, what was your sense of the role that technology played?

A27: Well, I'm technically a millennial, I mean, I'm twenty-eight years old. I grew up with the Internet, both literally and figuratively in a sense, as I was growing up. But, it was part of my psychological formation for many things, and being in the military was like, why the fuck are we doing things the old fashioned, stupid way? Are what we doing as advanced technologically as it gets? Technology is—it seems like older generations separate electronics as technology, and to them there is no difference between a cell phone in my pocket with eight gigabytes of storage and that hunk of plastic with a few wires in it sitting right there on a desk, whereas for people like me it's a continual problem; a cell phone vs. a radio, nail clippers vs. supercomputers. They make a big difference in war, and I think one will replace the other altogether in the future.

Q28: Would you make any recommendations to change any technologies that were in use?

A28: In order to answer that question you have to either assume or ascribe a specific purpose to the technology, and I'm not going to assume what the purpose is. Once you've understood the real purpose of the war, you don't think in terms of let's have better technologies, or even how more effectively do we rebuilt Iraq? Or, is it safe? Is it better to rebuild Iraq? To impose the American police state on the Iraqi people, I don't want to do that. So I can't even go through the process, as you see.

Q29: I understand. When an engineer talks about improving a technology it's generally to make it more efficient. What that means generally, for the state department, is to make it more effective in

killing. So while an engineer means that it operates more functionally, an official means it has greater utility for the job.

A29: So right away you run into the problem. You're taking that system that's designed to continually improve and maintain its superiority and abilities in blowing things up and killing people, and I can't even tell you from the perspective of loss, of killing so many people. When I was there my entire purpose was helping people. I really took that seriously. My entire mentality was civil affairs. I wanted to—I took my job seriously, I took it upon myself. My being disappointed with my time in Iraq was that we were told, civil affairs: you're going to be shaking hands, kissing babies, passing out money, you're going to be helping people, you're going to be helping contractors in supporting the Iraqi people. And I was like, in my head, going okay, that language is the language that all of the politicians are using to justify it. So when they say we're going to be the tip of the spear, yeah, we're going to be the tip of spear, we're going to have the infantry guys be there to support us in civil affairs. But it was the other way around. It was totally the other way around. We were there to support them. We were there as adjuncts to them. They defined the scope and the mission, and it was very clear: we're the guys in the white hats and anybody else, you know, they're the guys in the black hats. We are going to run around and we're going to just occupy and kill every black hat that pops up, whether it's the right one or wrong one. And, hey, whatever. Civil affairs? Oh, what do we do with you? Well, tag along. What's your mission again?

But if the mission is the imaginary mission of killing all the bad people in Iraq and imposing a secure, stable liberated, albeit police state—which is kind of an impossibility to begin with. And hey, now with democracy you're going to be violating people's freedoms in a steady, stable way instead of in a very violent sporadic way under an explicit dictatorship. Then technology-wise for that, in a sense, we really had everything we could have wanted, conceptually.

Q30: As it applies to war and policy in 2011, what's your opinion of what's happening right now in Iraq and/or Afghanistan?

A30: Let me try to answer that by telling you why I don't think what's actually going on in Iraq and Afghanistan is of particular importance to the average American. Since we ignored President Eisenhower's farewell address in 1953, to be aware of the Military Industrial Congressional Complex (as he originally wanted to call it) we have allowed the Military Industrial Complex to become a dominant political force. It has become one of the dominant political forces in terms of determining what the U.S. government does, and I mean that in terms of top two or three: One being the will of the people, one being the security state, one being the financial system. On that scale, the Military Industrial Complex is one of the major determinants of government policy. Therefore, the only check on how many wars, how many troops, how much money we spend on war is the will of the American people. If you looked at how government policy was determined, in terms of our foreign policy, and said my single goal is to spend the most money on war possible that the American people will let me get away with, you'd end up with best explanation for our current policy.

2.4—U.S. Military: Making Bodies Count

In his collection of war stories *The Things They Carried*, Tim O'Brien offers an assessment of the lasting imprint of war on soldiers that is alternately searing and poignant. In the essay, "How to Tell a True War Story," he charts the expository and ethical dilemmas of narrating the experience of war and observes frankly:

A true war story is never moral. It does not instruct, nor encourage virtue, nor suggest models of proper human behavior, nor restrain men from doing things that men have always done. If a story seems moral, do not believe it. If at the end of a war story you feel uplifted, or if you feel that some small bit of rectitude has been salvaged from the larger waste, then you have been made the victim of a very old and terrible lie. There is no rectitude whatsoever. There is no virtue. As a first rule of thumb, therefore, you can tell a true war story by its absolute and uncompromising allegiance to obscenity and evil. (65)

By the end of the essay, O'Brien has ventured through the unsettling turns of an expert narrator who remains uneasy, but must press forward, with the "true war stories" he unfurls. The dilemma that O'Brien charts is deceptively simple: how to convey the experience of war to those who have not been there—who might find it impossible to understand the horror or express apathy or disregard upon soldiers' return. Despite the specter of U.S. military engagement in the Middle East since 9/11, war has not been officially declared since World War II and thus the "war stories" of veterans returning from the occupations in Iraq and Afghanistan are not, just like those O'Brien grapples with from Vietnam, officially recognized by the U.S. Congress as the inevitable response to having been "at war."

The interviews above present individual optics into soldiers' experiences of war, and also provide the opportunity to draw attention to certain considerations for the embodiment of force that soldiers address. For example, J.A. S.J, and D.R all provide

similar assessments of the role of drill, cadence, and military training, suggesting they felt it was intended to both destroy bodily routines and instill and strengthen a professional sense of responsibility through new practices of embodiment. They suggest training was designed to: “break recruits,” “forget all of the ways of living,” “build you into a person who can take orders and follow directions,” “train you to be completely destroyed and build you back up to feel you’re a part of something so meaningful you’ll die for the cause,” “Break you up, make you toe the ground,” and provide “psychological conditioning through physical torture or physical conditioning through psychological torture.” The last observation, from S.J, emphasizes that she felt there was “no distinction” between techniques designed for an apparent separation of “mind” from body, but rather that training constitutively integrated both to create a new subjectivity of soldiering. And yet J.A. remarks that in the future the U.S. Military will have to “reduce the physical training and do far more psychological training” because the need for soldiering “bodies in harsh environments” will have been replaced by drones and smart bombs (A29) and the “body as the main weapon of war” will likely be replaced by robots (A30). Across the larger interview set, as also noted in these excerpts, a number of soldiers remarked on the disconnect between the historic role of the U.S. Military as a combat force and the labor of “occupations” in Iraq and Afghanistan that actually required policing and peacekeeping forces.¹⁹³ In response to my question, “What will be the responsibilities of the U.S. soldier in the 2020s?” one U.S. Marine Corps soldier

¹⁹³ Author’s personal interview with U.S. Army personnel, Joe C. 5 May 2010: Joe C. observed in response to my question, “What will be the responsibilities of the U.S. Army soldier in the 2020s?” Joe C.: “[We’ll] be operating technologies instead of going to combat. Robots will be the door-kickers. And I think the U.S. Army will be more like the U.N. We’ll be there to police things and keep the peace, even though that’s not what we train for.”

replied: “I think we’re headed down a very bad path where drones will replace soldiers, and what soldiers do—use combat force—will be decided by robots too. The U.S. Military is not like a police force. Americans don’t understand this. We fight, we kill, we leave. We don’t stick around for years and build governments and mediate feuds a thousand years old.”¹⁹⁴ J.A. surmises it will be necessary to “adapt to the new reality of what our role in warfare is, particularly as we appear to be moving forward without having declared wars” (A27) and that “there will be two types of militaries” composed of a first wave of remote operators (drones, aircraft, missiles) and secondary ground troops as policing forces. Of this role for the U.S. Military J.A. proposes: “What’s next is really a policeman’s role. They’re acting as guards. And that’s a very different role, and not one that the military was ever very good at. [...] We’re an attack force. Not a police force.” (A24-A25). S.J. similarly observes, “On the second tour, we were like the NYPD. We were there as police, especially as MPs. Even though we’re military police, that’s not really our role, to be like police in the United States” (40). Adam Kokesh remarks on the politics and ethics of this role for the U.S. Military far more critically in response to a question about the use of technology:

If the mission is the imaginary mission of killing all the bad people in Iraq and imposing a secure, stable liberated, albeit police state—which is kind of an impossibility to begin with. And hey, now with democracy you're going to be violating people’s freedoms in a steady, stable way instead of in a very violent sporadic way under an explicit dictatorship. Then technology-wise for that, in a sense, we really had everything we could have wanted, conceptually. (A29)

Kokesh, as a member of the U.S. Marine Corps Civil Affairs was also gravely concerned with the reduced prioritization of his professional duties: “[Infantry] defined the scope

¹⁹⁴ Author’s personal interview: A. B. May 2, 2009.

and the mission, and it was very clear: we're the guys in the white hats and anybody else, they're the guys in the black hats. We're going to run around and we're going to occupy and kill every black hat that pops up, whether it's the right one or the wrong one. Civil affairs? Oh, what do we do with you? Well, tag along. What's your mission again?" (A29). Kokesh's remarks were echoed by other service members, not only from Iraq Veterans Against the War but active-duty personnel, who suggested that from their perspective many Iraqi civilian and misidentified combatant deaths resulted from the tactical disconnect of placing combat forces in peace-keeping roles and peace-keeping and conflict-resolution personnel in combat roles. For example, in response to my question, "Do you think soldiers' roles have changed in the Middle East from their roles in previous wars? Do you see consequences of this?" one U.S. Marine Sergeant replied:

Of course. In Iraq and Afghanistan, we don't have enough translators, for one. We're supposed to interact with the people—win their hearts and minds—but we were not prepared to speak effectively with them. Think about that. You can't interrogate people with hand jive. I know of Iraqi civilians who were killed because soldiers didn't understand their answers to questions they definitely didn't understand. Here's the reality: we don't do peace, we do war. Someone else, like the U.N. or NATO, needs to do the kind of work we were asked to do over there [in Iraq in the early 2000s].¹⁹⁵

In my interviews with U.S. Military service members, I deliberately avoided questions concerning mental health issues, incidents of non-combat related violence (such as those described by veterans in the *Winter Soldier Eyewitness Accounts* collection), and soldiers' emotional or psychological responses to graphic or brutal engagements. All of these questions would likely have revealed the kinds of long-lasting damage that

¹⁹⁵ Personal interview with R.D. May 12, 2013.

results from witnessing, participating, or inflicting violent force.¹⁹⁶ In the edited volume, *What Was Asked of Us: An Oral History of the Iraq War by the Soldiers Who Fought It* (2006), Maria Kimple, a U.S. National Guard Combat and Operational Stress Control Officer in Tall Afar, Iraq from 2005 to 2006, offers her assessment of the long-term consequences for U.S. soldiers of witnessing violence:

There were quite a few suicide bombings in Tall Afar. Soldiers weren't injured, because suicide bombers were targeting their own people who were going to sign up to be a part of a police force or were going to vote. There were mass suicide bombings where thirty or more people were killed. Part of our mission is humanitarian, so we clean that up, we package up the bodies as best we can and sent them to the mortuary. That was one of the soldiers' tasks. Can you imagine being an eighteen-year old private and having to go clean up thirty bodies that were just blown apart, picking up an arm here, a leg here, and putting arms in a pile and legs in a pile, then trying to figure out what goes with what body? The biggest concern soldiers had was seeing the children. Children were blown so high that they would land on the roofs of buildings, and soldiers had to go and retrieve the bodies. [...] Under the Department of Defense's standard, if it's not too extreme we give them rest and recoup time, let them vent a little bit. If they can still function they can stay there. But just because they can function, it doesn't mean that the continuation of experiencing trauma isn't going to hurt them in the long run. Maybe a month or ten years after they get back. (288-289)

Kimple's assessment provides an account of one of the most traumatic experiences civilians and soldiers might endure from the violence of warfare and is a difficult reminder that war remains, even amidst tenuous claims that 21st-century technologies have "anesthetized" killing, resolutely embodied.

The narratives of U.S. soldiers presented in this chapter, as well as soldiers' observations in Chapter 3, provide optics to consider the individual experiences of U.S. soldiering "bodies of war," as well as those of non-U.S. civilians and combatants as understood from the vantage of U.S. soldiers "on the ground." Considering the living

¹⁹⁶ The U.S. Veterans Affairs Department maintains a national center for PTSD Research which regularly publishes reports on PTSD studies, as does the National Alliance on Mental Illness (NAMI). In addition, soldier memoirs provide introspective, personal narratives of the trauma of war. See: Trish Wood, Ed. *What Was Asked of Us: An Oral History of the Iraq War by the Soldiers Who Fought It*. New York: Bay Back Books, 2006.

labor of soldiering bodies, particularly in relation to writing histories of U.S. Military engagements, reveals how ethics, subjectivity, and agency are composed and compromised, continually, in intimate interactions between soldiers and “enemies.” Prioritizing soldiers’ bodily experience stands in direct opposition to the notion that a history of war is composed of tactics, techniques, and technologies; rather, soldiers’ “bodily writing” reveals war to be a record of how bodies perpetuate or protest the use of violent force—force that can only be inflicted by fundamentally disregarding the personhood and humanity of another body, temporally placed in opposition to U.S. state interests. In “Choreographing History” Susan Foster describes the act of attending to the “everyday” experience of historical bodies: “Each body’s movements all day long form part of the skeleton of meaning that also gives any aberrant or spectacular body its luster. Those everyday patterns of movement make seduction or incarceration, hysteria or slaughter, routinization or recreation matter more distinctively” (5). Establishing a historical “skeleton of meaning” for bodies of war also requires attending to everyday bodily patterns and movements. It suggests that any history of U.S. Military warfare should not simply include, but must actively inviscerate, concerns for soldiers’ embodiment—whether this reveals the violence of embodying war or the possibility for “redeploying” soldiers’ experiences to consider alternatives to state violence.

War, across centuries that differ remarkably in geopolitical, territorial, sovereign, and technological milieus, has maintained one irrefutable, ontological characteristic: war is defined by the use of generally brutal force against those who are invariably traumatized, injured, or killed by its impact. As such, the primary concern of this

chapter affirms a fundamental tenet of war: *All wars of force are wars waged on bodies.* And yet as D.R.'s remarks concerning preparing for and coping with U.S. Military combat suggest, there is a generation of U.S. soldiers who may feel that war is not dissimilar from "historic, well-built video games."¹⁹⁷ D.R. observes that these games not only provide soldiers with discipline, stamina for witnessing graphic violence, and the physical sensation of warfare because the games "use technology to put you on the edge of what it is like to be there" (A14-15), but also take the "shock out of war" and its violence and enable soldiers to feel: "I wasn't surprised about anything I saw at all. A gun, a bazooka, we found a cache, I had been doing that for years on my computer" (A69). While war remains defined by its use of generally violent force against bodies, the embodiment of soldiering in 20th- and 21st-century theaters of war, particularly for the world's largest military force, the U.S. Military, will undeniably be transfigured as military practices increasingly rely on virtual, digital, robotic, and remotely-operated systems for both training and deployment. U.S. soldiers will engage in globally networked, combat theaters with highly engineered weaponry that, even in asymmetrical warfare, will increasingly rely on digital calculation rather than analog choreography for effective delivery. What will thus become of not only human bodies, but the "humanity" that defines the *possibility*, if not the eventuality, for U.S. soldiers and civilians to deliberate, resist, and critique the violence of warfare that soldiers are tasked to deploy and U.S. citizens should be tasked to determine alternatives for? That is, how will bodies count and also be *accounted for* in a 21st-century U.S. Military?

¹⁹⁷ For one example of theorization of the relationship between of video games and soldiering see: Derek Burrill. "There's a Soldier Inside All of Us." *Choreographies of War*. Eds. Jens Giersdorf and Gay Morris. New York: Oxford University Press. Forthcoming.

Chapter 3: Technologies of War

Force, to counter opposing force, equips itself with the inventions of art and science.

—*Carl von Clausewitz, On War*

The Future Soldier weapon system will provide unequalled lethality and versatility on the future battlefield. The weapon system will permit direct and indirect target engagements, while effecting decisively violent and suppressive target effects at extended ranges.

—*U.S. Army Future Soldier Initiative White Paper*

The problem with the drone is it's like your lawnmower. You've got to mow the lawn all the time. The minute you stop mowing, the grass is going to grow back.

—*Bruce Riedel, Obama Counterterrorism Adviser*

3—Introduction: War Silhouettes—Techniques and Technologies of Invisibility

Invisibility in Strategy

In the late afternoon on November 5, 1937, Adolf Hitler convened generals of the Reich Chancellery in secret meeting, later designated the Hossbach Conference, to articulate Germany's expansionist need for, and entitlement to, greater geoethnic territory and his desire for racial preservation. The minutes' transcript, presented as evidence at the 1945 Nuremberg Trials, identified cases for the occupation of Austria and Czechoslovakia and called for the compulsory emigration of their inhabitants. Hitler speculated on plans to impair France's lines of communication, push back lines of occupation in Austria, draw lines of allegiance with Italy, and deploy lines of "special weapons" against designated enemies—all strategies to preserve pure lines of descent in Germany and further state autarchy. Colonel Friedrich Hossbach recorded that prior to beginning his address, Hitler requested, "In the interests of a long-term German policy,

that his exposition be regarded, in the event of his death, as his last will and testament.”¹⁹⁸ If killed, it was imperative that his policies were followed—orchestrated invisibly by his will posthumously—by all generals present. Even in death, his presence would be traceable by lines of war strategy, though he had himself disappeared.

Invisibility at Sea

Across the world a young Massachusetts Institute of Technology (MIT) oceanographer, Athelstan Spilhaus, was dropping a small device into the Atlantic Ocean. The invention would revolutionize submarine warfare for the next fifty years: it combined measurements of oceanic temperature and pressure, recording what was called a “trace” on a carbon-coated card that would allow U.S. World War II submarines to seemingly disappear from sonar. Because oceanic temperature gradients create layers that change the properties of sonar refraction, as submarines descend through depths alternating warm with cool temperatures, they are alternately visible and invisible. Bathythermograph measurements thus allowed U.S. submarines to hide from Hitler’s naval fleet by using the very properties of water against them. Having discovered how to manipulate the blind spot of the ocean the ships sank through thermoclines, moving through a transparent sea that nonetheless concealed them. Although U.S. ships seemed to have disappeared, in the ocean their enemies could still be found by invisible lines of sonar.

¹⁹⁸ See: Colonel Friedrich Hossbach, “Minutes of the Conference in the Reich Chancellery, Berlin, November 5, 1937, From 4:15 to 8:30 p.m.” 10 Nov. 1937. Web. 5 Nov. 2010.
PDF Available at: <<http://home.cc.umanitoba.ca/~mkinnear/Hossbach%20memorandum.pdf>>

Invisibility on Land

Addressing the U.S. Air Force Academy on June 2, 2004, President George W. Bush compared Operation Iraqi Freedom¹⁹⁹ to World War II, despite the startling political, strategic, and operational differences between the wars, facilitating an alternate history that justified the operation as one of “the great clashes of the last century between those who put their trust in tyrants and those who put their trust in liberty,” (Bush I). In both Iraq and Afghanistan, the tactics for identifying and evading the “enemy” have been radically transformed in the absence of a clearly defined military front. The headline of *The New York Times* on the morning of November 4, 2006 was not particularly unusual for the conflict in Iraq at the time—“Sniper Attacks Adding to Peril of U.S Troops.” Yet columnist C.J. Chivers writes that U.S. Marines were, surprisingly, dancing—albeit uncomfortably. Chivers states, “In conditions where killing the snipers has proved difficult, the marines have tried to find ways to limit their effectiveness. Signs inside Marine positions display an often-spoken rule: *Make yourself hard to kill*” (Chivers 2, original emphasis). Chivers describes the dance of evasive maneuvers the marines perform as “cutting squares.” However, the marines’ enemies are invisible, watching their performance through the eye of a scope, while the marines stare “down their barrels at dozens of windows that face them, as if waiting for a ghost’s next move” (Chivers 1). Attempting to diminish their visibility, the marines “zig and zag as they walk, and when they stop they shift weight from foot to foot, bobbing their heads. They change the rhythm often, so that when a sniper who might be watching

¹⁹⁹ Official U.S. Congressional policy has only formally declared war in five instances. Operation Iraqi Freedom was sanctioned as an extended military engagement by the U.S. Congress and is, like Operation Enduring Freedom in Afghanistan, not an officially declared U.S. war though it is often referred to as such in U.S. popular culture and media.

them thinks they are about to zig, they have zagged. Now and then they squat, shift weight to one leg and stand up beside the place where they had just been” (Chivers 2). Chivers notes this performance of disappearance is tiring. The marines cannot escape the inevitable—though the scope lines are invisible their targets and bodies remain resolutely present on terrain that is everywhere the “front”: “As operations drag on, some marines begin to stop cutting squares. And sometimes even those that are moving are still shot” (Chivers 2). The laser of a military scope is termed a sightline precisely because it delineates an invisible line that will reveal, at the end, a visible target. Even on land soldiers and civilians are surprisingly visible, though they hoped to have disappeared.

Silhouetting: A Rhetoric of Invisibility

Historically, Western warfare has coveted appearance and disappearance: the tidal-tectonic patterns of the ocean harnessed to conceal naval weaponry, the properties of nuclear and atomic physics manipulated in order to evaporate entire cities, and the warmth of human bodies concealed in order to disappear from heat-seeking missiles. Enacting a double erasure, the records of technologies of disappearance are also often secreted: plans for mechanized death camps and atomic missiles disappear for decades or are lost forever. Yet technologies of war that operate under the guise of invisibility only momentarily delay the grim, eschatological inevitability—technologies are frequently cloaked, in both rhetoric and real-time deployment, to achieve greater destruction. In addition, the design, testing, and deployment of military technologies often complicate the “visibility” of the consequences of war. As the three introductory

vignettes suggest, a rhetoric of invisibility—a *silhouette*—may operate at four distinct levels—in the *design* of technologies that explicitly forward the possibility of invisibility for the soldier, in the *distribution* of technologies which may uncouple the technology from its visible or ethical consequences, in the *deployment* of technologies wherein concealment facilitates greater technical acuity, and in the *discourse* of technologies through which ideas of invisibility may conceal lethal intentionality.

This chapter examines these four levels of invisibility in relation to specific technologies and introduces a theory of silhouetting to describe how 21st-century military technologies prioritize invisibility and concealment in both engineering and employment. Silhouettes of war are defined here as *circulating discourse and techniques that shadow technologies, forwarding a rhetoric of invisibility even as the technologies themselves catalyze visible destruction*. Silhouettes of war can and should be traced in processes of design, manufacturing, and distribution because examining the “silhouette” of a technology directs attention to the ways in which technologies may be engineered to shadow or obscure the consequences of employing force. The institutional and public discourse in the United States concerning the current use of drones in the Middle East is one obvious example of a silhouetting technique that serves to “cloak” a technology in rhetoric that is antithetical to its actual use. Frequently, technical and political language concerning drones obscures their audacious engineering to target human beings and also seeks to scuttle discussion of the “collateral damage” that has resulted from their use. The “silhouette” of a drone is therefore multivalent—designed to laud its stealth and precision, conceal its endgame, and downplay a visible pattern of errors that has

resulted in inadvertent mass killings. In a September 2012 report published jointly by New York University and Stanford University Schools of Law titled “Living Under Drones: Death, Injury and Trauma to Civilians From US Drone Practices in Pakistan,” the authors denounce the rhetoric that accompanies drone use in the United States. They argue, “In the United States, the dominant narrative about the use of drones in Pakistan is of a surgically precise and effective tool that makes the US safer by enabling 'targeted killing' of terrorists, with minimal downsides of collateral impacts. This narrative is false” (Stanford 9). Military manufacturers often initiate this silhouette. For example, General Aeronautics’ tagline for the Predator drone series states the drone is tasked with “Leading the Situational Awareness Revolution.”²⁰⁰ However, the Predator MQ-1B, equipped with AGM-114 Hellfire missiles, was the first *armed* drone deployed, and it would become the aircraft of choice to kill from the sky. At a conservative estimate, the Bureau of Investigative Journalism estimates that confirmed CIA drone strikes and U.S. covert drone strikes in Pakistan, Yemen, and Somalia have resulted in the deaths of more than 2700 citizens, and the number may be more than double that figure.²⁰¹ Writing for the *New York Times* in March, 2012, U.S. Congressman Adam B. Schiff (D-CA) emphasizes the disquieting “silhouette” that shadows drone warfare:

In a fight against a hidden enemy who operates in lawless safe havens, drones offer many obvious advantages and have taken many dangerous adversaries off the battlefield. But the idea that warfare can be precise, distant or sterile is also dangerous. It can easily blind us to the human cost of those inadvertently killed. And it can cause us to lose sight of the strategic imperative that we not multiply our enemies by causing the inadvertent loss of innocent lives. (Schiff 1)

²⁰⁰ General Atomics Aeronautical. Web. 10 Feb. 2014. <<http://www.ga-asi.com>>

²⁰¹ Bureau of Investigative Journalism. “Get the Data: Drone Wars. Bureau’s Data Sets on Drone Strikes in Pakistan, Yemen, Somalia.” Web. 2 Jul. 2014.<<http://www.thebureauinvestigates.com/category/projects/drones/drones-graphs/>>

Tracing the silhouettes of drones becomes increasingly urgent when one considers how ubiquitous drones have become: in 2001, the U.S. Military had approximately 150 drones available for service; in 2014, it had more than 7,000 drones ready for service or actively deployed.²⁰²

Silhouettes of war are inextricably linked to constitutive ethical concerns that develop from specific material conditions of production, labor, and geopolitics. Mapping silhouettes of war reveals the pragmatic, and often traumatic, ways in which the implementation of seemingly “invisible” technologies creates undeniably visible devastation for different communities. As French theorist Paul Virilio appropriately notes, “all techniques meant to unleash forces are techniques of disappearance” (Virilio 67). What is at stake in the rhetoric of invisibility for technologies of force is the denial of real, visible effects: the “invisible” sonar, infrared, surveillance, and nanotechnologies of military weaponry cannot also elide the destruction of visible targets. Likewise, what is at stake in the rhetoric of disappearance is the undeniable persistence of appearance: vanished “weapons of mass destruction,” the removal of dictators, and evasive tactics of military hide and seek cannot also erase the body count these disappearing acts engender. This is the paradox of invisibility: its power derives from its ability, at any moment, to make itself or its target visible. And once the target is revealed, so too are the tangible costs of discourses of invisibility: mapping silhouettes of war exposes the real subjects of war. This chapter is not concerned with labeling discrete technologies “bad”—as in antithetical to social and political goals of a humane democracy—but rather

²⁰² For drone statistics see: Stanford International Human Rights & Conflict Resolution Clinic. “Living Under Drones: Background and Context.” *Living Under Drones*. Web. 12 May 2014. <<http://www.livingunderdrones.org/background-and-context/>>

in examining specific 21st-century U.S. technologies of war with attention to the silhouettes that accompany their production and performance as tools of force. This chapter's study of the silhouettes of war that shadow the design and deployment of 21st-century military technologies will be restricted to an examination of two technology areas under current research and development (R&D) for use by the U.S. Military. In line with the thesis of this dissertation, which is concerned with the embodiment of force, both of these technologies may be considered corporeal technologies. Corporeal technologies are defined here as *those that are physically, physiologically, or prosthetically integrated into soldiers' defense and weapons system*. They may be intended to augment or replace the functions of a human soldier, including physical locomotion and action, embodied decision-making, and physiological and neurological functions. First, technological augmentation to the U.S. Army uniform in its current design, including digital patterning and material sciences will be examined. Second, embedded wearables, bionic prosthetics, and networked technologies that act extensively as part of a soldier will be considered. Both technology areas have been selected because they are purposefully designed to be physically or physiologically integrated with human soldiers or serve as their partial, prosthetic, or complete bodily replacements. Tracing the silhouettes of these technologies additionally suggests ways in which they operate in service of more complex, sociopolitical discourses than their technical descriptions provide. Methodologically, the chapter relies on primary military tracts, technical documents, primary sources, secondary scholarship, and first-person interviews with U.S. Military personnel to examine technological silhouettes of war. Since many technologies are

first developed as classified by the U.S. Department of Defense and U.S. military contractors, publications from U.S. military and industrial producers are often deliberately selective and the language is revealing precisely because it has been carefully crafted. However, these publications are frequently controlled in line with patent and intellectual property laws and often do not have an author, and thus generally do not reveal internal procedures for decision-making that might further disclose biases or influences. In his introduction to *Cultural Citizenship: Cosmopolitanism, Consumerism, and Television in a Neoliberal Age* (2007), Cultural and Media Studies Professor Toby Miller offers another valence with which to consider the production and regulation of embodiment in the United States. He articulates how the humanities and (social) sciences became cleaved from one another as capitalism induced divisive labor policies and suggests that rule by sovereign or state force was augmented by control through “cultural texts.” This argument presents an important variant to consider the ways in which “physical force” may also be culturally produced and deployed through non-militarized, but nonetheless, decidedly regulatory, textual mechanisms. Miller proposes:

With the emergence of capitalism’s division of labor, culture came both to *embody* instrumentalism and to *abjure* it, via the industrialization of farming, on the one hand, and the cultivation of individual taste, on the other. [...] As the spread of literacy and printing saw customs and laws passed on, governed, and adjudicated through the written word, cultural texts supplemented and supplanted physical force as guarantors of authority” (2, original emphasis).

Miller’s distinction is deployed in this chapter to suggest that the production of corporeal technologies engineered to employ military force must be viewed alongside corollary “cultural texts”—such as military tracts, technical documents, and press releases—that present discursive silhouettes and also act as “guarantors of authority.”

Silhouettes of War

The problem in defense is how far you can go without destroying from within what you are trying to defend from without.

—Dwight D. Eisenhower

We were issued unisex uniforms that were at least two to three sizes too big for many of the women. This may seem like a minor issue, but in Afghanistan every safety detail counts. Women tried to sew or belt their uniforms on the inside, so it wouldn't affect wear regulations, because they kept getting the bulky material caught on Humvee doors, the barbed wire that separates the base, or target buildings on patrol.

—U.S. Marine Corps Officer

3.1—U.S. Military: State Silhouettes of War

U.S. Military uniforms are not “standard” issue, but rather reflect the tactical priorities, terrain, and military theory of the U.S. service branches as theaters of war have shifted around the world in the last century. Not only has the U.S. Military uniform changed in response to each formal declaration of war, it is continually under development in anticipation of new theater threats and shifting, geopolitical alliances. Uniforms materially evidence the ways in which each service branch has embraced or rejected new techniques and technologies best suited for their corps, relying on both tradition and tactical necessity to protect soldiering bodies at war. But uniforms also expose “silhouettes” of war that offer insight into the sartorial power, sociopolitical signification, and state performance that uniforms display. What might otherwise be a decorative article of clothing has been transformed throughout American military history to function as a material index of national defense policy—even a glimpse at camouflage patterns provides a litmus to convey the theater of war in which the U.S. is

active. And uniforms remain the primary, iconic signifier of military life for those within and outside of service. For example, the official description of the U.S. Military uniform designates it as part of the “bloodline” of the military history of the United States.

The first U.S. Military uniforms date back to 1779 when General George Washington chose to use the blue uniform coat with state facing colors, and white waistcoat and breeches. The U.S. blue uniform was in direct contrast to the red uniforms of the British Army. To this day the blue uniform is part of the Military bloodline. Whether it’s the Navy’s ‘Full Dress’ or the Marine’s ‘Blue Dress’ uniforms, all five of the U.S. Armed Forces uniforms have a tie to the traditional blue uniform in one way or another.²⁰³

Suggesting that a uniform is part of a “bloodline” reveals how integral the military uniform is to the embodiment of soldiering—it is not simply insignia pinned to cloth: it shapes institutional and representational embodied identity in service of the military state, at home and abroad. In her work on the cultural significance of uniforms, *Uniforms Exposed: From Conformity to Transgression*, Jennifer Craik argues that uniforms create, following Marcel Mauss’ original ideas on the production of a social body—bodily techniques. Craik suggests:

So, we find that uniforms—and the enforcement of rules about them—are imprinted on our techniques of self-hood through techniques of the body (sociological, psychological and biological) [...] Uniforms are an example of body techniques *par excellence*. They are acquired by prestigious imitation of those we admire or who are in authority. As argued above, most of the body techniques associated with uniforms entail the acquisition of “not” statements—that is, what to repress or avoid. (7)

Conceived as a material means of engendering bodily techniques, it becomes possible to consider how the U.S. Military uniform simultaneously encourages techniques of private and public performance, personal and collectively coordinated movement, and representations of ideology, statehood, and self. For example: Does wearing a military

²⁰³ For an official description see: *U.S. Military*. “Guide to Military Uniforms and Insignia.” Web. 5 May 2014. <<http://www.military.com/benefits/resources/guide-to-military-uniforms-and-awards>>

uniform change individual subjectivity and selfhood? What bodily techniques are enabled or expected of U.S. service members wearing a uniform? What signification does a uniform have to civilians at home and enemy combatants and citizens abroad? Do uniforms facilitate an embodiment of force and state-sanctioned violence? What are the consequences of transforming the sartorial statehood of a military uniform into a digitally-enhanced, physiologically extensive weapon that is continuous with, not only clothing for, the body? The current U.S. Army uniform is officially required by the U.S. Military through 2015, when it will be replaced by a “Scorpion” uniform with further modifications. Additional technological augmentations to the U.S. Military uniforms of multiple service branches have been publicly announced. These augmentations herald the transformation of the uniform into a “superhuman” Iron Man suit, capable of bionic strength, neural-networked intelligence, and unprecedented lethality. The term silhouette in this chapter takes on an additional valence as it refers to both the cultural “shape” of discourses regarding 21st-century uniforms and also the literal, embodied shape of a soldier.

3.2—U.S. Military: The Standardization of Silhouettes

In her presentation of uniforms in military, corporate, religious, and educational institutions, Jennifer Craik argues that it was the newly deployed techniques of drill in late sixteenth-century Europe that facilitated the “uniformity” and demarcation by military duty of uniforms. She argues:

In the second half of the sixteenth century, soldiers’ dress changed along with a new approach to military tactics. Discipline, drill, and formal procedures replaced the individualistic “cavalier” approach to soldiering. Infantry dress became plainer though still copying civilian fashion while other branches—pikemen, musketeers and cavalry—each had a distinctive uniform. (25)

In addition to the embodied techniques for training and tactical philosophy the U.S. inherited from Early Modern France discussed in the first two chapters, the U.S. is similarly indebted to France, as well as Britain, for the standardization and diversification of military service uniforms across discrete branches.

In the 1770s, militiamen, minutemen, and regiments of the American Revolutionary War were often tasked to wear their own clothing to war, assembling an assortment of civilian clothing styles, linen hunting shirts, pilfered British uniforms modified for American use,²⁰⁴ and donated regimental uniforms, often homemade. Properly outfitting the Continental Army for protection and identification proved an onerous task. In October 1776, the Second Continental Congress mandated that the government provide uniforms to soldiers. In theory, this resolution required:

That for the further encouragement of the non-commissioned Officers and Soldiers who shall engage in the service during the War, a Suit of Clothes be Annually given each of

²⁰⁴ For example, in 1775 the British ship “Nancy” was taken by Continental forces. The ship’s cargo included British uniforms that were subsequently dyed brown for American troops. See: Jim Hayden. “The Uniforms of the 1st New Hampshire Regiment 1775-1784.” *The Continental Line*. Spring 2000. Web. 10 Apr. 2014. <<http://www.continentalline.org/articles/article.php?date=0002&article=000201>>

the said Officers and Soldiers, to consist for the present year of two linen hunting Shirts, two pairs of Overalls, a Leathern or woollen Waistcoat with Sleeves, one pair of Breeches, a Hat or leathern Cap, two shirts, two pair Hose, and two pair of Shoes. (McClellan 357)

In practice, however, these provisions were often not distributed. Noting the ghastly physical condition of his soldiers, in February 1778 George Washington remarked in a letter from Valley Forge to George Clinton: “Naked and starving as they are, we cannot enough admire the incomparable patience and fidelity of the soldiery.”²⁰⁵ In his translated memoirs, *A French Volunteer in the War of Independence*, Charles-Albert Moré the Chevalier de Pontgibaud, a young French nobleman who volunteered for the Continental Army, offered his reflections upon his arrival to Valley Forge in December 1777: “My imagination had pictured an army with uniforms, the glitter of arms, standards, etc., in short, military pomp of all sorts. Instead of the imposing spectacle I expected, I saw, grouped together or standing alone, a few militia men, poorly clad, and for the most part without shoes;—many of them badly armed” (40). This scene changed after the Continental Congress signed *The Treaty of Alliance* with France on February 6, 1778. The French provided extensive war support to the United States, including uniforms,²⁰⁶ military *accoutrements*, ammunition, and weapons.²⁰⁷ Military historian Thomas J. Schaeper traces the exceptional influence and military contributions of Jacques-Donatien Leray De Chaumont, with whom Benjamin Franklin lived in Passay,

²⁰⁵ President George Washington. “Washington’s Letter to Governor George Clinton.” 16 Feb. 1778. Web. 10 Apr. 2014. <<http://www.ushistory.org/valleyforge/washington/letter.html>>

²⁰⁶ Regarding the French contribution of uniforms to the Revolutionary War see: John Ferling. “Myths of the American Revolution.” *Smithsonian*. Jan 2010. Web. 1 Apr. 2014. <<http://www.smithsonianmag.com/history/myths-of-the-american-revolution-10941835/?page=3>>

²⁰⁷ *U.S. Department of State: Office of the Historian*. “French Alliance, French Assistance, and European Diplomacy during the American Revolution, 1778–1782.” Web. 1 Mar. 2014. <<https://history.state.gov/milestones/1776-1783/french-alliance>>

France between 1776 and 1785, in *France and America in the Revolutionary Era: The Life of Jacques-Donatien Leray de Chaumont, 1725-1803*. Chamont facilitated shipments of more than 50,000 French uniforms to the U.S. between 1777 and 1778 that were worn and subsequently copied by American regiments.²⁰⁸ Describing the mercantile politics of three discrete shipments of 25,000, 15,000, and 10,000 French uniforms, respectively, Schaeper writes, “These were the largest shipments of clothing to reach America during the Revolution. They did not end the Continental Army’s shortages, but they provided crucial help. [...] Chaumont himself claimed none of this money, not even a commission charge” (Schaeper 160). Since the total number serving in the Continental Army over the course of the war was approximately 100,000 soldiers, this contribution was substantial.²⁰⁹

By 1779, uniforms for the Continental Army were required to achieve “uniformity” under a subsequent Continental Congress mandate that included regulations for the color, cut, and trimmings of the uniform, including the official use of blue for all uniforms, with varied color facings by region.²¹⁰ Washington stated in the address to Congress on October 2, 1779: “It is recommended to the officers to endeavor to accommodate their uniforms to the standard, that when the men come to

²⁰⁸ For description of the French influence see: Thomas J. Schaeper. *France and America in the Revolutionary Era: The Life of Jacques-Donatien Leray de Chaumont, 1725-1803*. NY: Norton Critical Editions, 2005.

²⁰⁹ This estimate is provided by John E. Ferling, noted historian of the American Revolutionary period. “Myths of the American Revolution: A noted historian debunks the conventional wisdom about America’s War of Independence.” Jan 2010. Web. 10 May 2014. <<http://www.smithsonianmag.com/history/myths-of-the-american-revolution-10941835/?no-ist=&=&page=3>>

²¹⁰ In 1779 Congress mandated for the states: NH, MA, RI, and CT: Blue faced with white; NY and NJ: Blue faced with buff. PA, DE, and VA: Blue faced with red; NC, SC, and GA: Blue faced with blue. *The Connecticut Magazine, Illustrated Monthly, Vol 10*. Hartford: Connecticut Magazine Co., 1906. Pg. 677.

be supplied, there may be a proper uniformity.”²¹¹ The Congressional mandate of 1779 thus represents the first explicit standardization of the American uniform,²¹² as well as the designation of blue as the regulation color of the U.S. Military. To date, U.S. Army, U.S. Marines, and U.S. Navy Service and Dinner Dress Uniforms (non-combat) are all issued in a specific hue of blue—generally referred to as the “Dress Blue” uniform or just “Blues”—and the U.S. Air Force Service Dress mandates Shade 1620 or “Air Force Blue.” The persistence of this coloration across centuries affirms the role of institutional precedent as one influence on uniform styles, but it also suggests the broader aim of the uniform—to present a silhouette of public stateliness, authority, and civic distinction. Of this kind of civic performance by military uniforms, Craik remarks that changes to uniforms have often “reflected a new sense of public space, new ways of communicating between and within emerging class factions, and new aesthetics associated with these changes. Colours became increasingly important to distinguish different units and offset the main color, usually white, grey, blue, or red” (30).

During the Revolutionary War, the most common firearm of the era, the flintlock musket, was loaded with black-powder and produced a thick smoke that made colorful, distinguishing uniforms particularly useful on the battlefield.²¹³ In this regard, the Early American uniform additionally provides some indication of the corporeal movement of soldiers during war—the chaos of the battlefield prior to the influence and

²¹¹ *The Connecticut Magazine, Illustrated Monthly, Vol 10*. Hartford: Connecticut Magazine Co., 1906. Pg. 677.

²¹² Of interest, despite the direct influence of French uniforms on American ones, French Historian Daniel Roche argues in *The Culture of Clothing: Dress and Fashion in the Ancien Regime*, that Louis XIV was reticent to impose “definitive solutions as regards the administration of military clothing either in general or in particular, and it was, throughout the eighteenth century, repeatedly changed” (227). Daniel Roche. *The Culture of Clothing: Dress and Fashion in the Ancien Regime*. Cambridge: Cambridge UP, 1996.

²¹³ J. Loyd Dunham. “Outfitting an American Revolutionary Soldier.” North Carolina Museum of History. Fall 1992. Web. 12 Mar. 2014. <<http://ncpedia.org/history/usrevolution/soldiers>>

implementation of Prussian and French drill methodologies, adopted by American soldiers in the early 19th century, meant that being visible to avoid friendly fire was of potentially greater advantage than being camouflaged to avoid enemy fire on a highly disorganized battlefield. Uniforms for Civil War soldiers who maintained coordinated formations *en masse* in brightly colored blue or grey uniforms were thus deliberately visible to both friendly and enemy forces. In fact, not until the Spanish-American War of 1898 was a khaki color introduced in tactical consideration of the environment.

In comparison, the disciplined phalanx formations of the mid-17th-century French military battalions discussed in Chapter I appear to have primarily relied on uniform *movement* rather than uniform *costume* to achieve discipline and the illusion of superior force. French historian Daniel Roche, in *The Culture of Clothing: Dress and Fashion in the Ancien Regime*, addresses this predicament by describing a painting of a mid 17th-century army without uniforms:

In fact, nothing could be more uniform, no-one is mistaken in the general tumult. Formed into a compact column, the mass of pikemen, preceded by a thick line of musketeers, await the battle, weapons at their feet. Men and equipment form a sombre mass of grey and brown, in which the dress of soldiers is that of ordinary men. [...] These splashes of colour apart, the painting portrays a world made resoundingly uniform by action and function, but with no special feature of dress. (221)

Roche's observation affirms how bodily techniques instilled physical cohesion among soldiering bodies, a task later achieved by institutional uniforms that provided visual cues for social organization. Roche captures this idea when he declares: "The history of uniform deserves our attention since it is at the heart of the encounter between appearances and social discipline" (222).

The new Revolutionary uniform provided a regulated, uniform silhouette that obscured individual differences in favor of a collective force, potentially even cloaking gender. One of many historical narratives detailing the role of women in the Revolutionary War,²¹⁴ Deborah Gannet, nee Samson,²¹⁵ is documented as having sewn her own Continental Army uniform, replicating the cut and style to enlist as a light infantry soldier in 1782. Hers proved a successful deception until she was shot and her gender discovered by an attending surgeon. In 1804, Paul Revere wrote a personal letter to Congressman William Eustis on her behalf, alluding to her ruse and imploring that since she had “quitted the Male habit, and Soldiers uniform; for the more decent apparel of her own Sex” that she be provided with a pension in honor of her service.²¹⁶ Consider that it likely would have been impossible for Samson to serve as a light infantryman without the visual and political silhouette her uniform sanctioned. Samson’s cross-dressing underlines the sartorial power that military uniforms carry: the visual cues of a uniform are sufficient to bestow institutional legitimacy and authority, alongside the implicit threat of violence. Published in 1850, Elizabeth Fries Ellet compiled narratives and memoir accounts of dozens of women’s experiences during the Revolutionary War. One account by Eliza Wilkinson, a young widow living outside of Charleston at the start of the war, demonstrates the overt visual power that uniforms held for civilians during wartime—her reflection appears similar to those of U.S. Military service members recounting Iraqi and Afghani civilian reactions to their uniforms,

²¹⁴ Elizabeth Fries Ellet. *The Women of the American Revolution, Vols. I, II, III*. New York: Baker and Scribner, 1850-1856.

²¹⁵ Elizabeth Fries Ellet spells Deborah Gannet “Samson” while in Paul Revere’s letter it is spelled “Sampson.”

²¹⁶ *Paul Revere House*. Paul Revere. “Letter on Behalf of Deborah Sampson Gannett.” 20 Feb. 1804. Web. 2 Jul. 2014. <<http://www.paulreverehouse.org/gift2/details/46-51.pdf>>

discussed in the next section. Wilkinson relates her response upon seeing the colors of a “blue and red” uniform, unsure if the approaching party was friend or foe: “We watched sharply to see which way the enemy (as we supposed them) took. But, oh! Horrible! In a minute or two we saw our avenue crowded with horsemen in uniform. Said I, ‘that looks like our uniform—blue and red; but I immediately recollected to have heard that the Hessian uniform was much like ours; so out of the house we went, into an out-house.’”²¹⁷ Ellet then adds to her story, “Their dismay and terror were groundless; for the horsemen were a party of Americans, under the command of Major Moore. The one taken for a Hessian was a French officer” (Ellet 229-230). In this case, even the distant silhouette of a uniform was sufficient to convey the threat of violence and the embodiment of force the soldier portended—the uniform here is corporeally indistinguishable from the *body of force*. Anthropologist Bernard Cohn has articulated this potential, across the Atlantic, by arguing that clothes in British colonial India became the material site of contestations over power that were irreducible to simple sociological equations of hierarchy. He reasons that clothing such as uniforms do not only hold symbolic or representational power, but rather become continuous with the body itself. In the essay “Cloth, Clothes, and Colonialism” Cohn imparts:

Clothes are not just body coverings and adornments, nor can they be understood only as metaphors of power and authority, nor as symbols; in many cases, clothes literally are authority [...] Authority is literally part of the body of those who possess it. It can be transferred from person to person through acts of incorporation, which not only create followers or subordinates, but a body of companions of the ruler who have shared some of his substance. (Cohn 304)

²¹⁷ Hessian soldiers were of Germanic descent from the Hesse region of Germany. They were leased for hire by Prince Frederick II, Landgrave of Hesse-Kassel, and contracted by the British for combat service in the American Revolutionary War.

Cohn's argument, using the language of the silhouette offered in this chapter, suggests that both the literal and discursive silhouettes of a military uniform may become constitutive with the corporeality of the soldier. Cohn's description of a "transfer of authority" also enables the body of an army to become an extension of a ruler's body through uniform dress, as well as an "arm" of an institution or state.

Thus far, examining material changes to the Early American uniform has suggested that, pragmatically, the influence of allies, practical access to available materials, and tradition guided the evolution of the uniform and that, theoretically, the uniform offered both an embodied and discursive silhouette to provide cohesion and instantiate authority for the nascent nation. However, these factors do not yet recover how bodily techniques of the *movement* of soldiering—such as training, drill, and cadence—may have been influenced by military dress.

One example of the relationship between bodily techniques and uniform may be found slightly later in American military history. The imported French uniform for the Continental Army was not the only French sartorial influence on U.S. Military regiments. During the Civil War, individual regiments of the American military adopted a particular style of French uniform that was specifically designed for the drill and cadence activities soldiers performed in them—in this way, the "costume" of the military uniform was uniquely tailored to the technique of the performance. The French *Zouave* uniform for light infantry was adopted by both Union and Confederate volunteer *Zouave* regiments. These units, modeled on French North African military dress style and movement, were famed for their expert drill and cadence. Their uniforms were designed for swift drill

with loose-fitting “chausser” pants, short open jackets, and fez hats. In *Nothing but Victory: The Army of the Tennessee, 1861-1865*, historian Steven E. Woodworth suggests that these soldiers imitated the choreographed cadence known as “Zouave drill,” sometimes referred to as the “Zoo-Zoo drill,” which required greater speed and tactically impractical “flourishes” for “élan.” He remarks:

Some of the soldiers practiced a special type of drill known as the Zouave drill. Zouaves were originally French North African colonial troops who had performed well in European wars. They utilized light infantry tactics that emphasized open-order formations, with several feet between soldiers, rather than the customary close order, with its characteristic “touch of elbows.” They moved at double time, rather than marching at a stately cadence, and they lay on their backs to load their rifles rather than standing to do so. [...] Zouave units normally adopted special uniforms, more or less inspired by the traditional garb of the French North African regiments. These ranged from the gaudy to the downright bizarre. [...] Lew Wallace²¹⁸ believed that the overall effect of the Zouave uniform was to “magnify the men.” The Zouave drill, he believed, gave the men confidence, self-reliance, and élan. (16-17)

In this description, coordinated drill and uniform appear to contribute to an embodiment of force that is accessed through both unique choreography and costume. Woodworth’s analysis and Wallace’s first hand observation affirm that the uniform provided a sense of embodied group cohesion for Zouave regiments. However, the description also suggests that Zouave uniform and drill formation facilitated individual expression within a larger regimental group. This distinction serves as a reminder that

²¹⁸ General Lew Wallace served as an Adjutant General, Colonel, and Brigadier General in the American Civil War between 1861 and 1864 and later as Governor of the New Mexico Territory from 1878 to 1881. Wallace is perhaps best known as the author of the novel *Ben-Hur: A Tale of the Christ*. Biographical information and analysis of Wallace’s career may be found in: Robert Eustis and Katherine M. Morsberger. *Lew Wallace: Militant Romantic*. San Francisco: San Francisco Book Co, 1980; John Swansburg. “The Passion of Lew Wallace.” *Slate Magazine*. 26 Mar. 2013. Web. 10 Jul. 2014.
<http://www.slate.com/articles/life/history/2013/03/ben_hur_and_lew_wallace_how_the_scapegoat_of_shiloh_became_one_of_the_best.single.html>

individual soldiering bodies, while perhaps drilled to perform in unison, were not simply docile bodies in strategic service of early American military campaigns.²¹⁹

Zouave drill and dress provide an early historical example of the interdependence of bodily techniques and uniform for the American military. The relationship between a soldier's movement and uniform style—a seemingly logical rapport between costume and compulsory drill and cadence—is also catalogued in other descriptions of changes to American uniforms and drill techniques.²²⁰ Considering the uniform in the context of bodily techniques it may influence, the American military uniform becomes not only a material artifact that reflects specific engagements and geopolitical theaters, but also a valuable indicator of historic corporeal tactics and training. Analyzing the material uniform in relation to the physical techniques it enables or prohibits reveals how the uniform performs as a utilitarian object (signaling affiliation or rank) and is also performative: it conveys images of institutional power and transforms individual subjectivity in ways that trump its original material function to cloak and coordinate soldiers. Like any costume, examining a uniform's design and disciplinary use enables a more refined understanding of the moving power of its

²¹⁹ Zouave tactics, in particular, appear to have emphasized individual competence as an important contributor to regimental success. Historian and American Studies Professor Timothy Marr provides an account of the agency of Zouave soldiers in *The Cultural Roots of American Islamism* (2006) and argues that Zouave dress and drill facilitated an ideal of embodied resistance that appealed to American Civil War soldiers: "At a time when military life and uniforms were heavily regimented, the Zouave mystique offered soldiers a glamorous vision of the skill, adventure, and community of war-making. 'With his graceful dress, soldierly bearing, and vigilant attitude the Zouave at an outpost is the *beau-ideal* of a soldier,' wrote General George B. McClellan. [...] The Zouave craze enabled soldiers to retain a fashionable sense of avant-garde romance at the very moment when both their bodies and their agency were being conscripted by the state" (289). An embodied history of how Zouave drill was introduced to and migrated throughout early American military regiments is unavailable. However, The Civil War Trust notes that by 1861 there were so many Zouave regiments in America that a French publication reported, "Ils pleut des Zouaves" (*It is raining Zouaves*). *Civil War Trust: Saving America's Civil War Battlefields*. "Regiments of the Civil War." Web. 1 Aug. 2014. See: <<http://www.civilwar.org/education/history/warfare-and-logistics/warfare/regiment.html>>

²²⁰ For example, see: William H. McNeill. *Keeping Together in Time: Dance and Drill in Human History*. Boston: Harvard UP, 1997.

silhouette, particularly since uniforms convey institutional as well as individual authority. Roche, in his discussion of the “discipline of the uniform,” astutely describes the balance between power and training pedagogy that uniforms confer on their wearers:

The fundamental purpose behind the standardisation of military dress is less the necessary tactical aim of making troops recognizable in action than the formation and training of bodies for combat. Uniform is at the heart of the military logic which has been developed in modern times, that of the *ultima ratio*, when war is a necessary continuation of politics. Uniform constructs the fighting man for mortal combat. It imposes control, a source of efficiency in battle and means to social power. Uniform, along with the congeries of military disciplinary procedures, should not be seen only in terms of docility and repression, or ideological instrumentality. It creates through education, realizes a personage and affirms a political project by demonstrating omnipotence. (229)

Roche’s emphasis on the realization of “personage” through military dress suggests how the body continues to guide the development of a sense of self vis-à-vis the uniform. Commenting on his service in the late 2000s, one U.S. Army Sergeant remarked of this phenomenon: “I was one man before I put on the service uniform for combat. I was a completely different human being in the Army uniform. Not just my profession, but my entire body—my muscles, brain, my way of talking and thinking about what I did—everything changed. Out of the Army, well, really out of the uniform, I can’t be Army Joe anymore. Now, I’m executive Joe. My wife says I don’t even walk the same anymore. I guess I lost Army cadence.”²²¹ The Sergeant’s remarks not only convey the loss of institutional identification that results from removing a uniform, they also affirm the potential impact on a soldier’s physical bearing and sense of subjectivity while he or she is in uniform and, subsequently, transitions to life without it.

²²¹ Author’s personal interview with U.S. Army personnel, Joe C. 5 May 2010.

It is outside the scope of this chapter to provide an analysis of the U.S. Military uniform in relation to the tactics, bodily techniques, and historic constraints of every U.S. Military engagement over time. However, late 18th-century and early 21st-century military engagements do share strategies for maintaining and modifying the uniform as a silhouette of the state. In addition to complying with economies of production and the pragmatics of distribution, primary catalysts for changes to the uniform have included tradition, tactics, technology, and bodily techniques. In concert, these influences have enabled the uniform to become a discursive silhouette of embodied force. Reviewing the Revolutionary War uniform—a linen hunting shirt at its conception—also confirms the startling differences in the technologies of war after only two centuries. In the 2010s, as men and women both occupy combat positions and technological augmentation to the uniform is forecast as inevitable, 21st-century uniforms of war now offer the possibility to not only clothe the soldier, but to cloak her invisibly, endow her with superhuman powers, and even remove her from the battlefield altogether, substituting instead her lethal digital avatar.

3.3—U.S. Military: The Regulation of Silhouettes

Since the 2003 invasion of Iraq, the U.S. Army uniform, distributed to the largest number of active-duty soldiers in any branch of the U.S. Military,²²² has projected an increasingly complicated and public silhouette: uniformed service members within the U.S., abroad, in conflict and war zones, and at extraordinary rendition sites have

²²² The U.S. Army force is expected to be reduced to approximately 470,000 personnel, after a high during the Middle East operations of 570,000. See: Michelle Tan. "It's Official: Army's New Appearance Reg Takes Effect." *Army Times*. 31 Mar. 2014. Web. 25 Apr. 2014. <<http://www.armytimes.com/article/20140331/NEWS07/303310046/It-s-official-Army-s-new-appearance-reg-takes-effect>>

become bound to the ethical and legal issues that war in the early 21st century has catalyzed—their silhouettes often appear as the most visible. As of 2014, the total number of enlisted U.S. Military service members is approximately 1.4 million and the U.S. Army is the largest branch with approximately 560,000 active duty personnel; women make up approximately 14.4% of the active duty force across the service branches, while ethnically-identified, non-female minorities make up approximately 30% of the active duty force.²²³ The uniform, the material silhouette of the embodiment of force, has historically signified some combination of sacrifice, violence, and justice in the name of nation-state or philosophical principle. However, as questions of women's participation in combat, sexual orientation, sexual abuse, mental illness, torture, and disability have emerged as priorities for bodies of war, the design and development of the U.S. Military uniform has become a fabric of the debate. It is being lauded, scrutinized, contested, and continually redesigned—to accommodate gender differences as women enter combat roles, to protect soldiers from asymmetrical warfare, suicide bombers, and terrorists, to ensure soldiers are continually monitored and globally networked, and to increase soldiers' lethality with digital, robotic, and metamaterial enhancements.

Explicitly, design of the U.S. Military uniform has changed primarily in response to extant or anticipated geopolitical theaters of war: in the 2010s, camouflage, comfort, and safety reign as industrial design constraints. However, projected design changes to the uniform signal a more pressing ethical question regarding its future: How might a

²²³ America's Promise Alliance. "U.S. Military Demographics: Military Service Member Data." Web. 2 Aug. 2014<<http://www.americaspromise.org/us-military-demographics>>

21st-century, technologically “jacked” uniform enable unprecedented protection and “unprecedented lethality” at once, from a soldier entirely unseen by the enemy combatant (or civilian), and what are the ethical consequences of this? The discursive silhouette of the modern uniform reveals conflicting narratives regarding two general areas of concern: first, the design of uniforms, and second, their deployment. The political economy of uniform design and deployment is often unsettling: the rapprochement among military departments, defense contractors, and universities is nothing new, but this interdependence continues to offer economic advantage to certain parties with uncertain ethical consequences for others. Responsibility for the production of uniforms that are not only worn by bodies of war, but engineered to transform *into* bodies of war, raises new ethical dilemmas that emerge directly from the work of these institutions and thus requires far greater scrutiny of their design and deployment.

Regulating Uniform Silhouettes: AR 670-1

All U.S. Military service branches have at least three required uniforms designated for use in training, active service, and ceremonial functions. Each branch has very specific guidelines for the appearance, care, and function of each uniform and accoutrement, which extend to weapon holsters, purses, gym bags, shoes, hats, insignia, heraldry, appurtenances, jewelry, tattoos, cosmetics, body piercings, nails, hair, and facial hair. Regulations for the current U.S. Army uniforms are outlined in an unclassified series of U.S. Army publications, *670-1*, available for public download.²²⁴ U.S. Army Regulation *AR 670-1: Wear and Appearance of US Army Uniforms and Insignia*, was

²²⁴ U.S. Army *AR 670-1 March 2014* is available at: http://www.apd.army.mil/pdffiles/r670_1.pdf
U.S. Army *DA Pamphlet 670-1 March 2014* is available at: http://www.apd.army.mil/pdffiles/p670_1.pdf

previously issued in February 2005 and officially reissued in March 2014 with new sections now found in the U.S. Army Pamphlet *p670-1* (March 2014) and revised U.S. Army Regulation *r670-1* (March 2014); the latter two documents internally reference each another as well as previous versions in referring to specific policies. All versions of *670-1* maintain the same number, despite different iterations wherein specific sections remain applicable while others have been updated or revised. Prior to the officially revised publication in March 2014, many of the individual changes appeared in more than fifty U.S. All Army Activities (ALARACT) messages issued periodically since 2005 and used by the U.S. Army to communicate interim updates.²²⁵ Here, the U.S. Army *670-1* documents will be referenced with both their number and date to specify the version.

The U.S. Army *670-1* series affirms two earlier theoretical assertions: first, that uniformed military bodies are intended to project a representation not only of an individual, but of institutional fidelity in the name of the state; and second, that discursive language—the theoretical silhouette—shapes how uniforms become coextensive with the body—the material silhouette—and act as disciplinary bodily techniques. Section I-7 of AR *670-1* (February 2005)²²⁶ on “Personal Appearance Policies” reminds soldiers: “The Army is a uniformed service where discipline is judged, in part by the manner in which a soldier wears a prescribed uniform, as well as by the individual’s personal appearance. Therefore, a neat and well-groomed appearance by all soldiers is fundamental to the Army and contributes to building the pride and *esprit* essential to an

²²⁵ A comprehensive list of ALARACT messages that are now superseded by AR *670-1* and DA Pamphlet *670-1* are posted in the “Summary of Changes” section at the beginning of each document.

AR *670-1 March 2014* is available at: http://www.apd.army.mil/pdffiles/r670_1.pdf

DA Pamphlet *670-1 March 2014* is available at: http://www.apd.army.mil/pdffiles/p670_1.pdf

²²⁶ AR *670-1 February 2005* is available at: <http://fas.org/irp/doddir/army/ar670-1.pdf>

effective military force” (2). In the March 2014 version, an updated “Personal Appearance Policies” appears in Section 3-1 and has been revised to state:

A vital ingredient of the Army’s strength and military effectiveness is the pride and self-discipline that American Soldiers bring to their Service through a conservative military image. It is the responsibility of commanders to ensure that military personnel under their command present a neat and soldierly appearance. The Army uniform regulations for standards of personal appearance and grooming are as specific as is practicable to establish the parameters with which Soldiers must comply. Portions of this chapter are punitive. Violation of the specific prohibitions and requirements set forth in this chapter may result in adverse administrative action and/or charges under the provision of the UCMJ [Uniform Code of Military Justice]. (4).

In addition to the explicitly punitive consequences now subject to the UCMJ, which did not appear in the previous versions,²²⁷ the term “conservative” is now used to delimit a soldier’s “military image.” In the theorization of silhouette offered in this dissertation, this “image” acts as a controlled silhouette. “Conservative” is defined, for the first time, in the *AR 670-1* “Glossary of Terms” (March 2014) as simply “Traditional in style.” This usage substantiates an earlier argument that military tradition, as its own regulatory discourse, acts as a disciplinary bodily technique. It also disquietingly introduces the question—What bodies, bodily conduct, and bodily techniques, precisely, are considered “untraditional?” In addition, five other descriptive terms to monitor the body also newly appear in the “Glossary of Terms” and are used throughout the document to prohibit unacceptable styles, fashions, or conduct. Like “conservative,” they appear for the first time in the March 2014 publication. No subjective adjectives of any kind appear in the preceding *AR 670-1* versions from 2005 or 2000,²²⁸ where the

²²⁷ In the “Summary of Change” section of *AR 670-1* (March 2014) it states that it: “Notifies Soldiers of which portions of the regulations are punitive and violations of these provisions may subject offenders to adverse administration action and/or charges under the provisions of the Uniform Code of Military Justice (paras 1-5a, 3-2, 3-3, 3-4, 3-5, 3-7, and 3-10).”

²²⁸ *AR 670-1* (2000) available at: http://ciehub.info/ref/AR/670-1_2000-05-22.pdf

definition of terms is strictly limited to inanimate objects such as “Award,” “Badge,” and “Lapel Button.” In *AR 670-1* (March 2014), “Eccentric” is defined as “departing from the established or traditional norm”; “Exaggerated” as “To make greater or more noticeable”; “Fad(dish)” as “A transitory fashion adopted with wide enthusiasm”; “Extreme” as “Exceeding the ordinary, usual, or expected; not moderate”; and “Unsightly” as “Unpleasant or offensive to look at.” These terms are used to dictate appropriate regulation of the body and prevent any individuation that might otherwise occur. Not only adjectives, but the body itself is also semantically and anatomically constrained in the new “Glossary of Terms”: a soldier’s “Neck” is defined with geometric precision: “For clarity in regards to grandfathered tattoos, the neck is defined as anything above a crew T-shirt neckline (in a standard uniform T-shirt) and also below the jaw line (in the front of the head) and below a parallel line from the lowest point of where one ear connects to the head to the lowest point of where the other ear connects to the head (in the back of the head)” (54-56). Before addressing the specific, material changes to the U.S. Army uniform and its technological augmentation, it’s important to establish that a majority of the rules and regulations for the body appear in the U.S. Army *670-1* series; the official military tract on uniforms thus provides the disciplinary mechanisms for the soldiering body. No inch of the body is left unexamined, including fingernails, underarms, the interior of the mouth, tooth fillings, piercings in “unseen” places, the color, length, and style of hair, and the location and size of body markings and body “mutilations.”

AR 670-1 (March 2014) begins by affirming the document's intent and the institutional significance of the uniform. In Section I-1 on "Purpose" it states:

The Army is a profession. A Soldier's appearance measures his or her professionalism. Proper wear of the Army uniform is a matter of personal pride for all Soldiers. It is indicative of *esprit de corps* and morale within a unit. Soldiers have an individual responsibility for ensuring their appearance reflects the highest level of professionalism. Leaders, at all levels, have a responsibility for implementing and applying the standards contained in this regulation to ensure the best interests of the Army, including our shared traditions and customs.

This characterization affirms the role of the uniform as vital in representing bodily experience (*esprit de corps*) as well as institutional ideologies. As the *AR 670-1* regulations are exhaustive, a selection of them are presented for consideration. While limited, they sufficiently illustrate how comprehensive—anatomically, mathematically, and geometrically—the regulation of the uniformed American military body has become in the early 21st century. Two considerations are germane: first, many of these prohibitions would have been inconceivable for earlier Armies as the technologies were not yet invented nor the techniques to achieve the prohibited styles conceived. And second, these regulations will likely appear, from a position of historical parallax, decidedly antiquated from a mid to late 21st-century perspective when the body has been technologically merged, altered, or removed entirely from the embodiment of uniformed soldiering as we now conceive it.

Table I

U.S. ARMY AR 670-1:

Wear and Appearance of Army Uniforms and Insignia

3-2: Hair and fingernail standards and grooming policies

Note: This paragraph is punitive with regards to Soldiers. Violation by Soldiers may result in adverse administrative action and/or charges under the provisions of the UCMJ.

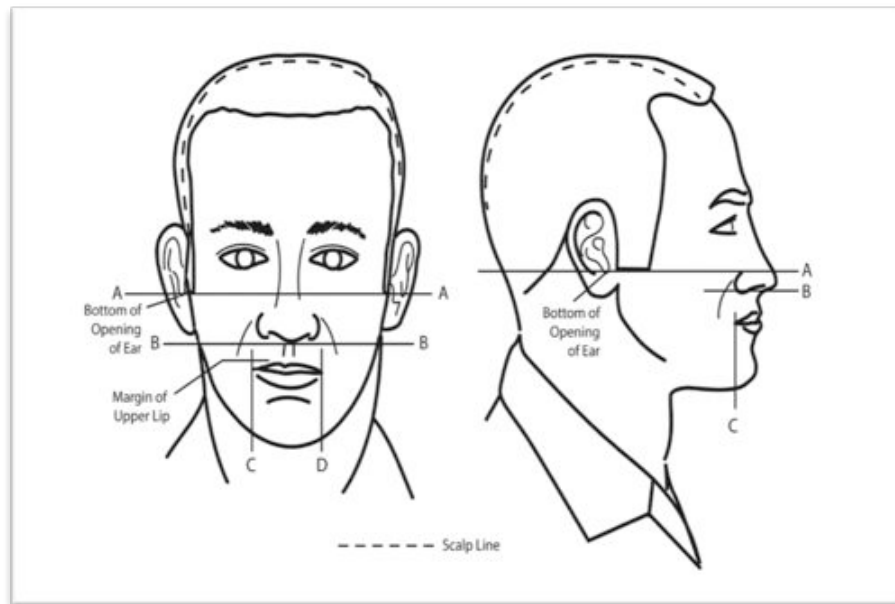
a. Hair

(1b) Extreme, eccentric, or faddish haircuts or hairstyles are not authorized. If Soldiers use dyes, tints, or bleaches, they must choose a natural hair color. Colors that detract from a professional military appearance are prohibited. Therefore, Soldiers must avoid using colors that result in an extreme appearance. Applied hair colors that are prohibited include, but are not limited to, purple, blue, pink, green, orange, bright (fire-engine) red, and fluorescent or neon colors. It is the responsibility of leaders to use good judgment in determining if applied colors are acceptable, based upon the overall effect on a Soldier's appearance.

(1c) Soldiers who have a texture of hair that does not part naturally may cut a part into the hair. The part will be one straight line, not slanted or curved, and will fall in the area where the Soldier would normally part the hair. Soldiers will not cut designs into their hair or scalp.

(2) Male haircuts. The hair on top of the head must be neatly groomed. The length and bulk of the hair may not be excessive or present a ragged, unkempt, or extreme appearance. The hair must present a tapered appearance. A tapered appearance is one where the outline of the Soldier's hair conforms to the shape of the head (see scalp line in figure 3-1), curving inward to the natural termination point at the base of the neck. When the hair is combed, it will not fall over the ears or eyebrows, or touch the collar, except for the closely cut hair at the back of the neck. The block-cut fullness in the back is permitted to a moderate degree, as long as the tapered look is maintained. Males are not authorized to wear braids, cornrows, or dreadlocks (unkempt, twisted, matted, individual parts of hair) while in uniform, or in civilian clothes on duty. Haircuts with a single, untapered patch of hair on the top of the head (not consistent with natural hair loss) are considered eccentric and are not authorized. (See figs 3-1 and 3-2.)

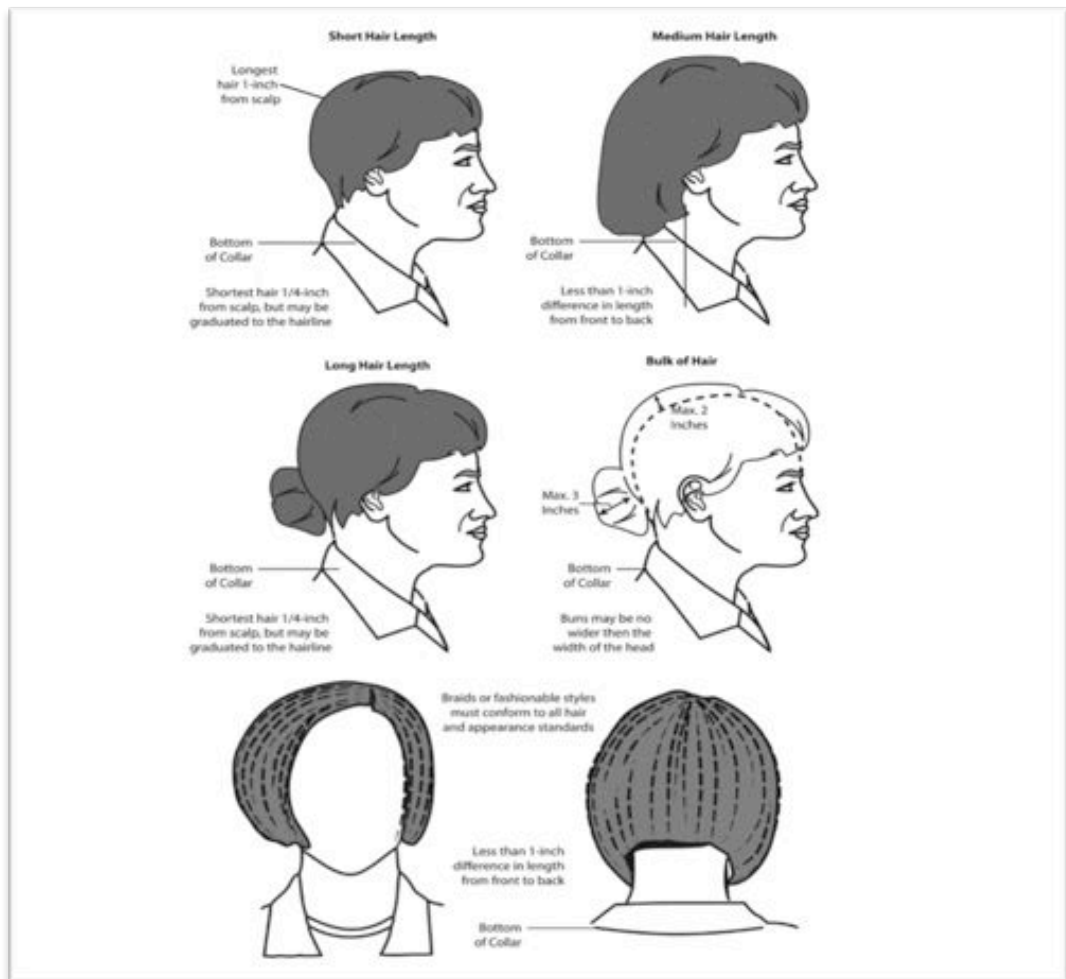
(2b) *Facial hair.* Males will keep their face clean-shaven when in uniform, or in civilian clothes on duty. Mustaches are permitted. If worn, males will keep mustaches neatly trimmed, tapered, and tidy. Mustaches will not present a chopped off or bushy appearance, and no portion of the mustache will cover the upper lip line, extend sideways beyond a vertical line drawn upward from the corners of the mouth (see lines C and D of Figure 3-1), or extend above a parallel line at the lowest portion of the nose (see line B of Figure 3-1). Handlebar mustaches, goatees, and beards are not authorized.



U.S. Army AR 670-1: Figure 3-1. Male Grooming Standards

(3) Female haircuts and hairstyles. The illustrations provided in figure 3-3 are intended only to clarify language regarding authorized hair lengths and bulks. The requirements for hair regulations are to maintain uniformity within a military population for female Soldiers while in uniform, or in civilian clothes on duty, unless otherwise specified. Female hairstyles may not be eccentric or faddish and will present a conservative, professional appearance.

(3f) *Braids.* Medium and long hair may be braided. Multiple braiding (defined as more than two braids) is authorized. When worn, multiple braids will be of uniform dimension, small in diameter (approximately 1/4 inch), show no more than 1/8 of an inch of scalp between the braids and must be tightly interwoven to present a neat, professional, well-groomed appearance. Foreign material (for example, beads and decorative items) will not be braided into the hair. Braids must continue to the end of the hair in one direction, in a straight line, and can be worn loose per medium hair length guidelines or secured to the head in the same manner as described for medium or long length hair styles. Ends will be secured only with inconspicuous rubber bands. If multiple braids are worn, they must encompass the whole head. When braids are not worn loosely and braided close to the scalp, the braids must start at the front of the head.



U.S. Army AR 670-1: Figure 3-2. Female Hairstyle Standards

(3g) *Twists*. Twists are defined as twisting two distinct strands of hair around one another to create a twisted ropelike appearance. Although some twists may be temporary, and can be easily untwisted, they are unauthorized (except for French twists). This includes twists formed against the scalp or worn in a free-hanging style.

(3h) *Dreadlocks*. Dreadlocks are defined as any matted, twisted, or locked coils or ropes of hair (or extensions). Any style of dreadlock (against the scalp or free-hanging) is not authorized. Braids or cornrows that are unkempt or matted are considered dreadlocks and are not authorized.

(3i) *Cornrows*. Cornrows are defined as hair rolled (not twisted using two strands) or braided closely to the scalp producing a continuous, raised row of hair. When worn, cornrows must be of uniform dimension, small in diameter (approximately 1/4 inch), show no more than 1/8 inch of scalp between the cornrows and must be tightly rolled or braided to present a neat, professional, well-groomed appearance. Cornrows must start at the front of the head and continue in one direction in a straight line.

b. Cosmetics.

(1) Standards regarding cosmetics are necessary to maintain uniformity and to avoid an extreme or unprofessional appearance. Males are prohibited from wearing cosmetics, except when medically prescribed. Females are authorized to wear cosmetics with all uniforms, provided they are applied modestly and conservatively, and that they complement both the Soldier's complexion and the uniform. Leaders at all levels must exercise good judgment when interpreting and enforcing this policy.

(3) Females will not wear shades of lipstick that distinctly contrast with the natural color of their lips, that detract from the uniform, or that are faddish, eccentric, or exaggerated.

(4) Females will comply with the cosmetics policy while in any military uniform or while in civilian clothes on duty.

c. Fingernails.

All personnel will keep fingernails clean and neatly trimmed. Males will keep nails trimmed so as not to extend beyond the fingertip unless medically required and are not authorized to wear nail polish. Females will not exceed a nail length of 1/4 inch as measured from the tip of the finger. Females will trim nails shorter if the commander determines that the longer length detracts from a professional appearance, presents a safety concern, or interferes with the performance of duties. Females may only wear clear polish when in uniform or while in civilian clothes on duty. Females may wear clear acrylic nails, provided they have a natural appearance and conform to Army standards.

3-3 Tattoo, Branding and Body Mutilation Policy

Note: This paragraph is punitive with regard to Soldiers. Violation by Soldiers may result in adverse administrative action and/or charges under the provisions of the UCMJ.

a. Tattoos and brands are permanent markings that are difficult to reverse (in terms of financial cost, discomfort, and effectiveness of removal techniques). Before obtaining either a tattoo or a brand, Soldiers should consider talking to unit leaders to ensure that they understand the Army tattoo and brand policy. The words tattoo and brand are interchangeable in regards to this policy.

b. The following types of tattoos or brands are prejudicial to good order and discipline and are, therefore, prohibited anywhere on a Soldier's body:

(b1) Extremist. Extremist tattoos or brands are those affiliated with, depicting, or symbolizing extremist philosophies, organizations, or activities. Extremist philosophies, organizations, and activities are those which advocate racial, gender, or ethnic hatred or intolerance; advocate, create, or engage in illegal discrimination based on race, color, gender, ethnicity, religion, or national origin; or advocate violence or other unlawful means of depriving individual rights under the U.S. Constitution, and Federal or State law (see AR 600-20).

(b2) Indecent. Indecent tattoos or brands are those that are grossly offensive to modesty, decency, propriety, or professionalism.

(b3) Sexist. Sexist tattoos or brands are those that advocate a philosophy that degrades or demeans a person based on gender.

(b4) Racist. Racist tattoos or brands are those that advocate a philosophy that degrades or demeans a person based on race, ethnicity, or national origin.

c. Tattoos or brands, regardless of subject matter, are prohibited on certain areas of the body:

(c1) Soldiers are prohibited from having tattoos or brands on the head, face (except for permanent makeup, as provided in paragraph 3-2b(2)), neck (anything above the t-shirt neck line to include on/inside the eyelids, mouth, and ears), wrists, hands, or fingers. Accessing applicants must adhere to this same policy.

(c2) Soldiers may have no more than four visible tattoos below the elbow (to the wrist bone) or below the knee. The tattoos in these areas must be smaller than the size of the wearer's hand with fingers extended and joined with the thumb touching the base of the index finger. The total count of all tattoos in these areas may not exceed a total of four.

l. Soldiers are prohibited from willful mutilation of the body or any body parts in any manner. Examples include, but are not limited to, tongue bifurcation (splitting of the tongue) or ear gauging (enlarged holes in the lobe of the ear, which are greater than 1.6mm).

3-4 Jewelry

Note: This paragraph is punitive with regard to Soldiers. Violation by Soldiers may result in adverse administrative action and/or charges under the provisions of the UCMJ.

a. Soldiers may wear a wristwatch, a wrist identification bracelet, and a total of two rings (a wedding set is considered one ring) with Army uniforms, unless prohibited by the commander for safety or health reasons. Any jewelry worn by Soldiers while in uniform, or in civilian clothes on duty, must be conservative. Identification bracelets are limited to the following: medical alert bracelets, missing in action, prisoner of war, or killed in action (black or silver in color only) bracelets. Soldiers are only authorized to wear one item on each wrist while in uniform, or in civilian clothes on duty.

c. Attaching, affixing or displaying objects, articles, jewelry, or ornamentation to, through, or under their skin, tongue, or any other body part is prohibited (this includes earrings for male Soldiers). This applies to all Soldiers on or off duty. The only exception is for female Soldiers, who may wear earrings consistent with paragraph 3-4 d. (The term "skin" is not confined to external skin but includes the tongue, lips, inside the mouth, and other surfaces of the body not readily visible.)

(d3) When in civilian clothes on duty, female Soldiers must comply with the specifications listed in paragraph (l), above, when wearing earrings, unless otherwise authorized by the commander. When females are off duty, there are no restrictions on wearing earrings so long as the earrings do not create or support ear gauging (enlarged holes in the lobe of the ear, greater than 1.6mm).

f. The use of gold caps, platinum caps, or caps of any unnatural color or texture (permanent or removable) for purposes of dental ornamentation is prohibited. Teeth, whether natural, capped, or veneered, will not be decorated with designs, jewels, initials, or similar ornamentation. Unnatural shaping of teeth for nonmedical reasons is prohibited.

3-6 Uniform Appearance and Fit

a. Appearance.

(a1) All personnel will maintain a high standard of professional dress and appearance. Uniforms will fit properly; the proper fitting of uniforms is provided in DA Pam 670-1. Personnel must keep uniforms clean, serviceable, and rollpressed, as necessary. Soldiers must project a military image that leaves no doubt that they live by a common military standard and uphold military order and discipline.

(2d) Soldiers will not walk while engaged in activities that would interfere with the hand salute and greeting of the day or detract from a professional image. Examples include, but are not limited to, walking while eating, using electronic devices, or smoking cigarettes, cigars, or pipes. Soldiers are not authorized to wear wireless or non-wireless devices/earpieces while wearing Army uniforms. Hands-free devices while operating a commercial or military vehicle (to include a motorcycle or bicycle) are allowed if not otherwise prohibited by policy or law in accordance with AR 385-10.

(3) While in uniform, personnel will not place their hands in their pockets, except momentarily to place or retrieve objects. Soldiers will keep uniforms buttoned, zipped, and snapped. They will ensure that metallic devices such as metal insignia, belt buckles, and belt tips are free of scratches

and corrosion and properly polished or properly subdued, as applicable. Soldiers will ensure all medals and ribbons are clean and not frayed. Personnel will keep boots and shoes cleaned and/or shined, as appropriate. Soldiers will replace the insignia listed in AR 700–84 when it becomes unserviceable or no longer conforms to standards.

3-10 Eyeglasses, sunglasses, and contact lenses

Note: This paragraph is punitive with regard to Soldiers. Violation by Soldiers may result in adverse administrative action and/or charges under the provisions of the UCMJ.

a. Eyeglasses and sunglasses.

(a1) Conservative civilian prescription eyeglasses are authorized for wear with all uniforms.

(a2) Conservative prescription and nonprescription sunglasses are authorized for wear when in a garrison environment, except while indoors. Individuals who are required by medical authority to wear sunglasses for medical reasons, AR 670–1 • 31 March 2014 15 other than refractive error, may wear them, except when health or safety considerations apply. Commanders may authorize sunglasses in formations or field environments, as appropriate.

(3) Eyeglasses or sunglasses that are trendy or have lenses or frames with conspicuous initials, designs, or other adornments are not authorized for wear. Soldiers may not wear lenses with extreme or trendy colors, which include, but are not limited to, red, yellow, blue, purple, bright green, or orange. Lens colors must be traditional gray, brown, or dark green shades. Personnel will not wear lenses or frames that are so large or so small that they detract from the appearance of the uniform. Personnel will not attach chains or ribbons to eyeglasses. Eyeglass restraints (to include bands) are authorized when required for safety purposes. Personnel will not hang eyeglasses or eyeglass cases on the uniform and may not let glasses hang from eyeglass restraints down the front of the uniform. Glasses may not be worn on top of the head at any time.

b. Restrictions on contact lenses.

Tinted or colored contact lenses are not authorized for wear with the uniform. The only exception is for opaque lenses that are prescribed medically for eye injuries. Clear lenses that have designs on them that change the contour of the iris are not authorized for wear with the uniform. Contact lenses may be restricted by the commander for safety or mission requirements.

AR 670-1 (March 2014) presents one of the most anatomically detailed official regulation of soldiers' embodied silhouettes to date. It also illustrates the anxious theoretical silhouette that shadows the design and regulation of the American uniformed body, particularly as it relates to concerns for gender and non-white bodies. In addressing the "appearance" of these bodies, the institutional discourse has officially acknowledged (confronted) the increased participation of women in nearly all sectors of Army service and the presence of diverse bodies in the U.S. Army. However, despite the 21st-century reality of female and non-white ethnic bodies in the U.S. Army, the way

in which the branch has considered regulating these bodies is unsettling because it singles out physical traits generally associated with specific ethnic identities for further and far more detailed “professionalization.” In Section 3-2 regulating hair, fingernails, and grooming, males are not only prohibited from wearing braids, cornrows, or dreadlocks, but dreadlocks are parenthetically defined as “unkempt, twisted, matted, individual parts of hair” (5). While females are provisionally permitted to wear cornrows, they must be of “uniform dimension” with no more than “1/8 inch of scalp between the cornrows”; they must start at the front of the scalp, continue in a “straight line” and include only one style at a time (5). Soldiers who are ethnically identified as having “a texture of hair that does not part naturally” are permitted to cut an artificial part in their hair provided it is, again, in “one straight line” (5). All female hairstyles, regardless of style, are required to present a “conservative” (i.e. traditional) appearance. These directives, presented as required geometrical and mathematical administration, cannot disguise the racially-biased, regulatory discourses they evince. The institutional regulation of bodies of color in the U.S. Military persists in the *AR 670-1* as doctrine that ostensibly proscribes unacceptable uniform wear, even as it invariably prescribes specific techniques of bodily discipline for specific ethnic bodies. In her 2012 work *Bodies of Evidence: Mediating Race, Globalizing Gender*, Women’s Studies Professor Janell Hobson observes in her discussion of the presentation and reception of black bodies in various media outlets that, “Mostly, such displays remind us of how black bodies are still positioned as uncontrollable and unstable sites in need of control and surveillance” (50). *AR 670-1* provides a similar oversight that designates bodies of color, identified through

ethnically “disruptive” physical features, as potentially “unstable sites.” For example, for female service members, it is repeatedly mentioned that cornrows and multiple braids of “less than ¼ inch” must be “tightly interwoven” to “present a neat, professional, well-groomed appearance.” In contrast, a single, straight braid of a texture that “parts naturally” may “be worn loose per medium hair length guidelines” and no recourse to its potential disruption of a “neat, professional, well-groomed” appearance is ever mentioned.

Protesting the decidedly racialized regulation of their “silhouettes,” thousands of U.S. Army soldiers led by an initial protest from U.S. Army Sgt. Jasmine Jacobs, publicly criticized the *AR 670-1* (March 2014) as racially biased in the weeks after it was published and signed a petition requesting that Congress revise or remove specific language in the document.²²⁹ The U.S. Army further complicated the matter by publishing a U.S. Army Power Point presentation entitled, “Uniform Policy Leaders Training (March 19, 2014)” that was even more explicit in pictorially representing which hairstyles were not allowed for women, using women of color as models rather than the ethnically-ambiguous figures in the original publication (Figure 31).

²²⁹ Michelle Tan. “Hair Reg Petition Fails to Force White House Response.” *Army Times*. 23 Apr. 2014. Web. 1 May 2014. <<http://www.armytimes.com/article/20140423/NEWS07/304230054/Hair-reg-petition-fails-force-White-House-response>>



Figure 31. U.S. Army. *Uniform Policy Leaders Training: AR 670-1*²³⁰

Women of the Congressional Black Caucus appealed to U.S. Defense Secretary Chuck Hagel in a letter dated April 10, 2014, noting with concern that, “Though we understand the intent of the updated regulation is to ensure uniformity in our military, it is seen as discriminatory rules targeting soldiers who are women of color with little regard to what is needed to maintain their natural hair.”²³¹ After concluding a three-month review, Hagel officially notified Congress August 11, 2014 by letter of the pending policy revisions to *AR 670-1* (March 2014). He wrote:

Each Military Service reviewed its definitions of authorized and prohibited hairstyles, and eliminated offensive language, including the terms “matted and unkempt” from both the Army and the Air Force grooming regulations. Additionally, each Service reviewed its hairstyle policies to ensure standards are fair and respectful while also meeting military requirements. These reviews were informed by a panel of military personnel of mixed demographics reflective of our diverse force.²³²

²³⁰ “Uniform Policy Leaders Training.” *U.S. Army*. 19 Mar. 2014. Web. 30 Mar. 2014.

<<http://www.armyreenlistment.com/Messages/new-ar-changes.pdf>>

²³¹ Women of the Congressional Black Caucus. “Letter to Hagel Re: AR 670-1” 10 Apr. 2014. Web. 10 May 2014.

<[http://cbc.fudge.house.gov/uploads/CBC%20Letter%20to%20DOD_Hagel%20\(1\).pdf](http://cbc.fudge.house.gov/uploads/CBC%20Letter%20to%20DOD_Hagel%20(1).pdf)>

²³² Chuck Hagel. “Letter to Representative Fudge Re: AR 670-1” 11 Aug. 2014. Web. 10 May 2014.

<<http://cbc.fudge.house.gov/uploads/ArmyRegulationResponse.pdf>>

For the U.S. Army, four official changes will be made to *AR 670-1*: the language “matted and unkempt” is to be removed; temporary, two-strand twists will be allowed; the size of braids, cornrows, and twists is increased with the spacing requirement removed, and ponytails will be allowed during physical training (PT). The controversy sparked intense, often angry, discussion on online forums. On the *Soldier Systems: An Industry Daily* website, posts by service members analyzed the new hair regulations, directing resentment at both women and women of color, who in turn pointedly replied.

Ben says: April 2, 2014 at 01:41

I say women should have the same regs as men, equal rights and all... If I've got to shave my damn head to keep my job so should a woman.

Threeseven says: April 2, 2014 at 12:17

“We feel let down,” Jacobs said. “I think, at the end of the day, a lot of people don’t understand the complexities of natural hair.” Pfft. As a male, if I have to go to painstaking lengths to ensure whoever cuts my hair blends it perfectly to ensure I don’t end up with an ‘aggressive’ or ‘radical’ hairstyle and still end up getting abused for it 25% of the time, I’m sure these women can figure something out. At least women are allowed to have some kind of choice as to what they do with their hair. Don’t even get me started on the race thing.

MSG LEE says: April 4, 2014 at 03:02

I’ve been in the military for 30 years serving with cornrows, buns larger than 2 inches, and for the last 3 years, locks. I am able to wear my headgear, dawn a mask, and accurately fire a weapon. [...] It is a concerted effort to not only discriminate but to segregate and eliminate ethnic people. I was not born with thin hair that can fit in a 2 inch bun. I signed up 30 years ago and the doctor did not check my hair type then, nor each physical after that to determine if I could be a soldier. Who wrote this and what do they have against being diverse.²³³

The ethnically-biased prohibitions are not the only concern among soldiers regarding *AR 670-1* (March 2014). In another online thread, soldiers wryly noted that the section on “Tattoos, Branding, and Body Mutilation” prescribes tattoo policies, but fails to consider the consequence of scars and bodily mutilation endured from combat wounds and injuries. One contributor sarcastically writes, “In addition to tattoos, we need to address bullet, shrapnel, or burn scars on the face, head, neck, as well as below the

²³³ “New AR 670-1 Goes Into Effect Today.” *Soldier Systems: An Industry Daily*. “1 Apr. 2014. Web. 10 Jun. 2014. <<http://soldiersystems.net/2014/04/01/new-ar-670-1-goes-effect-today/>>

elbow and knees. These scars do not present the neat, professional appearance of the new Army, and are inconsistent with the values projected by the Army's Senior Leaders."²³⁴ Another post, remarking on the mathematically regulated facial hair for men observes, "Damn! If only my Tattoos didn't hinder my ability to be a good soldier! On the other hand mustache diagrams affirm "Hitler stache" is the only way to go, so you win some you lose some."²³⁵ A third service member replies, "Now that we got those pesky wars out of the way we can finally focus on what's really important, tattoos and sideburns. I've never known a peacetime Army...here goes nothing..."²³⁶

There are also some uncanny corporeal oversights related to the soldiering body in the document. For example, Section 3-4 on Jewelry is one of the paragraphs with added punitive charges through the UCMJ for non-compliant soldiers. However, the paragraph proceeds, without attending to the mortal impossibility of the instruction, to limit identification bracelets to include "medical alert bracelets, missing in action, prisoner of war or killed in action (black or silver in color only) bracelets." This of course explicitly suggests that AR 670-1 should be complied with by the deceased or that missing in action and prisoner of war soldiers should have self-identifying bracelets, presumably alerting themselves to their own predicament. An unusual error, it also attends to the ways in which, as suggested earlier, the body may be materially disregarded even as it is being bureaucratically regulated. And yet regulation of the

²³⁴ John Gavin. "New AR 670-1 Goes Into Effect Today." *Soldier Systems: An Industry Daily*. 2 Apr. 2014. Web. 10 Jun. 2014. <<http://soldiersystems.net/2014/04/01/new-ar-670-1-goes-effect-today/>>

²³⁵ Steve. "New AR 670-1 Goes Into Effect Today." *Soldier Systems: An Industry Daily*. 1 Apr. 2014. Web. 10 Jun. 2014. <<http://soldiersystems.net/2014/04/01/new-ar-670-1-goes-effect-today/>>

²³⁶ CJ. "New AR 670-1 Goes Into Effect Today." *Soldier Systems: An Industry Daily*. 1 Apr. 2014. 13:27 Web. 10 Jun. 2014. <<http://soldiersystems.net/2014/04/01/new-ar-670-1-goes-effect-today/>>

uniformed body marches on exhaustively in the document—sculpting, restricting, ordering, and monitoring the body and its motion to create an unwaveringly disciplined and uniform silhouette. In Section 3 on Cosmetics, it is noted that women’s makeup (as makeup for men is strictly prohibited) should be “applied conservatively” and “must complement the uniform,” *rather than* the woman. Similarly, it is mandated that lipstick must not “detract from the uniform” (6-7). Here, the female body has been removed entirely in favor of a rapport between uniform and cosmetic to present the correct silhouette. Nor does the interior of the body escape regulation: “willful mutilation” of the body (such as tongue bifurcation and ear gauging) is not permitted. Piercings of any kind are disallowed for men at all times, as are piercings “under” the skin for both genders on-duty and off-duty wherein “skin is not confined to external skin” but also applies to “other surfaces of the body not readily visible.” Teeth may not be “unnaturally shaped” or capped with “unnatural” colors and the eyes must remain “conservative” as “tinted or colored lens are not authorized” (12-15). The body in motion is equally tasked with conformity: In Section 3-6 on Uniform Appearance and Fit, uniformed soldiers are not even permitted to walk if it might interfere with a hand salute or “detract from a professional image.” Thus, they may not walk while eating, walk while smoking, nor walk while using a cell phone. They may not use wired or wireless earpieces to communicate while in motion in uniform, nor may they ever put their hands in their pockets, except “momentarily to place or retrieve objects” (13).

As discussed, the U.S. Military uniform functions to assimilate soldiers materially and ideologically into military life, providing immediate indication of branch, rank, battle

experience, and feats of valor through distinguishing insignia, patches, and cut and style, and also presents a silhouette or “military image” (to use the Army’s definitional language) of institutional values. With the increased number of women serving in Iraq, it has also become a “fabric”—a material platform—for arguments regarding women’s participation in military combat roles. In her 2009 work on the evolving challenges for U.S. Military servicewomen, *The Lonely Soldier: The Private War of Women Serving in Iraq*, Journalism Professor Helen Benedict asserts:

The military has a profoundly muddled approach to women’s uniforms. On the one hand, women must wear the unisex combat fatigues, on the other, their dress uniforms are not pantsuits, as one might expect, but skirts to be worn with “flesh tone nylons” and jackets tailored in an exaggerated hourglass shape. Until recently, army women also had to wear a small, folded cap with their dress uniforms know as “the cunt cap” in army vernacular. They now wear the same beret as men. (39)

As the U.S. Military has sought to accommodate, or “muddle through” basic concerns regarding the gender and diversity of its forces and their attire, even more radical changes to the uniform are envisioned. The traditional combat uniform is being physically and strategically reconfigured as part of a defense system that moves beyond its former visual signification of disguise and display: it is becoming a digitally and robotically enhanced weapon. And yet to account for the uniform’s transformation into a weaponized exoskeleton, one must also consider the military “gear” and basic weapons that are routinely issued as part of the U.S. Military official uniform. The transition from material uniform to metamaterially enhanced exoskeleton has been gradually proceeding through intermediate steps that connect, if not yet merge, soldiers with machines. Professional military gear that is worn (such as a helmet and protective plates), held (rifles and grenades), or acts as a prosthetic extension of the body’s basic

sensorial functions (auditory communication devices, visual recording equipment) already provides one kind of a weaponized extension of a soldier's body. Arguably, weapons as basic as a sword and shield also extend the boundaries of the body as a weapon, literally lengthening the corporeal "reach" of the body into space. And it does not take a large theoretical or industrial design leap to span the gap between attaching a basic protective plate to a soldier's chest and attaching a protective plate that enhances bionic strength tenfold.

And yet, there is an ontological precipice, extant in many debates that deliberate where human subjectivity begins and ends in relation to handheld, wearable, and physiologically embedded technologies that appears to make protective plate or helmet different, somehow, from a bionically enhanced plate or a neurologically "jacked" helmet. Scholars have articulated this potential collapse of a uniquely human subjectivity in relation to technology with language that ranges from laudatory to the apocalyptic. In her now-canonized essay from 1985, "A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the 1980s," feminist scholar Donna Haraway reappropriates the idea of a cyborg (a cybernetic organism that is a "hybrid" of an organism and machine) as a potentially productive, disruptive, and "pleasurably confusing" subversive agent. She writes:

The relation between organism and machine has been a border war. The stakes in the border war have been the territories of production, reproduction, and imagination. [...] Late twentieth-century machines have made thoroughly ambiguous the difference between natural and artificial, mind and body, self-developing and externally designed, and many other distinctions that used to apply to organisms and machines. Our machines are disturbingly lively, and we ourselves frighteningly inert. (191-194)

Haraway's explicit intent for the essay, "to build an ironic political myth faithful to feminism, socialism, and materialism," is successful in her troubling of definitional boundaries and her reclamation of cybernetics for feminism. However in the 2010s, a new critique of the cyborg is possible—vital—because the military cyborg is not only "disturbingly lively," it is disturbingly violent in its integration of (wo)man with machine to provide, in the U.S. Military's words, "unprecedented lethality."²³⁷ It is the military cyborg's lethality that, rather than potentially recuperating the cyborg as a defiant but socially productive agent, reinscribes it as a product of militarized culture. The mythical, at times imaginary, cyborg that Haraway describes is not only envisioned to be wearing "boots on the ground" in the Middle East, it is conceived by the U.S. Military as a prosthetic, physiological, and neurological merger of a soldier's anatomy with digital, nano, and metamaterial technologies. In addition, new theories of the cyborg must account for the ways in which the soldiering body has become a preeminent site to be manipulated and maneuvered by technology—that is, there are very real threats to the physical and mental health and embodied subjectivity of soldiers who are hooked into neural helmets that transcribe their brain waves into actionable data to initiate military attacks (U.S. Military HORNET program) or prosthetically and physiologically integrate soldiers' material bodies with synthetic metamaterials (U.S. Military Future Soldier Initiative program). These changes to the U.S. Military "uniform" fundamentally alter, or in the language of U.S. Military publications "augment," a soldier's basic physicality. The difference between a U.S. Army basic-issue helmet worn on the head, and a U.S. Army

²³⁷ U.S. Army Soldier Research, Development, and Engineering Center. "Future Soldier White Paper." Massachusetts: U.S. Army Natick Soldier Research, Dev, and Eng. Center, 2009. Web. 10 Jan. 2010. <<http://nsrdec.natick.army.mil/FSI/index.htm>>

HORNET helmet which has embedded neurological sensors that invasively monitor electrochemical brain activity is not one of degree. Rather, it represents the potential for a soldier's interior body to be invaded in the name of state security and requires a soldier to abdicate basic rights to personhood and embodied subjectivity when a soldier becomes, in essence, useful primarily as a *technocorpus* of the state. Technocorpus is defined here as a body whose embodied subjectivity is effectively bypassed through the use or application of technology. If soldiers, some of whom already consider themselves "human fodder" in the defensive plans of the state,²³⁸ are currently used as bodies of war, new technologies offer the prospect that their continuously jacked and monitored bodies will be increasingly harvested for data and deployed for "unprecedented" lethal action. While Haraway imagines cyborgs may be "regenerative" and provide a "a way out of the maze of dualisms in which we have explained our bodies and our tools to ourselves," military cyborgs, using human male and female soldiering bodies as the sites of radical experimentation, lead rather quickly back into the maze.

Katherine Hayles, Professor of New Media and English, has intervened extensively in the debate regarding where bodies, and constitutive issues of consciousness, embodiment, and agency, begin and end in relation to virtual and cybernetic technologies. In "How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics" (1999), she echoes the limitations of theorizing cyborgs without attending to real, individual bodies and suggests that a performative cyborg of this kind is useful—"Especially when it operates in the realm of the Imaginary

²³⁸ Author's personal interview: J.C. April 5, 2014. Author's personal interview: A. B. May 2, 2009. Author's personal interview: Adam Kokesh, September 1, 2011.

rather than through actual physical operations (which act as a reality check on fantasies about cyborgism) (85). Military cyborgs provide one distinct “reality check” on utopic visions of effortlessly merging humans and machines. And yet the image of a cyborg—which offers a continuum of possibilities for considering how bodies and machines engage, ranging from heart patients with electronic pacemakers to neurologically “jacked” weaponized soldiers—proves useful in establishing why corporeal technologies that fundamentally alter the human body (a neurologically invasive HORNET helmet) are more ethically objectionable than technologies that are temporarily worn on the human body (a regular-issue helmet). Considering the U.S. Soldier, for a moment, as a military cyborg is disquieting because this type of cyborg is neither “pleasurable and Imaginary” (Haraway’s language) nor does it peacefully “stir Imaginations” (U.S. Army’s language).²³⁹ Rather, a military cyborg offers a vision of the body that no longer wears a uniform to invade, but is also corporeally invaded by technologies for the state. Basic materials issued in the initial allowance for the U.S. Army uniform vary based on one’s military operation specialty (MOS) and military status (active-duty, deployed, etc.). However, the basic U.S. Army Combat Uniform (ACU) includes a camouflaged jacket, pants, moisture-wicking t-shirt, black nylon belt, and approved combat boots. In addition, a black beret is required for headgear and a patrol cap is issued for operational use when designated by a commanding officer. Soldiers are also required to wear identifying insignia tabs denoting rank and awards and a “Friend or Foe” identification square, all of which are

²³⁹ In the first paragraph of the RDECOM 2009 Future Soldier Initiative White Paper, the authors state: “*Our intent is to start a dialogue and stir imaginations about how best to equip the Soldier of the future.*” Future Soldier Initiative. “Future Soldier White Paper.” Massachusetts: U.S. Army Natick Soldier Research, Dev, and Eng. Center, 2009. Web. 10 Jan. 2010. <<http://nsrdec.natick.army.mil/FSI/index.htm>>

affixed with Velcro in the 2010s. In addition, deploying soldiers generally receive a helmet, pack series, protective outer gear, and a personal rifle or protective small firearm. As argued here, the distinction between “standard issue” uniform and gear and many of the U.S. Military’s proposed corporeal technologies is that the former are *additive, removable, and temporary* (although soldiers do experience injuries as a result of wearing load-bearing packs), while the latter are *invasive with potentially irreversible* physical, psychological, and physiological effects. The path to transform the U.S. Military uniform from a material dress used for environmental protection and signification to a technologically enhanced weapon begins with manufactured changes to the U.S. uniform, primarily in response to operational issues, and continues to its future as a neurologically integrated robotic exoskeleton.

3.4—U.S. Military: The Manufacture of Silhouettes

In a 2014 essay blog for U.S. veterans, *The Havok Journal*, service member Scott Faith wryly characterizes the predicament of the 21st-century U.S. Military uniform:

Ground warfare used to be simple: “Move to the sound of the guns, and shoot anyone not dressed like you.” Things aren’t that simple in the US military these days, since first the Marines and then every other service abandoned the effective and “uniform” uniforms (battle dress uniforms, or BDUs, and desert combat uniforms, or DCUs) and began fielding a bewildering variety of service-specific (and often quite ridiculous) ground combat uniforms.²⁴⁰

The U.S. Armed Forces Battle Dress Uniform (BDU) was intended, as the name implies, for “battle” and was the primary service uniform for the U.S. Army, U.S. Marine Corps, and U.S. Air Force from approximately 1980 to the early 2000s. The U.S. Army implemented the BDU in 1981 and discontinued its use in 2005, when it was replaced by

²⁴⁰ Scott Faith. “Uniformly Stupid: The U.S. Military’s ‘50 Shades of Green.’” *The Havok Journal*. 27 Mar. 2014. Web. 10 Jun. 2014. <<http://www.havokjournal.com/military/2014/3/27/uniformly-stupid-the-us-militarys-50-shades-of-green>>

the Army Combat Uniform (ACU). The U.S. Army Training and Doctrine Command (TRADOC) generates and distributes military training documents, including *AR 670-1*, many of which are approved for public distribution and available on their website. One can download diverse documents ranging from the official procedure for homosexuals in the military (*TRADOC Pamphlet 600-26*²⁴¹) to training aids for mine clearing lines, plastic rifles, and portable grave registration kits (*TRADOC Pamphlet 350-9*²⁴²). These documents contribute to the institutional and operational bureaucracy that regulate military functions, and also provide textual discourse regarding weapons training, tactical maneuver, and geopolitical strategy—in essence, basic requirements for participating in (and surviving) modern military life. TRADOC published a list of all changes for the new ACU—which began replacing all BDUs for U.S. Army Active, Reserve and National Guard Soldiers in 2005—as well as descriptions of the digitized camouflage pattern, care and wear instructions, and justification for discrete design modifications. The original TRADOC document, reprinted on websites like *U.S. Military.com* and *Army Study Guide.com* states:

There were 20 changes made to the BDU. The bottom pockets on the jacket were removed and placed on the shoulder sleeves so Soldiers can have access to them while wearing body armor. Buttons were replaced with zippers that open from the top and bottom to provide comfort while wearing armor. Patches and tabs are affixed to the uniform with Velcro to give the wearer more flexibility and to save the Soldier money, also the cost to get patches sewn on will be eliminated.²⁴³

²⁴¹ This 2009 document has since been updated due to the changes in the Don't Ask Don't Tell (DADT) U.S. Military policy. Available at: <http://www.tradoc.army.mil/tpubs/regs/r25-35/samples/tpam.doc>

²⁴² Department of the U.S. Army. *TRADOC Pamphlet 350-9: U.S. Army Training and Doctrine Command Training Devices for Armywide Use*. TRADOC. 19 Feb. 2009. Web. 20 Jul. 2014. <<http://www.tradoc.army.mil/tpubs/pams/tp350-9.pdf>>

²⁴³ Originally available in 2009: <http://www.tradoc.army.mil/pao/fact_sheets/ACU/ACUstandinginfo.htm> In 2014, see: "Army Combat Uniform" Web. 1 May 2014. <http://www.armystudyguide.com/content/Prep_For_Basic_Training/Prep_for_basic_uniforms/army-combat-uniform.shtml>

Additional modifications included improved desert boots and moisture wicking t-shirts and socks. A quote from Sgt. Maj. Of the Army Kenneth Preston affirms, “Every modification made on the uniform was designed with a specific purpose and not just for the sake of change” (qtd. in “Army Combat Uniform”) (See Figure 32).

For civilian observers, the most conspicuous change was certainly the digitized camouflage print, Universal Camouflage Print (UCP), which phased out the woodland camouflage (as well as the three-color desert combat uniform) that had defined the U.S. Army for decades. For the new print, designed to be effective in “universal” theaters, the Army utilized a print already developed by the U.S. Marine Corps and also removed black entirely. The U.S. Army officer in charge of the “Clothing and Individual Equipment” changes, Sergeant 1st Class Jeff Myhre, stated: “Black is no longer useful on the Army uniform—it is not a color commonly found in nature, and it immediately catches the eye” (qtd. in Cramer). We may infer that it particularly “catches the eye” in the dominant biome of current U.S. combat—the Middle East. Though highly publicized, the muted pattern of the digitized, pixelated UCP camouflage was not a recent design. According to Guy Cramer, CEO of United Dynamics, as early as the 1970s a Dual Texture Camouflage (Dual-Tex) was utilized by the U.S. Army 2nd Armored Cavalry Regiment in Europe (Cramer). Developed by Lt. Col. O’Neill, a West Point Professor in Engineering Psychology, Dual-Tex was determined to reduce detection by 50% in comparison to the 3-color NATO pattern also used at the time. However, some Army personnel resisted the idea that small squares provided better mimicry of natural environs, so the standard BDU persisted for decades (Cramer I).

In addition to the pattern changes implemented to better suit the current environment of U.S. Military combat operations (the mixed desert and urban sites of the Middle East rather than Southeast Asian and South American jungles), fabric and functionality modifications were also developed. Rather than the 100% cotton of the standard BDUs, which were issued with Nomex fire-retardant for specific missions, the ACU has a rip-stop nylon/cotton blend with an applied wrinkle-free treatment that eliminated the time-honored tradition of pressing and starching one's uniform. An U.S. All Army Activities (ALARACT) message informed soldiers, "Soldiers will not starch the ACU under any circumstances. The use of starch, sizing, and any process that involves dry-cleaning or steam press will adversely affect the treatments and durability of the uniform and is not authorized."²⁴⁴ The life expectancy of the ACU uniform was estimated at six months.²⁴⁵

²⁴⁴ U.S. Army ALARACT. "Army Combat Uniform (ACU) Ensemble." Web. 10 May 2014. <[http://www.army1.army.mil/hr/uniform/docs/Army%20Combat%20Uniform%20\(ACU\)%20Ensemble.pdf](http://www.army1.army.mil/hr/uniform/docs/Army%20Combat%20Uniform%20(ACU)%20Ensemble.pdf)

²⁴⁵ Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics. "Disposition Policy for U.S. Military Combat Uniforms." 1 Oct. 2008. Web. 1 Sep. 2014. <http://www.acq.osd.mil/log/sci/MD/2008-001041-Disposition_Policy.pdf>"

Army Combat Uniform (Via U.S. Army PEO Soldier)

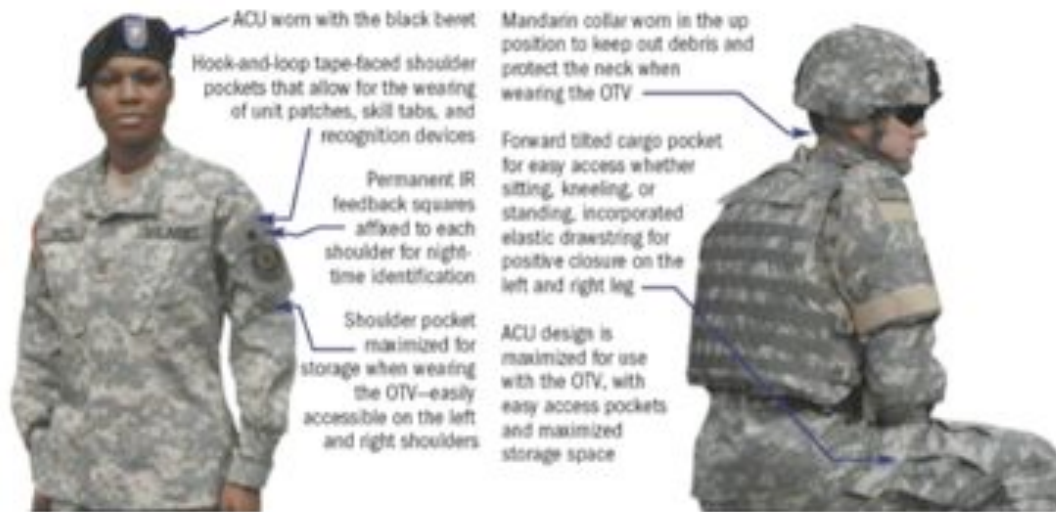


Figure 32. U.S. Military Army Combat Uniform, *Defense Industry Daily*, February 2, 2009

The ACU uniforms were distributed to Army units in 2005²⁴⁶ with the gradual phase-out of BDUs based on stock depletion, and the transition was completed by 2007. However, complaints regarding the new uniform, ranging from inappropriate camouflage, noise made by Velcro pockets alerting enemy insurgents, and a life-threatening lack of fire-retardant, soon echoed through U.S. Army community forums and media publications. The uniform's failure may be partially attributed to industrial design flaws, but it also illustrates fundamental ways in which the soldiering body was disregarded in the research and design (R&D) process. As Army Officer Matt Gallagher remarked in an interview in 2013 with *The Daily Beast* entitled "The Army's \$5 Billion New Uniform Already Being Replaced": "What's best for soldiers in the field is usually not a primary decision-maker."²⁴⁷

Shortly after fielding, the uniform was already catalyzing safety and operational concerns. In his 2007 article, "New Army Uniform Doesn't Measure Up," active duty officer and Iraqi Engineering Commander Eric Coulson describes "The Good, The Bad, and The Ugly" consequences of the new ACU for soldiers stationed abroad (active duty soldiers deployed to Iraq were the first prioritized to receive the new uniforms). To begin with, the ACU, in an attempt to make the contents of modular pockets more accessible, replaced zipper and button closures with Velcro. However, under the heading "The Bad" Coulson writes, "This material [Velcro] is just not ready for combat.

²⁴⁶ Beginning in January of 2003, the first twenty-five prototype uniforms were tested on Stryker Brigade Combat Teams at the National Training Center in Fort Irwin, CA; twenty-one were then re-issued with modifications again to Stryker squads at the Joint Training and Readiness Center in Fort Polk, Louisiana; and finally, a third version was worn by a select group of Stryker Soldiers for testing in Iraq during Operation Iraqi Freedom. <http://www.peosoldier.army.mil/faqs/equipment.asp>

²⁴⁷ Matt Gallagher qtd in. Caitlin Dickson. "The Army's \$5 Billion New Uniform Already Being Replaced." 14 Oct. 2013. Web. 20 May 2014. <<http://www.thedailybeast.com/the-hero-project/articles/2013/10/14/the-army-s-5-billion-new-uniform-already-being-replaced.html>>

Putting anything of size or weight in the pant's cargo pocket will often cause the closure to fail if your Velcro has any wear and tear—which in Iraq, it does. Soldiers risk losing belongings” (Coulson). Additionally, many patches, recognition labels and skill tabs—that is, official demarcations of authority, rank, and valor—are now adhered with Velcro, at least until they fall off. Coulson remarks:

First, patches are much more likely to be lost now that they can be easily removed. And, more obviously, Velcro repair kits are beginning to appear in the exchange shops—a tacit admission the Velcro does not last. Instead of shelling out cash to put new patches on the blouse, Soldiers now have to buy new Velcro to replace the material that failed. (Coulson)

Coulson's sentiment was widely echoed. Gallagher reported that his soldiers nicknamed the ACU their “pajamas” due to their “inability to look right on anyone, no matter their build” but that his biggest concern was the Velcro; he reports, “On a night raid, if it gets caught on a wire or something, it would make a crunchy sound that alerted insurgents to a soldier's location.”²⁴⁸ In the essay “Uniformly Stupid: The U.S. Military's 50 Shades of Green,” Scott Faith writes in the military essay blog *The Havok Journal* that the exposed Velcro was only good for “attracting mud and sticking to other Soldiers while brushing past them in the chow line. I take that back, it was also good for something else: sticking to itself while being laundered.” His observations also extend to his observations of the overall “silhouette” of the ACU:

The ACU, with its slanted pockets and copious amounts of exposed Velcro, was supposed to mimic the appearance of the non-standard uniform alterations adopted by special operations forces (SOF) personnel early on in the wars in Afghanistan and Iraq. In this regard, it is much like the infamous black beret, which was taken from the elite Ranger Regiment and distributed to the entire Army (the Rangers now sport a tan beret). The thought in both of these cases is, of course, if you make people LOOK elite, then

²⁴⁸ Matt Gallagher qtd. in Caitlin Dickson. “The Army's \$5 Billion New Uniform Already Being Replaced.” 14 Oct. 2013. Web. 20 May 2014. <<http://www.thedailybeast.com/the-hero-project/articles/2013/10/14/the-army-s-5-billion-new-uniform-already-being-replaced.html>>

that MAKES them elite. No need for special assessment or training; the clothes make the man. (1)

In the military, standards of perfect appearance—precisely folded bedding, spit polished shoes, and spotless uniforms—are legendary and also enforced by official disciplinary regulations, even in Iraq and Afghanistan. The ACU is now worn with a rough-boot that no longer requires polishing but this, suggests Coulson, is the only discernable “good” of the uniform. The new ACU itself “shows every last bit of dirt the Soldier’s been exposed to. I never once saw my original BDUs stain like my ACUs have” (Coulson). And the viability of the “no starch, no press” instructions also proved challenging. In an online cartoon on CombatReform.org parodying the Army’s claim that the uniform would not require pressing, the uniform made the cut for the “Operation Elusive Concept” cartoon series (Figure 33).



Figure 33. “Operation Elusive Concept” Cartoon²⁴⁹

²⁴⁹ “Make Your BDU’s Lighter and Cooler.” *Combat Reform*. 5 Dec. 2009. Web. 20 Feb. 2012. <<http://www.combatreform.org/bdufixes.htm>>

Another difficulty arose with the camouflage pattern as it received negative feedback from deployed soldiers. Coulson remarks, “The pixilation assists in breaking up the shape of the Soldier—particularly through night vision—but in general it stands out against anything except a concrete wall” (Coulson). Faith colorfully echoes this sentiment, “We’re finally getting rid of this train wreck known as the Army Combat Uniform (ACU), whose “camouflage” pattern is pretty much only useful if you’re fighting in a gravel pit. At night. Good riddance, ACUs.”²⁵⁰ The U.S. Government Accountability Office (GAO) concurred with the soldiers’ assessments. In a fifty-two page report issued in September 2012 documenting uniform development, cost-sourcing, and deployment failures by both the U.S. Army and U.S. Air Force, the GAO summarized:

The DOD has not met a statutory requirement to establish joint criteria for future uniforms or taken steps to ensure that uniforms provide equivalent levels of performance and protection for service members. [...] As part of the development of the ACU, the Army Natick Soldier Research, Development, and Engineering Center began a field evaluation in 2002 of the performance of 13 camouflage patterns and color combinations. However, PEO Soldier officials told us that prior to the completion of this study the leadership chose a camouflage pattern and colors for the new uniform without data from the camouflage study. In 2010, the Army began replacing the ACU for personnel deployed to Afghanistan with Operation Enduring Freedom Camouflage Pattern (OCP), and estimated that the replacement would add more than \$38.8 million in development and initial fielding costs for fiscal year 2010 and 2011. (22-23)

Nor does the U.S. Navy escape criticism for their camouflaged uniform, also from within their own force, which is informally nicknamed “The Blueberry.” U.S. Navy Secretary Ray Mabus bleakly observes that a blue-colored camouflage for sailors is particularly dangerous: “The Navy ‘blueberries’—I don’t know what the name is, that’s what sailors call them—the great camouflage it gives is if you fall overboard.” The report goes on to

²⁵⁰ Scott Faith. “Uniformly Stupid: The U.S. Military’s ‘50 Shades of Green’” *The Havok Journal*. 27 Mar. 2014. Web. 10 Jun. 2014. <<http://www.journal.com/military/2014/3/27/uniformly-stupid-the-us-militarys-50-shades-of-green>>

state: “Mabus points to what has become a macabre joke among sailors, highlighting the dangers of a shipmate falling into the sea wearing a sea-colored uniform.”²⁵¹

Critically, the “new” Army ACU, in addition to having poor Velcro adherence, becoming easily soiled, malfunctioning and, without sufficient testing, providing poor camouflage, presented an even graver problem—it was not treated with fire-retardant and contributed to injury and death as a result of its high flammability.²⁵² Coulson writes:

The 50/50 blend of cotton and nylon does not appear to have the staying power or the protection of the old 100% cotton or the Nomex of today’s flight suits. In fact, Soldiers and Marines that spend a great deal of time in vehicles in Iraq are being issued tan Nomex flight suits to protect them from the possibility of flash fires in their vehicles. The cotton/nylon blend burns very quickly and can add to the injuries sustained in a burning vehicle by melting to the Soldiers’ skin. [...] The extra cost of Nomex will be more than made up in savings for the treatment and care of burned Soldiers. (Coulson)

In response to the ACU’s potential to *increase* flammability, the U.S. Army issued a variation of the ACU in 2010 called the Flame Resistant Army Combat Uniform (FRACU). In a 2013 article for *National Defense Magazine* suggests, technology writer Eric Beidel notes of the uniform’s newly engineered fabric, called “Defender M” (a blend of nylon, rayon, and anti-ballistic twaron) that, “The Army’s FRACU is made from a self-extinguishing fabric that will not melt, drip or be affected by multiple washes.” FRACU was tested at the U.S. Army Natick Soldier Systems Center and Major Joel Dillon, Assistant Product Manager of soldier clothing, remarked of the new fabric: “Other fabrics fought off flames successfully but were not breathable enough. We can’t have a

²⁵¹ Paul D. Shinkman. “New Secretary Slams ‘Blueberry’ Camouflage.” *U.S. News*. 13 Jun. 2013. Web. 20 Aug. 2013. <<http://www.usnews.com/news/articles/2013/06/13/navy-secretary-criticizes-blueberry-camouflage-uniforms>>

²⁵² For a discussion of ACU fire-protection effectiveness see: Eric Beidel. “New Fabrics Promise Better Fire Protection for IED-Battered Troops.” *National Defense Magazine*. October 2011. Web. 2 Jan. 2013. <<http://www.nationaldefensemagazine.org/archive/2011/October/Pages/NewFabricsPromiseBetterFireProtectionForIED-BatteredTroops.aspx>>

soldier wearing a garbage bag.”²⁵³ Dillon’s remark provides a reminder of the discourse that accompanies industrial research and design (R&D) processes for military wear within governmental or privately contacted institutions—a dialogue that is rarely transparent to the public except through formal press releases. In comparison, while U.S. Soldiers’ views were more difficult to publically access prior to 1995, they are more readily available in the 2010s due to social media outlets such as military blogs (milblog), chat rooms, online community forums, and public post sites. Some of these forums count hundreds to tens of thousands of followers²⁵⁴ and include official military sites that allow comments or privately-run sites, including: *The Havok Journal* (military essay site), *Duffel Blog* (essay blog for all service branches), *The Sandbox* (essay post site initiated by Garry Trudeau of the Doonsbury comic strip), *Blackfive*, (conservative military blog), and *Airman* (U.S. Air Force online magazine with comment forum). Public feedback on military technology from service members in these forums provides its own informal “review” process that runs parallel to the formal testing built into institutional R&D programs. Online forums, particularly if the comments are aggregated, provide one valuable index of the performance of equipment in military operations.

In my personal interviews, U.S. Army and U.S. Marine Corps personnel confirmed they have posted online reviews of military equipment. They expressed concern during the interviews with various engineered components of their uniforms’

²⁵³ Joel Dillon qtd. in Eric Beidel. “New Fabrics Promise Better Fire Protection for IED-Battered Troops.” *National Defense Magazine*. October 2011. Web. 2 Jan. 2013.
<<http://www.nationaldefensemagazine.org/archive/2011/October/Pages/NewFabricsPromiseBetterFireProtectionForIED-BatteredTroops.aspx>>

²⁵⁴ For a ranking of military blogs (milblog) by Blog Rank, which includes an “Alexa Rank” that measures unique visitors and site views per month, see: <http://www.blogmetrics.org/Military#al>

design—ranging from discomfort to potentially life-threatening design flaws. U.S. Marine Adam Kokesh described the Small Arms Protective Insert (SAPI) plates, or “trauma plates,” designed to protect soldiers from high-velocity shrapnel, rifle, and projectile injuries to vital organs. He notes:

Adam Kokesh (U.S. Marines 2009-2012): You turn it [the SAPI] one way and it’s convex, the other way and it’s concave. For the front plate it was okay. It was not great, but it was okay. The back one would dig in your back, and especially if you’re sitting in a Humvee a lot. It was a constant struggle, and a lot of guys just took them off altogether—that was really dangerous. We also had what was called the cock flap, the groin protector, which as a driver I wore it on my left shoulder because there was a guy, the story got around, shrapnel came in and punctured his lung. It went through the armpit hole in his flak jacket. There were a lot of stories of drivers who got hit on the left from shooters or IEDs so most drivers moved the cock flap from their cock to their shoulder or side. Better to be alive.²⁵⁵

Kokesh’s observations reveal the decidedly improvisational responses U.S. Marines employed to adapt potentially ineffective gear in the field to the embodied realities of war. Kokesh is also a service member who has been vocal in expressing his views on U.S. Military failures, informed by his active-duty experiences, in multiple media outlets. Kokesh maintains a highly public online and political profile. Since receiving an honorable discharge from the U.S. Marines in 2004,²⁵⁶ Kokesh has been a member of Iraq Veterans Against the War (IVAW), a veteran group that testified before U.S. Congress in 2008 at the Winter Soldier hearings²⁵⁷ to document operational failures in the occupations of Afghanistan and Iraq. In the veterans’ 2008 published account, *Winter Soldier-Iraq and*

²⁵⁵ Author’s personal interview: Adam Kokesh, Sep. 1, 2011

²⁵⁶ Kokesh was originally honorably discharged from the U.S. Marine Corps in 2004. His discharge status was subsequently changed to “general discharge under honorable conditions,” a lesser accommodation than his original status, seemingly as a result of attending a political protest in uniform and responding to a U.S. Marine officer who subsequently investigated the incident. Described in author’s personal interview with Adam Kokesh, Sep. 1, 2011.

²⁵⁷ The 2008 IVAW Winter Soldier hearings were modeled on the Vietnam Winter Soldier hearings held by the Vietnam Veterans Against the War (VVAW) in 1971 before the Senate Foreign Relations Committee. John Kerry remarks in his testimony, “We call this investigation the ‘Winter Soldier Investigation.’ The term ‘Winter Soldier’ is a play on words of Thomas Paine in 1776 when he spoke of the Sunshine Patriot and summertime soldiers who deserted at Valley Forge because the going was rough.”

Afghanistan: Eyewitness Accounts of the Occupations, Kokesh writes, “During the siege of Fallujah, we changed Rules of Engagement more often than we changed our underwear. At first it was, ‘You follow the Rules of Engagement. You do what you’re supposed to do.’ Then there were times when it was, ‘You can shoot at any suspicious observer.’ So someone with binoculars and a cell phone was fair game, and that opened things up to a lot of subjectivity” (Kokesh 43). Kokesh’s experiences informed his decision to run for the 2010 Republican primary campaign in New Mexico’s 3rd Congressional District, during which his predominantly Libertarian political views were published on his campaign site, and his role as an influential political activist represents one way in which military personnel have chosen to negotiate the moral complexity of wartime service.

Another U.S. Marine Sergeant focuses his concerns on operational failures with a new pistol holder, the Blackhawk SERPA Level 2 Holster, that replaced an older, nylon version and is designed to carry a standard issue 9mm pistol. He said he tested the firearm in the U.S. and in Afghanistan with his soldiers and was very concerned: “Weapons handling is automatic for every U.S. Marine. Every Marine is trained to draw his weapon in combat situations—under fire, at night, and under incredible duress. But the design of this holster...you have to release it on the side before firing. I’ve had half a dozen guys fire the gun just after they got it out of the holster—only dumb luck they didn’t blow a leg off. And these are careful, well-trained, expert Marines.”²⁵⁸ His

²⁵⁸ Personal interview with R.D. May 12, 2013. Reports of the SERPA’s technical difficulties were also reported in various military blogs and review sites. For example, see: Rob Curtis. “USMC Adopts Blackhawk Holsters.” *Military Times Gear Scout*. 9 Sep. 2011. Web. 3 Oct. 2012.

<<http://blogs.militarytimes.com/gearscout/2011/09/12/usmc-adopts-blackhawk-serpa-holsters/>>

James K. Sanborn. “Corps New Pistol Holster Called Dangerous.” *Marine Corps Times*. 26 Sep. 2011. Web. 2 Oct. 2012.

<<http://www.marinecorpstimes.com/article/20110926/NEWS/109260316/Corps-new-pistol-holster-called-dangerous>>

observations of the fielding of the holster have been confirmed by other reports—including by Tex Grubner, a professional military gear tester who recorded testing the SERPA holster with live footage (posted on *YouTube*) where he accidentally shoots himself in the leg²⁵⁹—and affirm how military gear testing outside of the formal, industrial research and design (R&D) process provides operational insights.

In my personal interviews, two women deployed with the U.S. Military between 2005-2010 shared their concerns with the quality of the uniform that resulted in malfunctions that inconvenienced both mobility and safety on duty. One bluntly notes:

J.C. (U.S. Army 2005-2010): The Army uniform for women is a piece of s***. We don't need different treatment, but it would be good to have a different service uniform that actually fits us. It was designed to be lightweight—this was good, it breathed and I heard from other guys, before the ACU, that the old BDU was so heavy you were sweating before you even went on patrol. But the fabric ripped all the time. And not to be blunt, but it's already humiliating to be a woman on patrol with a Humvee of guys trying to use a bathroom—by that I mean a ditch or the side of the road. You're looking for IED's, looking for suspicious activity, looking for kids that might be running line to a bomb, and then you're sitting in a uniform full of rips and holes. Most of the guys didn't care—the crotch ripped out and they just left it. The girls I knew who were on patrol all the time, especially MP gunners [Military Police machine gun operators], bought sewing kits and sat at base camp like f***** old ladies sewing the crotch or a** of their uniforms. Or sometimes, we'd pay an Iraqi woman who was working on base or one of the laundry girls to do it for us.²⁶⁰

Another U.S. Marine servicewoman stationed in Afghanistan remarked on the inappropriate fit of the Corps uniform:

A.B. (U.S. Marine Corps 2008-2011): I was part of an Engagement Team in Helmand Province in 2009. We were issued unisex uniforms that were at least two to three sizes too big for many of the women. This may seem like a minor issue, but in Afghanistan every safety detail counts. Women tried to sew or belt their uniforms on the inside, so it wouldn't affect wear regulations, because they kept getting the bulky material caught on Humvee doors, the barbed wire that separates the base, or target

²⁵⁹ Tex Grubner. "I Just Shot Myself!" *YouTube*. 3 Jul. 2011. Web. 20 Apr. 2014. <<https://www.youtube.com/watch?v=zYvAxLX6OzE>>. For discussion of Blackhawk SERPA design see: Military Arms Channel. "Blackhawk SERPA and Tex Grubner's Design Flaws." *YouTube*. 18 Jul. 2011. Web. 3 Jun. 2012. <<https://www.youtube.com/watch?v=GDpxVG9XFjc>>

²⁶⁰ Personal interview with J.C. May 20, 2014.

buildings on patrol. Think about it this way—it's like wearing a Halloween costume that's three sizes too big for you, except your single most important priority for the day is to stay alive, and make sure your team stays alive.²⁶¹

The gender-specific concerns expressed by U.S. Military female service members offer insight into the broader debates that have characterized the controversial entry of women into new military occupational specialties (MOS) since 2013 when the ban on women serving in combat positions was lifted. Since 1994, a restrictive Pentagon policy officially prohibited women from serving in U.S. Military units below the organizational level of a brigade—this effectively restricted women from being assigned many military occupational specialties (MOS), including infantry and artillery positions. However, women's roles in combat, medical, military police, and infantry operations in Iraq and Afghanistan from 2003 to 2014 meant that women realistically, although unofficially, frequently served in “frontline” MOS combat positions that were legally closed to them.²⁶² As of January 24, 2013, the policy was repealed by Secretary of Defense Leon Panetta and women serving in the U.S. Military were officially permitted to train and serve in many, though not all, previously restricted MOS positions including training and assignment with the U.S. Marine Corps Infantry, U.S. Army Rangers (in 2015), and U.S. Navy Seals (in 2016).²⁶³ U.S. Military service branches have two years to fully integrate and comply with the policy by January 2016. It is estimated that the new policy made

²⁶¹ Personal interview with A.B. May 12, 2014.

²⁶² See, for example: Ann Scott Tyson. “For Female GIs, Combat is a Fact.” *The Washington Post*. 13 May 2005. Web. 12 Jun. 2006.

<<http://www.washingtonpost.com/wp-dyn/content/article/2005/05/12/AR2005051202002.html>>

Regina T. Akers. “Women in the Military ‘In and Out’ of Harm’s Way.” *DC Military*. 19 Mar. 2009. Web. 12 Jul. 2010.

<http://ww2.dcmilitary.com/stories/031909/southpotomac_28112.shtml>

²⁶³ Elspeth Reeve. “Yes, Women are Ready to be Navy Seals—Just Ask the Internet.” 18 Jun. 2013. Web. 3 Aug. 2013. <<http://www.thewire.com/politics/2013/06/woman-navy-seals/66344/>>

available 33,000 new positions to U.S. Army female service members as of April 2014.²⁶⁴ As of 2014, the U.S. Army has explicitly addressed women's concerns by designing a new uniform, designated the ACU-A or "Alternate" uniform, that may be worn by men or women, although changes were made in consideration of women's body types. Physical changes to the uniform include a narrowed shoulder design, shortened button fly, and an adjusted hip to waist ratio cut with a narrowed waist and elastic waistband.²⁶⁵

In a 2004 article for the online magazine of cultural criticism, *Slate Magazine*, titled "The U.S. Army's New Camouflage" reporter Tom Vanderbilt writes, "Historically, the U.S. Army has been unique among the branches of the armed forces in its lack of an enduring uniform standard. A study conducted before World War I discovered that the Army had employed different uniforms in every campaign since the Revolutionary War."²⁶⁶ As of May 2014, the U.S. Army has indeed decided to replace the Universal Camouflage Pattern (UCP) with an entirely new pattern called the Operational Camouflage Pattern (OCP), or more informally: "Scorpion." Distribution is scheduled for May 2015.²⁶⁷ The difficulties of the U.S. Army ACU indicate not only design and deployment failures but are suggestive of more fundamental strategic and operational miscalculations—a new "camouflaged cloak" has not proven to protect soldiers against asymmetrical insurgent tactics in Middle Eastern theaters—that is, the

²⁶⁴ C. Todd Lopez. "Army to Open 33,000 Positions to Female Soldiers in April." *Army Times*. 27 Jan. 2013. Web. 30 Jan. 2013. <http://www.army.mil/article/118930/Army_to_open_33_000_positions_to_female_soldiers_in_April/>

²⁶⁵ "Alternate Uniform Offers More Fit Options." *U.S. Army*. 8 Jul. 2013. Web. 5 Aug. 2014. <http://www.army.mil/article/106924/ACU_Alternate_uniform_offers_more_fit_options/>

²⁶⁶ Tom Vanderbilt. "The U.S. Army's New Clothes: Why Has the Army Redesigned its Uniforms." *Slate*. 8 Sep. 2004. Web. 21 Apr. 2007.

<http://www.slate.com/articles/business_and_tech/design/2004/09/the_us_armys_new_clothes.html

²⁶⁷ Joe Gould. "New Images Show Details of New Army Camo." *Military Times*. 31 Jul. 2014. Web. 5 Aug. 2014. <<http://www.militarytimes.com/article/20140731/NEWS07/307310083/UPDATE-New-images-show-details-new-Army-camo>>

uniforms are not protecting soldiers in the new realities of 21st-century war. To this end, the U.S. Military is not only redesigning the material uniform of the U.S. soldier, it has invested substantially in the last decade in nanotechnology and metamaterial sciences that predict soldiers may be so concealed they will simply “disappear” on 21st-century battlefields. The U.S. Army is simultaneously pursuing multiple research and development (R&D) projects to allow soldiers to transform the bounds of their own material bodies—to “wear” technology that radically augments their vision, communication, surveillance, and lethality. The “conservative” U.S. Army uniform has been plagued by fundamental design and deployment flaws: how will the 21st-century “Iron Woman” be properly outfitted and the corollary ethical dilemmas of her weaponized silhouette addressed?

3.5—U.S. Military: The Science of Silhouettes

The Army of TALOS

In the 21st century, the U.S. Army uniform is no longer conceived of only as protective fabric or a sheath for identifying insignia. Increasingly, it is imagined as a digitally-enhanced, embodied bio “weapon” issued to infantry and linked to communication arrays that physically connect ground soldiers within a larger, geopolitical network of U.S. Military strategy and surveillance. Talos, a figure of Greek mythology and an early instantiation of an automaton, was cast entirely of bronze with a vein-like spinal cord running from neck to ankle, anchored shut by a single nail to keep

his life energy encased.²⁶⁸ Adopting this Greek figure, but enlivening him through military acronym, TALOS (Tactical Assault Light Operator Suit) is envisioned as a 21st-century uniform for ground soldiers that confers bionic powers by operating an enhanced exoskeleton. Describing the reconfigured uniform, the U.S. Army offers: “TALOS is an advanced infantry uniform that promises to provide superhuman strength with greater ballistic protection. Using wide-area networking and on-board computers, operators will have more situational awareness of the action around them and of their own bodies.”²⁶⁹ In this characterization, not only is the “superhuman” suit still defined as a uniform, despite its robotic enhancements, it proffers to confer even more proprioception and bodily self-awareness for soldiers through technological augmentation than soldiers would have on their own. In this guise, the uniform, historically worn on the body, now becomes a prosthetic extension and continuation of the physical body—with the capacity to not only impact a soldier’s sense of embodiment through increased strength, but also to enable his or her increased capacity for “superhuman” violence.

TALOS is guided by the U.S. Special Operations Command (USSOCOM), which presides over unified missions and military projects jointly affecting the U.S Army, Air Force, Marine Corps, and Navy service branches. TALOS is being designed in partnership with diverse defense contractors, university departments, and public and private industry: as of July 2014 the TALOS website²⁷⁰ designates approximately 56 defense companies, 13 universities, 16 government agencies, 10 national labs, and a

²⁶⁸ Roger D. Woodard, Ed. *The Cambridge Companion to Greek Mythology*. Cambridge: Cambridge UP, 2007.

²⁶⁹ Roger Teel. “Army Explores Futuristic Uniform for SOCOM.” *U.S. Army*. 28 May 2013. Web. 2 May 2014. <http://www.army.mil/article/104229/Army_explores_futuristic_uniform_for_SOCOM/>

²⁷⁰ Mike Hoffman. “SOCOM Lists Iron Man Suit Collaborators.” *Kit Up! Standard Issue and Beyond*. 18 Apr. 2014. Web. 2 May 2014. <<http://kitup.military.com/2014/04/socom-lists-iron-man-suit-collaborators.html>>

handful of individuals and nonprofit companies. In addition to major defense contractors such as Lockheed Martin, Boeing, and Raytheon, industry partners include²⁷¹: Legacy Effects²⁷² (best known for designing the Iron Man suits for the Hollywood film franchise of the same name); EKSO Bionics²⁷³ (engineers of medical prosthetics for lower extremity paralysis); Rini Tech (a thermal cooling engineering company); Under Armor (provider of thermal heating and cooling fabrics) and Revision²⁷⁴ (engineers of protective technologies for the head and extremities). The diversity of TALOS' partners indicates the ambitious reach of its vision into nearly every technology sector. In addition to digital augmentation, TALOS (Figure 34) is poised to exploit the latest developments in materials science. MIT plans to provide a magnetorheological (MR) liquid body armor that can instantaneously transition from a liquid to solid when the molecules are excited by a magnetic field and thus achieve bullet-proof capabilities. Describing the diverse collaboration of agencies and design demands for the suit, Lieutenant Colonel Karl Borjes, a U.S. Army Research, Development and Engineering (RDECOM) advisor working with USSOCOM stated, "The requirement is a comprehensive family of systems in a combat armor suit where we bring together an exoskeleton with innovative armor, displays for power monitoring, health monitoring, and integrate a

²⁷¹ Ekso Press Release. "Ekso Bionics(TM) Announces Launch of Ekso(TM) Labs." *Ekso Bionics*. 28 Mar. 2014. Web. 3 Apr. 2014. <<http://online.wsj.com/article/PR-CO-20140328-906025.html#printMode>>

²⁷² For a description of Iron Man exoskeleton see Legacy FX Company: <http://www.legacyfx.com>

²⁷³ For a description of EKSO bionic prosthetics see EKSO Company: <http://www.eksobionics.com>

²⁷⁴ Dan Lamothe. "Meet the First Companies Working on the Military's 'Iron Man' Supersuit." *Foreign Policy*. 9 Apr. 2014. Web. 20 Apr. 2014.

<http://complex.foreignpolicy.com/posts/2014/04/09/exclusive_meet_the_first_companies_working_on_the_military_s_iron_man_supersuit>

weapon into that.”²⁷⁵ The construction of a “superhuman” bionic uniform suggests a transformation of subjectivity that physiologically integrates weaponry—historically guided, deployed, or “manned”—with the “skin” of the body and thus alters the site of agency: which “brain” is responsible for killing when man and machine are merged?



Figure 34. TALOS Prototype Uniform²⁷⁶

In my personal interviews with U.S. Military personnel, they described the transformed sense of embodied subjectivity that occurs when wearing the current “plain cloth” uniform. When asked how the uniform influenced their transition from civilian to military life, service members from various branches responded that it conferred a sense of power, authority, and transformation to their sense of self and identity, and generally drew respect or fear from those around them. For example, to the interview question, “How do you think Iraqi civilians responded to the fact that you were in uniform,” U.S. Marine Adam Kokesh replied:

²⁷⁵Mike Hoffman. “Iron Man Suit to Troops for Testing in 4 Years.” *Kit Up! Standard Issue and Beyond*. 18 Nov. 2013. Web. 2 May 2014. <<http://kitup.military.com/2013/11/iron-man-suit-troops-testing-4.html>>

²⁷⁶Mike Hoffman. “SOCOM Lists Iron Man Suit Collaborators.” *Kit Up! Standard Issue and Beyond*. 18 Apr. 2014. Web. 2 May 2014. <<http://kitup.military.com/2014/04/socom-lists-iron-man-suit-collaborators.html>>

Adam Kokesh (U.S. Marine Corps, 2009-2012): I think when Iraqis, or people in any occupied territory, see the U.S. Military uniform it is such a strong identifier because it is a representative of the American people and the U.S. government—more specifically the government, I think more and more people around the world are able to separate those things. It's very unfortunate that we don't ever tell occupied civilians what the government is doing even when we're occupying them. I think in occupied situations it's not a reaction to the uniform, it's of course a reaction to the visual of it. It creates a projection that represents the entire attitude of that civilian towards the American government, towards the American military, towards the occupation, to some extent towards the American people: I think that's what the uniform invokes. I suppose if all of a sudden there was a new, scary looking uniform, or a more friendly uniform, that might leave a different impression.²⁷⁷

Kokesh's analysis of the U.S. Marine Corps uniform is firmly in line with its function as a silhouette of the state. Kokesh draws explicit attention to the visual rhetoric the uniform provides when he suggests it's not the (material) uniform, per se, but rather its "visual projection" that presents the U.S. Government to civilians and thus obscures the individual body or actions of any particular soldier. In a follow-up question regarding what a "friendly uniform" might look like, Kokesh responded, "One worn by an Iraqi soldier," signaling his assessment that American soldiers were unlikely to successfully project a "friendly" visual silhouette, regardless of their outfit.

Another U.S. Army service member, deployed to Iraq in 2004 began his answer to the same interview question with one word: "Terror," and then elaborated:

R.R. (U.S. Army, 2003-2012): We've been in Afghan now for more than a decade. They listen to news; they know Iraq is a disaster. They were occupied by Russia—disaster, now the U.S.—disaster. It feels terrible to have people run from you in fear—or hate and disgust, hard to know which combination of feelings it is—when you thought you were going to help. When your government has sent you to help. When you *believe* you're there to help. But I'm not blaming them—come on, if Afghans flew into North Dakota, interrogated my sisters, kidnapped my uncles, and then tried to hand out candy and stuffed animals to my children—every American would be armed and shooting, even more violently.²⁷⁸

²⁷⁷ Author's personal interview: Adam Kokesh, September 1, 2011

²⁷⁸ Author's personal interview: R.R., February 20, 2013

This officer immediately framed his answer to address the political agenda the uniform projects; in fact, the explicitly political visual significance of the uniform was assumed in his answer, and he then proceeded to sympathetically assess how American civilians would respond to a similar invasion. His response also provides a glimpse into the day-to-day, subjective experience of soldiers, including having civilians run from them in a combination of “fear, hate or disgust” upon seeing the U.S. Army uniform.

The answers below appear in response to the interview question: “Based on your combat experience in the Middle East, how would you feel if the military uniform were replaced by a version of the Iron Man suit? It would act like an exoskeleton around your body and provide you with enhanced strength, protection, lethality, and in-theater networked communication.”²⁷⁹

S.J. (U.S. Army, 2008-2012): Would it be connected to me physically, like jacked in like the Matrix? Absolutely not. That may be how things will go in the future, but think about all the issues with that. Who’s responsible if you’re jacked into a system—you, your commander, DoD stateside? We could barely get our SAT [satellite] phones to work in Fallujah. The tracking systems were always down. Night vision worked really well, sometimes. You know what was the most useful? Drawing a map. Yeh. Most of the time on patrol we just drew maps with pen and paper. Back on base, we’d go over them with the other guys, but all informal, and see if we could make a bigger map. One day this stray dog pissed on one of them when it blew out of a guy’s hand on patrol and it wasn’t all clear to immediately go after it. So there went the map. We had to start all over. I just don’t see how we’re going to go from f***** chicken-scratch maps to, like, Iron Man anytime soon.²⁸⁰

D.R. (U.S. Army, 2009-2012): Possible. But I don’t see it happening in reality. It’s not that I don’t see it, but that kind of equipment is not the purpose of war is it? The way wars are fought, you know, we as human beings—war is genetically encoded in us. I feel like there are always going to be foot soldiers, men and women getting into the heat of battle. You can’t just battle it out like a video game with robotics. That’s not what leaders of war would want to see. So one side got robots, but I’m still not going to give up my land, so the other side gets robots? People aren’t going to let robots fight their

²⁷⁹ One of author’s standard interview questions in interviews conducted between 2011-2014.

²⁸⁰ Author’s personal interview: S.J, September 30, 2012

wars. We *need* to fight. Like I said, it's in our DNA. There are some guys who love war—you have to think about that. War isn't really about peace, is it, it's about *war*.²⁸¹

R.C. (U.S. Army, 2010-2014): Absolutely, that's coming. Since the invention of the atom bomb—which really is the most lethal technology used so far in war, except for chemical agents. In fact, in some ways we fight cleaner wars now than we did in World War II and Vietnam—but we've really just continually been using the current technology to be able to kill better and better. I don't know how an Iron Man suit would have good protection—I guess completely bullet/projectile proof, but I don't really see it protecting anyone against IED's. A road bomb is going to blow up the Iron Man, I don't care what he's wearing. Now, if the suit can interrupt the electronics, which is really what we try to already do, then maybe. Having said that though, I believe it's coming. To answer your question, yes, I'd absolutely wear one. Bring it on. Suit me up. I think I'd feel like the Iron Man—like I look like a badass, and can shoot and kill like one too.²⁸²

A.R. (U.S. Air Force, 2006-2014): I don't know that I'd feel that much different wearing something like that than I do now. I provide support and cover from a plane, so I'm already kind of protected by metal and a lot of technology. Although, I don't feel like the plane and I are “one” or anything, like an Iron Man suit. But we kill people from planes. We target them, identify them, and shoot them. They generally don't see us coming, and we generally don't know who they are, exactly, except that we've hit a high-value target. It seems like a suit like that would be really good for grunts, although I really wouldn't want the enemy to have it. That's always the issue—what we have, they usually buy from Russia or Iran a few years later. And I guess also—who's killing the target, the grunt or the suit? In a plane, WE are responsible. The plane doesn't kill anyone, we do. But if you're wearing a suit like that, I don't know, seems complicated for chain of command issues.²⁸³

The soldiers' responses indicate both their practical and ethical preoccupation with the development of a bionic exoskeleton suit. While unmanned robotic aids, particularly those used in survey, supply, bomb detection, and recovery missions, have been used extensively in the American occupations of Iraq and Afghanistan, exoskeleton and bionic suits, many of which are still in preliminary R&D stages, have not yet been deployed. Ethical deliberation as well as policy-making regarding their use is thus in an extremely nascent stage. And yet, this also makes it possible—urgent even—to consider the ethical implications of such technologies before they become ubiquitous. P.W. Singer,

²⁸¹ Author's personal interview: D.R., January 8, 2014

²⁸² Author's personal interview: R.C., September 10, 2013

²⁸³ Author's personal interview: A.R., April 10, 2014

Brookings Institute fellow and author of *Wired for War: The Robotics Revolution and Conflict in the 21st Century* (2009), summarizes this ethical dilemma when he observes:

When we look back at history, one thing that stands out is how truly momentous events were often missed. [...] When Hitler decided to give up his painting career, no one thought to convince him to give selling crappy watercolors just one more try. [...] Imagine if we had been able to wrestle with the great changes that atomic bombs brought to politics while they were being invented, rather than waiting to puzzle our way through their implications years later. [...] I quickly learned that what was impossible in 1945 is possible now. This revolution is not occurring in secret desert test facilities but playing out right in front of us. (11)

Singer's assertion that it is possible to analyze robotic technologies and *nunc tempus est* (the time is now) is not an isolated trumpet. The *Journal of Military Ethics*, for example, is entirely dedicated to deliberating socially and legally impactful issues as they contemporaneously unfold for military forces. In their 2010 article, "What Should We Mean by Military 'Ethics'", co-editors of the *Journal of Military Ethics* Martin L. Cook and Henrik Syse seek to establish guiding principles for military ethics in a field they have observed over the years to "exhibit a great diversity of activities nominally gathered under that rubric [of military ethics]" (119). The authors suggest that the value of military ethics is most significant for professionals who require it to make pragmatic and real-world decisions in their work environs. Cook and Syse argue:

Firstly and most importantly, military ethics is a species of the genus "professional ethics." That is to say, it exists to be of service to professionals who are not themselves specialists in ethics but who have to carry out the tasks entrusted to the profession as honorably and correctly as possible. It is analogous to medical ethics or legal ethics in the sense that its core function is to assist those professions to think through the moral challenges and dilemmas inherent in their professional activity and, by helping members of the profession better understand the ethical demands upon them, to enable and motivate them to act appropriately in the discharge of their professional obligations. (120)

The editors' utilitarian definition of military ethics makes it even more imperative for U.S. Military soldiers to have opportunities to reflect on the ethics of technologies such as exoskeletons and bionic suits because soldiers bear the professional burden and embodied consequences of these corporeally integrated "uniforms." In his 2014 essay, "Conscience and Carnage in Iraq and Afghanistan: U.S. Veterans Ponder the Experience," freelance writer Larry Minear provides precisely the kind of platform for U.S. Military personnel that Cook and Syse advocate. Minear facilitates a dialogue through personal interviews with U.S. Military service members that allows them to analyze their corporeal experiences, generally not the result of their own decision-making, while serving in Middle East occupations. Minear examines how the overwhelming emotional and embodied experience of witnessing violence and carnage during deployment often resulted in soldiers requesting to leave the U.S. Military with a conscientious objector discharge. Accounts from Minear's interviews indicate, like Adam Kokesh's earlier observations, that the *U.S. Military Rules of Engagement* sometimes made it personally difficult to justify a course of action that might impair enemy combatants but might also injure or kill civilians. Minear writes:

Many soldiers found the violence against children particularly unsettling. According to one study published in 2004, some 46 per cent of the US troops stationed in Afghanistan and 69 per cent of those in Iraq had seen wounded children and women whom they were unable to help (Hoge et al. 2004). In fact, the Rules of Engagement in some areas specified that drivers of US military vehicles not stop for children on the roads for fear of ambush. (139)

In concert, the reflections from U.S. Military personnel above and the analysis of scholars such as Singer, Cook and Syse, and Minear offer an ethical "canary in the mine": what will be the *new* "Rules of Engagement" for soldiers equipped with unprecedented

bionic strength and integrated weaponry who must nonetheless make ethical decisions as technologically-augmented “boots on the ground?” The *U.S. Military Rules of Engagement for Iraq*, issued by U.S. Central Command Combined Forces in 2003 and distributed to all U.S. Soldiers on a laminated card they were required to carry at all times, contain only five basic provisions and consist of approximately ten complete sentences. The rules are alarmingly sparse for such an ethically complex issue as employing lethal force in sovereign nations and successfully avoiding war crimes. The summative statement at the end, which has the expository tone of a sports coach, reads: “REMEMBER: Attack enemy forces and military targets. Spare civilians and civilian property, if possible. Conduct yourself with dignity and honor.”²⁸⁴ An Iron Man suit may be on the horizon, but anticipating the ethical issues is already urgent because, like drone warfare, integrated robotics initiate a waterfall of international, humanitarian, and legal challenges. Specifically, it will be necessary to determine new rules of engagement for robotically-augmented soldiers, to regulate physiologically-enhanced soldiers (which may initiate a new definition of “chemical warfare”), and decide where legal responsibility lies for the combat actions of these newly configured soldiers. It is illogical to suggest that a drone must follow the *U.S. Military Rules of Engagement* and conduct itself with “dignity and honor”—in the 2010s, the question of responsible conduct for drone warfare bypasses the U.S. Military operators (who currently cannot be held legally

²⁸⁴ U.S. Central Command Combined Forces Land Component Commander. “Appendix E: Rules of Engagement for U.S. Military Forces in Iraq.” January 2003. Web. 10 Jan. 2004. <<http://www.hrw.org/reports/2003/usa1203/11.htm>>

responsible for killing either foreign enemy targets or civilians)²⁸⁵ and falls squarely at the feet of American executive decision makers such as the U.S. President, Congress, and Department of Defense officials. But what about a human operator who is so robotically augmented or prosthetically enhanced that the corporeal demarcation between the body of the soldier and the body of the weapon becomes indistinguishable? Can a robotically hybridized soldier be held ethically or legally responsible to fight with “dignity and honor”—and what institution will assess and govern this?

TALOS is not the only bionic incarnation of the next-generation U.S. Military uniform—he has many sidekicks. U.S. Department of Defense (DoD) projections for the next decade anticipate the design of nanotechnology uniforms that will digitally camouflage soldiers, visually erasing them from the battlefield, and simultaneously endow them with 3-D modalities, x-ray vision displays, embedded biometric sensors, and ultrasonic medical diagnostics. The DoD funds and collaborates with numerous research and development (R&D) programs for advancing uniform technology, including the Digital Military Police Program,²⁸⁶ Atlas Robot by Boston Dynamics²⁸⁷ (acquired by Google in 2013), U.S. Army NATICK Future Soldier Initiative,²⁸⁸ and the MIT Institute for Soldier Nanotechnologies (MIT ISN).²⁸⁹ When the MIT Institute for Soldier Nanotechnologies (MIT ISN) was founded in 2002, initiated by a \$50 million dollar

²⁸⁵ For example of a past discussion regarding drone operators, see: Nathan Hodge. “Drone Pilots Could Be Tried for War Crimes.” *Wired Magazine*. 28 Apr. 2010. Web. 12 Mar. 2011. <<http://www.wired.com/2010/04/drone-pilots-could-be-tried-for-war-crimes-law-prof-says/>>

²⁸⁶ Joshua K. Frye. “Military Police Make Use of Land Warrior.” Web. 15 May 2014. <<http://www.wood.army.mil/mpbulletin/pdfs/Fall%202011/Frye.pdf>>

²⁸⁷ Boston Dynamics. “Atlas: The Agile Anthropomorphic Robot.” Web. 12 May 2014. <http://www.bostondynamics.com/robot_Atlas.html>

²⁸⁸ David McNally. “Future Soldiers Will Have Flexible Electronics Everywhere.” *U.S. Army*. 19 Feb. 2013. Web. 10 Feb. 2014. <<http://www.army.mil/article/77560>>

²⁸⁹ MIT Institute for Soldier Nanotechnologies. “About ISN.” *MIT ISN*. Web. 20 Mar. 2014. <<http://web.mit.edu/isn/aboutisn/>>

contract from the U.S. Army Research Office as well as private industry donations such as DuPont, Raytheon, and Partners Healthcare, U.S. Army chief scientist Michael Andrews declared to the media that, “If you want to visualize the impact of nanotechnology, think about the movie Predator. It’s about the ability to have a uniform that protects you totally against your environment. Until he took his uniform off, he [Predator] was the meanest SOB in the world. Nobody could kill him.” When the project debuted, it was summarized as an effort to “develop high-tech gear that would allow soldiers to become partially invisible, leap over walls, and treat their own wounds on the battlefield.”²⁹⁰ The language of the press conference introducing the new collaborative project between MIT ISN and the U.S. Army read much like a trailer for a big-budget, science fiction film, emphasizing such innovations as an optically invisible suit, “live” sensory fabric that would respond to bullet impact, and self-tourniquetting clothing. Reuters reported that, “Instead of bulky bullet-proof vests made of Kevlar, scientists envision uniforms lined with a slurry of fluids that respond to invisible magnetic fields, creating an armor system that can go from flexible to stiff during combat.”²⁹¹ Of note, MIT president Charles M. Vest claimed that he didn’t wish for the center to “get tangled up in classified research,” thus all technologies were to be made available for industrial as well as military applications. One of the center’s proposed

²⁹⁰ “Army and MIT Unveil Futuristic Soldier Center.” *Reuters Press*. 22 May 2003. Web. 2 Feb. 2014. <<http://news1.iwon.com/tech/article/id/327961%7Ctechnology%7C05-22-2003::17:45%7Creuters.html>>

²⁹¹ “Army and MIT Unveil Futuristic Soldier Center.” *Reuters Press*. 22 May 2003. Web. 2 Feb. 2014. <<http://news1.iwon.com/tech/article/id/327961%7Ctechnology%7C05-22-2003::17:45%7Creuters.html>>

directors, Professor Edwin L. Thomas, also confirmed that the institute was to be "run on a business model, with regular milestone reviews."²⁹²

Today, the institutional tagline of the MIT ISN is "Enhancing Soldier Survivability"²⁹³ and MIT ISN suggests that, "because nanotechnology operates at length scales where classical Newtonian physics breaks down, it offers engineers the potential for creating unprecedented new materials, properties and devices."²⁹⁴ Military camouflage has always, of course, relied on the precarious claims of disappearance—temporarily disappearing oneself to better permanently disappear another—and collusion between university, private industry, and government agencies is certainly not new. Yet what is "innovative" in recent private, corporate, and university partnerships is the semantic and ideological turn the discourse has taken: invisible (or invisibilizing) technologies, many designed ultimately to evaporate rather than evade the enemy, now openly masquerade as unclassified research (compare for example, the historic secrecy of the development of the U.S. atomic bomb versus the business model slogans of 21st-century academic institutes with military contracts). What is now affected—marketed even—is what Gilles Deleuze describes in *Nomadology: The War Machine (1986)* as "the introduction of the 'corporation' at all levels of schooling" (Deleuze 7). What remains silhouetted in the discourse of these technologies, however, is the visible destruction that "invisible" technologies cause. For example, press releases for General Atomics

²⁹² Otis Port. "Super Soldiers." *Bloomberg Business Week*. 27 Jul. 2003. Web. 13 Jan. 2010. <<http://www.businessweek.com/stories/2003-07-27/super-soldiers>>

²⁹³ MIT Institute for Soldier Nanotechnologies. "Partners." *MIT ISN*. Web. 20 Mar. 2014. <<http://web.mit.edu/isn/partners/index.html>>

²⁹⁴ MIT Institute for Soldier Nanotechnologies. "Research." *MIT ISN*. Web. 20 Mar. 2014. <<http://science.mit.edu/research/institute-soldier-nanotechnologies-isn>>

Predator military drones forward their capacity for advanced stealth and concealment, characterizing them as a “life-saving tool,” but carefully avoid any mention of the visible, lethal destruction the weaponized drones inflict on individuals, communities, and geographic regions.²⁹⁵ Nor does the rhetoric provide consideration for establishing technologies for peace. Rather, as early as 2003, a systems engineer at the U.S. Army's Soldier Systems Center (Natick), Jean-Louis DeGay, asked readers to imagine that, “With a uniform like Predator's, our soldiers would really have a lopsided advantage. [...] Science fiction is rapidly becoming reality—and that could change forever the way wars are fought.”²⁹⁶ The adjective to ponder in DeGay's assessment is “lopsided.” While the U.S. undeniably has a “lopsided” technological advantage over Iraqi and Afghan combative insurgents, their improvisational weapons and tactics have proved to be extremely successful against the U.S. Military in both regions, wherein success is defined as interrupting U.S. Military missions or injuring and killing U.S. and allied soldiers. However, despite individual soldiers' comments to the contrary, the U.S. Military does clearly articulate and seek to follow rules of engagement agreed upon by U.S. Federal and International regulatory and governing bodies. War is chaos. To suggest that rules of engagement will always be followed is to fundamentally misunderstand warfare which, as established throughout this dissertation, is primarily concerned with inflicting violent force on bodies to elicit a particular, generally political, outcome. However, DeGay's observation that the U.S. Military will have an entirely “lopsided” advantage at war

²⁹⁵ General Atomics Aeronautical. “Predator 107 Soars Past 20,000 Flight Hours: U.S. Air Force Workhorse Heralded for Unrivalled Reliability and Performance.” 28 Jun. 2013. Web. 5 Jul. 2013. <http://www.gasi.com/news_events/index.php?read=1&id=420>

²⁹⁶ Otis Port. “Super Soldiers.” *Bloomberg Business Week*. 27 Jul. 2003. Web. 13 Jan. 2010. <<http://www.businessweek.com/stories/2003-07-27/super-soldiers>>

potentially undermines fundamental rules governing military methods and means, even during wartime. Specifically, Article 35 of Protocol I of the *Geneva Conventions* (1977) governing the “Methods and Means of Warfare” which states:

1. In any armed conflict, the right of the Parties to the conflict to choose methods or means of warfare is not unlimited. 2. It is prohibited to employ weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering. 3. It is prohibited to employ methods or means of warfare which are intended, or may be expected, to cause widespread, long-term and severe damage to the natural environment.²⁹⁷

Unfortunately, the humane, delimiting restrictions set forth in the article do not apply to the United States, at least from a governmental purview. Article 35 appears in Protocol I of the Geneva Conventions, one of two protocols added in 1979 to the original four Geneva Conventions of 1949, and the United States has not ratified either Protocol. Critically, the Protocols 1 and 2 govern treatment of prisoners-of-war and means (weapons) and methods for conducting warfare and might provide legal heft to the ethical concerns that will invariably arise from corporeally-integrated technologies.

Increasingly, the U.S. Military uniform is being reconfigured in research labs not as a garment, but as a scientifically sophisticated, digitally augmented weapon in its own right. The term “embedded wearables” refers here to digital systems that are physically integrated into the soldier’s uniform—physically altering uniform materials and accessories such as helmets, masks, and weapons housings—and are generally embedded as part of a larger military technological system such as military GPS surveillance. For example, camouflage fatigues will, if projected developments from

²⁹⁷ International Committee of the Red Cross. *Geneva Conventions: Protocol I, Part III: Methods and Means of Warfare Combatant and Prisoners-of-War, Article 35*. 1977. Web. 10 June 2006. <<https://www.icrc.org/applic/ihl/ihl.nsf/1595a804df7efd6bc125641400640d89/f6c8b9fee14a77fdc125641e0052b079?OpenDocument>>

research institutions such as MIT, the NASA Jet Propulsion Laboratory, and the University of Tokyo continue as planned, soon be replaced by virtual and/or metamaterial forms of optical camouflage. The term “metamaterial” generally denotes the recombination of extant elements to form a uniquely composite element with variant properties. For example, U.S.-British researchers in October 2006 developed a metamaterial that made a small object invisible to microwave radiation, foreshadowing the potential for objects to be rendered invisible to light, which occupies a different electromagnetic wavelength. Technologies of digital optical camouflage are being developed to transform soldiers into mobile, three-dimensional screens wherein the environment behind the soldier is video-captured by a backward-facing camera and then projected onto flexible, screen-like fabric of a soldier’s uniform. In a description of this particular iteration of the so-called “invisibility suit” in the article “Being Invisible” in the Super Power Issue of *Wired Magazine* (August 2003), technology writer William McCarthy states, “Rather than one video camera, we’ll need at least six stereoscopic pairs (facing forward, backward, right, left, upward, and downward)—enough to capture the surroundings in all directions. The cameras will transmit images to a dense array of display elements, each capable of aiming thousands of light beams on their own individual trajectories. And what imagery will these elements project? A virtual scene derived from the cameras’ views, making it possible to synthesize various perspectives” (1). Phased array optics develop this schematic further, creating a three-dimensional hologram image of the surrounding environment to be mapped onto the soldier. While natural parallax causes the accuracy of two-dimensional projections to change based on

viewing angle (to the human eye distance and orientation to an object transform the “reality” of its visual properties), three-dimensional holographic projection has the potential for what scientists call a high index of true invisibility. If actualized, the standard issue military uniform would be transformed into a digitally networked version of the Ancient Egyptian Ammon-Ra’s invisibility cloak, capable of disappearance and omnipresence at once. Though materially real, like Ammon-Ra the soldiers will seem to have disappeared with only projected simulacra of themselves standing in their place. In the 2010’s, invisibility suits have been further developed by military contractors, private research institutions, and corporations that apply innovative science, such as advances in materials science and nanotechnology, to military projects. In 2012 Guy Cramer, CEO of the Canadian company Hyperstealth Biotechnology Corp., wrote about his company’s newest advances in material concealment technologies in the press release, “Quantum Stealth: The Invisible Military Becomes a Reality”: “Once thought to be only a Science Fiction/Fantasy technology...militaries can now become invisible with [our] light bending technology called ‘Quantum Stealth.’ Quantum Stealth is a material that renders the target completely invisible by bending light waves around the target. The material removes not only your visual, infrared (night vision) and thermal signatures but also the target’s shadow.” Echoing the early discoveries of sonar to “cloak” a submarine, Cramer writes that Quantum Stealth has the capacity to conceal combat aircraft as well as “invisiblize” submarines at periscope depths so that, “With Quantum Stealth, the entire submarine can stay hidden near the surface as well as the periscope above the

surface which cannot be seen.”²⁹⁸ As of February 2014 Hyperstealth had been contracted for a joint contract between the U.S. Military and Defence Research and Development Canada (DRDC) to develop Quantum Stealth for Tier-I U.S. Special Forces (often designated as “Special Mission Units” (SMUs) in the U.S. that perform highly-classified missions). In April 2014, Hyperstealth also announced a commercial variant of Quantum Stealth, known as INVISIB. The press release notes that since Canada does not permit patents on classified technology, INVISIB will be declassified and will offer reduced capabilities in comparison to its military counterpart, which will still only be offered to U.S. and Canadian special forces. Hyperstealth boasts the deployment of their light-bending, camouflage material in use for “over two million military issued uniforms and over 3000 vehicles and fighter jets around the world.”²⁹⁹ Quantum Stealth “invisibility cloaks” affirm the role of invisibilizing, corporeal technologies for 21st-century uniform design; these technologies, like the “lopsided” advantage conferred by exoskeletons, may present a similar conflict with the 1977 Protocol of the Geneva Conventions—at stake here is the definition of what types of “materials of warfare” may reasonably be considered to cause unnecessary suffering. Consider a future wherein tens of thousands of U.S. Military “boots on the ground” are entirely invisible as they move through occupied territory, their existence completely camouflaged from enemy combatants and civilians, alike. Do the same rules of engagement apply when the bodies called upon to deliver military force are neither

²⁹⁸ Guy Cramer. “Quantum Stealth: The Invisible Military Becomes a Reality.” 19 Oct. 2012. Web. 2 May 2013. <<http://www.hyperstealth.com/Quantum-Stealth/>>

²⁹⁹ Guy Cramer. “Quantum Stealth: The Invisible Military Becomes a Reality.” 19 Oct. 2012. Web. 2 May 2013. <<http://www.hyperstealth.com/Quantum-Stealth/>>

physically present nor materially visible in a geopolitical region? Do the same rules of engagement apply to bodies of war that are so digitally, robotically, or technologically enhanced that the traditional definition of a “body” is materially and existentially upset? Both queries are corollaries to former NATO commander General Rupert Smith’s assessment that, in the 21st century, “War no longer exists. [...] War as battle in a field between men and machinery, was as a massive deciding event in a dispute in international affairs: such war no longer exists” (3). Smith’s argument is that industrial war among standing state armies no longer exists because it has been replaced by continually ongoing “war amongst the people” (5). Smith’s critique is predicated on the idea that human bodies are indeed still required for war—an assumption challenged by technologies that replace material bodies with their enhanced or robotic silhouettes.

Invisibility suits such as those proposed by Hyperstealth are part of a larger military vision to create the “Future Force Warrior.”³⁰⁰ Uniform augmentation has also included a series of helmet-mounted displays equipped with digital maps, miniature enhanced laser scopes, and hands-free, screen-based instrument, maintenance, and training plans. While these digital helmets literally hook soldiers into a larger global grid of military defense information (real-time enemy location, injured vehicles, command communication, etc.) they also proscribe certain kinds of physical movement. For example, the Nomad Helmet-Mounted displays made by Microvision, which are a primary military contractor, allow Stryker soldiers to monitor both the physical horizon,

³⁰⁰ For discussion of Future Force Warrior program see: “Future Force Warrior (FFW) Technology Demonstration.” *Defense Update*. Issue 2 (2006). Web. 3 Jul. 2009. <<http://www.defense-update.com/products/f/ffw-atd.htm>> SSC Natick Press Release. “Army to Highlight Future Warrior Systems at NextFest.” 20 Sep. 2006. Web. 12 Jan. 2013. <http://www.natick.army.mil/about/pao/2006/06-33.htm>> Army Technology. “Land Warrior Integrated Soldier System.” 15 Jun. 2011. Web. 12 Jan. 2014 <http://www.army-technology.com/projects/land_warrior/>

outside of the vehicle, and the situational data (enemy positions, updated digital maps, etc.) projected on the interior of their helmet screens at once. However, because some of this situational data, monitored on Force Battle Command Brigade and Below (FBCB2) computers has historically been displayed on screens mounted inside vehicles, soldiers have to physically navigate both information systems at once by standing up to monitor the horizon with the helmet technology and then squatting to use the FBCB2 system within the Humvee vehicle. In his 2004 article “Tech Success: ‘Heads Up’ Takes on a Fresh Meaning for Army” in *Washington Technology*, a publication for government contractors and partners, technology editor Brad Grimes suggests, “If you want to know what it’s like to be a commander in a brigade of Army Stryker armored vehicles, do 70 knee bends. It’s not that commanders are exercise nuts...Rather, it’s that cutting-edge technology sometimes leads to unintended consequences.”³⁰¹ While helmet-mounted displays are designed to enhance the range of visibility for soldiers, Grimes’ observation conveys how essential motion and physical maneuvers that soldiers perform daily are also being altered as a result of new corporeal military technologies.

Not only do helmet-mounted systems potentially choreograph one’s physicality, they are allowing soldiers to record and sometimes distribute their combat experiences to other military personnel or the public. In addition to receiving video and data streams, digital helmets have been equipped with miniature video recorders that allow them to produce documentation and archival data with unprecedented results. Helmet-mounted “lipstick cameras” not only track soldiers’ eye movements, allowing them

³⁰¹ Brad Grimes. “Tech Success: ‘Heads Up’ Takes on a Fresh Meaning for Army.” *Washington Technology*. 9 Sep. 2004. Web. 2 Jul. 2008. <<http://washingtontechnology.com/articles/2004/09/09/tech-success-heads-up-takes-on-fresh-meaning-for-army.aspx>>

guided target precision, they also track the day-to-day events of combat. Video from helmet-mounted displays is increasingly being examined to strategize for future attacks and plan missions as well as provide visual accounting for legal purposes (this is of increasing importance in Afghanistan); however, it is also being covertly posted or distributed to friends and family members as video memorials and documentation of tragedy and transgression. In a 2007 article published in *Military Embedded Systems* the CEO of VioTac, David Ollila, describes the feed of a helmet-mounted, video capture system, “The footage is raw, intense. Soldiers duck to avoid oncoming shots, weave through their surroundings, and aim their weapons with deadly accuracy. The screen is ablaze with the sights of war, the echoes of gunfire and the barked orders of a Marine unit providing an eerie soundtrack to the action onscreen” (Ollila 1).

A third application of helmet-mounted technology has been developed for the military’s mobile medical corps. In 2002, Microvision was also awarded a \$3.3 million dollar contract from the U.S. Army Telemedicine and Advanced Technology Research Center (TATRC), a division of the U.S. Army Medical Research and Materiel Command (USAMRMC), for designing a digital medical helmet that would monitor vital signs, provide ultrasound readings, and download patient data on a mounted 17-inch display screen. In a 2002 company press release for shareholders and media,³⁰² Rick Rutkowski, CEO of Microvision, Inc., outlined the vision for the company’s industrial application of Nomad to the U.S. Military’s INFOMEDIC program: “The INFOMEDIC concept represents the future of battlefield medicine, and indeed the future of personal

³⁰² “U.S. Army Awards Microvision \$3.3 Million Contract: Company Continues to Focus on Development of Wearable Display for Mobile Medics” *Microvision News Release*. 21 Aug. 2002. Web. 10 Jul. 2014. <<http://phx.corporate-ir.net/phoenix.zhtml?c=114723&p=irol-newsArticle&ID=327395&highlight=>>

information display. We are excited about the opportunity to demonstrate the advantages that our display technology can bring to this critical aspect of military operations” (“U.S. Army Awards Microvision”). In the ensuing decade, Microvision has continued to develop miniaturized display systems for military applications. In a 2009 press release, “Microvision: Innovation Acceleration,” the company argues for the value of displaying military data at the level of individual pixilation: “For military applications, it’s important to be able to display every pixel of information that’s captured with sensors, like night vision and thermal cameras. As these types of sensors advance in image capture resolution, the display element needs to scale in capability to keep up with them. A small, portable display that matches the resolution of input sensors can improve the safety and situational awareness of soldiers.”³⁰³ Microvision’s corporate emphasis and commercial success with the miniaturization of data forecasts a future where corporeal military technologies not only serve to conceal or invisibilize the soldiering body, but the technologies themselves become increasingly microscopic. The “invisibilization” of technology by reducing its size is already commonplace in computer processing and data storage industries. In 2012, the *MIT Technology Review* reported in an article subtitled, “Memory-storage Element Made at IBM Points to Future Computing Systems Built Atom by Atom,” that IBM scientists had successfully “miniaturized magnetic memory to just 12 iron atoms”³⁰⁴—to envision this size, and the scale it would

³⁰³ “Innovation Acceleration.” Microvision. 14 Jan. 2009. Web. 10 Mar. 2009. <<http://www.microvision.com/innovation-acceleration/>>

³⁰⁴ Katherine Bourzac. “Magnetic Memory Miniaturized to Just 12 Atoms.” *MIT Technology Review*. 12 Jan. 2012. Web. 15 Jan. 2012. <<http://www.technologyreview.com/news/426601/magnetic-memory-miniaturized-to-just-12-atoms/>>

provide for wearable military technologies, millions of iron atoms fit in a single line across the diameter of a one millimeter pinhead.

Mobile medic technology is being developed in tandem with wearable biometric systems that shift the role of the uniform from that of a digital soldier or doctor, to that of a digital police officer. Biometric surveillance has been highly controversial in the U.S. as part of a larger political and juridical discourse on immigration, privacy rights, and national security. Within the U.S. Military, biometric scanning systems are rapidly transforming the capacity of officers to more efficaciously provide security, identification records, and track their own personnel, enemy combatants, and even detainees and casualties. Biometric systems converge with the previously discussed technologies: long-range retinal scanning devices are being covertly embedded into invisibility suits, mounted onto head displays, and integrated into the 3D training and combat enhancement systems). The GRIDS (Global Rapid Identification System) “Jump Kit,” designed jointly by Cross Match Technologies Inc. (a biometric identification solutions firm) and Quantum 3D (architects of 3D military training systems) is described as, “For Use in War Theaters and Other Extreme Environments.” The companies’ 2005 joint press release distributed for shareholders and industry news such as *BusinessWire*³⁰⁵ states:

GRIDS has been designed to be worn in combat zones, border operations, or by any individual operating in a harsh environment. The human wearable kit contains the THERMITE [2D/3D computer from Quantum 3D] with Cross match software,

³⁰⁵ Military technology companies with public stock or stake and shareholders frequently issue press releases that, along with financial statements, are monitored closely by industry-specific and business publications, such as *BusinessWire*, which reports consistently on technology companies, many with government or military contracts. See: “Cross Match Technologies Introduces First Human Wearable Biometric Solution.” *Business Wire*. 3 Oct. 2005. Web. 7 Nov. 2007. <<http://www.businesswire.com/news/home/20051003005143/en/Cross-Match-Technologies-Introduces-Human-Wearable-Biometric#.VGkskMYk9g0>>

a Cross Match MV5X hand-held forensic quality fingerprint scanner, an iris camera, a digital camera, and GPS software to capture the latitude and longitude of the place at which each individual is being enrolled. [...] Cross Match's earlier versions of the multi-biometric GRIDS Jump Kit are currently in use...for the enrollment and identification of military and governmental personnel, police, security forces, detainees, and casualties. ("Cross Match Technologies")

Biometric surveillance presents multiple ethical and legal complexities outside the scope of this dissertation to discuss; however, it provides an important corollary to the rhetoric of invisibility already mentioned. Within the evolving discourse of military technologies one finds advanced bio-surveillance and documentation procedures—designed to make humans' biological, geopolitical, and historical information increasingly "visible"—yet this occurs vis-à-vis technologies that increasingly employ distinctly "invisible" methods of monitoring. Nor is biometric surveillance limited to technologies that simply scan the human body, pulling and parsing previously internal biological data for storage and analysis in external databases. Biometric surveillance in the 2010s is merging advances in neuroscience with those in digital biometric monitoring technologies. One project that has emerged from this wedding is the Human-aided Optical Recognition and Notification of Elusive Threats (HORNET) system. This military acronym describes a pair of electronic binoculars that relies on soldiers' electrochemical brain activity to determine threat levels in their surrounding environment. Controversially, this would allow soldiers' brain activity to be analyzed in real time by local or remote monitoring systems and responsive force to be deployed *without* a soldier's conscious analysis of the "meaning" of his or her own electrical brain impulses. Such a system would potentially bypass conscious human deliberation, at least at the level of the ground soldier, and directly transmit neurochemical impulses signaling

heightened “fear” or “imminent threat” to military analysts. Military contractor Northrop Grumman was contracted by the U.S. Department of Defense to develop HORNET in 2008. The Northrop Grumman press release describes the science and applications of the system:

HORNET will utilize a custom helmet equipped with electro-encephalogram electrodes placed on the scalp to record the user's continuous electrical brain activity. The operator's neural responses to the presence or absence of potential threats will train the system's algorithms, which will continue to be refined over time so that the warfighter is always presented with items of relevance to his mission. When deployed, HORNET will support a wide variety of military and homeland defense applications, including force protection, improvised explosive device (IED) defeat, border surveillance and applications now using aided target recognition³⁰⁶

The military applications of HORNET for target recognition and elimination provides another valence to a theory of silhouetting because HORNET acquires and projects a “silhouette” of an enemy combatant, as sketched by a soldier’s neurological impulses which are subsequently interpreted as fear, threat, or anger—though not necessarily by the soldier herself, and then may used to activate weaponry. With this technology, the definition of the “body” is delimited to neurochemical impulses and also revalued primarily for its subconscious physiological contribution. HORNET disregards a soldier’s own embodied subjectivity and agency to interpret and analyze his or her own experience and self-determine a course of action during combat.

Corporeal technologies that extend soldiers’ physical and physiological capacities are also being extensively applied in virtual training and combat simulation systems.

While developments in virtual training have been theorized throughout the last decade,

³⁰⁶ Northrop Grumman. “Northrop Grumman-Led Team Awarded Contract to Develop Electronic Binoculars That Use Brain Activity to Detect Threats.” *GlobeNewsWire*. 9 Jun. 2008. Web. 15 Jul. 2008. <<http://www.globenewswire.com/news-release/2008/06/09/379572/144249/en/Northrop-Grumman-Led-Team-Awarded-Contract-to-Develop-Electronic-Binoculars-That-Use-Brain-Activity-to-Detect-Threats.html#sthash.xziWxn7.dpuf>>

it has recently been activated not only within the U.S. but also in foreign military theaters. That is, while real combat is occurring, virtual embedded training is simultaneously being enacted. This scenario presents a disquieting variation to Jean Baudrillard's now canonical description of simulation and simulacra—not only does the copy arrive in the absence of the original, it also occurs in the presence of the original. Thus, soldier, simulation, and simulacra all operate coextensively. In his 2001 work, *Virtuous War: Mapping the Military Industrial-Media-Entertainment Network*, media and international relations Professor James Der Derian argues that, “Technology in the service of virtue has given rise to a global form of virtual violence, virtuous war.” [...] Scholars and journalists have been slow to cover the story of virtuous war, mainly because they can't find the smoking gun, let alone the increasingly virtualized body” (xi-xxii). The “virtualized body” that Der Derian describes is both virtual (composed of pixels rather than cells) and virtuous (cloaked in an ideology of righteousness that permits acts of violence even while declares this violence is in service of a higher moral calling). Like the silhouettes of war theorized in this chapter, the “virtualized body” presents a (digital) image of military action that obscures the consequences of violent force. Der Derian argues, “At the heart of virtuous war is the technical capability and ethical imperative to threaten and, if necessary, actualize violence from a distance—with *no or minimal casualties*. [...] On the surface, virtuous war cleans up the political discourse as well as the battlefield. Yet most of us would not know the casualty figures for the other side” (xv, original emphasis). Der Derian's analysis also anticipates the ways in which 21st-century soldiers need to negotiate both “real” technologies and

training systems (such as machine gun systems and U.S. Navy Seal training) and “virtual” systems (video simulations of machine gun operation and U.S. Navy Seal training played in Afghanistan), and how these would both be presented to a U.S. public under the guise of achieving more “virtuous” technologies and tactics for war, despite the body counts that the real and virtual technologies effectuate.

U.S. Soldiers not only need to adapt physically to virtual training systems, the requirement to navigate multiple data streams means they may endure discernable or deleterious psychological effects. In their essay “Configuring the User in Wearable Technology Design” Professor Lucy Dunne, Director of the Wearable Technology Lab at the University of Minnesota (UofM) and Computer Science Professor Barry Smyth, examine the physical, cognitive and social dimensions of wearable technology for the user. The authors suggest, “Just as a wearable device can influence the physical configuration of the user, the ubiquitous nature of a wearable application can likewise magnify the effects of the technology on the cognitive processes of the user. [...] Wearable devices offer the ability to interface more intimately with our existing cognitive processes” (Dunne and Smyth 7). The term “intimacy” portends the complex psychological consequences for a soldier catalyzed by wearable technologies, particularly when the devices cause soldiers to experience and document real violence and carnage, and virtually-simulated violence, simultaneously. In addition, virtual simulation technologies that increase the resolution of three-dimensional environments with such accuracy that a difference between reality and representation may no longer be discernable are situated—theoretically, if not physically—within a broader ethical

conversation that queries the ethics of “virtual war.” The virtual soldier is no longer the operator of a real weapon but rather an operand that may be manipulated within the “game” of virtual training systems. However, in non-virtual theaters of war, soldiers remain undeniably “real” and must negotiate the political and phenomenological process of becoming bodies of force as well as corporeally-enhanced, embodied weapons.

The transition from virtual military training to active-duty theaters of war is necessarily an embodied shift. Even if a soldier has experienced simulated violence in training and is corporeally refitted with digital technologies, the U.S. Military is *not* yet a phalanx of armed robots and thus even the most sophisticated digital soldier is still vulnerable to basic physiological processes—like breathing. In his essay, “Breathing Like a Soldier: Culture Incarnate,” sociologist Brian Lande argues that, “Cultural patterning in the army is not an abstract intellectual process, but takes place at the level of the body as it engages in practical activity in the training environment, and becomes adapted to the military milieu” (Lande 95). Lande’s fieldwork at ROTC (Reserve Officer Training Corps) sites is specifically focused on the way in which breathing—its patterning, habituation, control, and uniformity—provides philosophical indoctrination through strict physiological regimes. “Breathing Like a Soldier” he suggests, contributes fundamentally to a military “habitus” (following Pierre Bourdieu³⁰⁷) and military “techniques” (following Michel Foucault³⁰⁸) that place the body at the locus of social and symbolic divisions of military life. Recuperating the body, amidst many sociological

³⁰⁷ See: Pierre Bourdieu. *Distinction: A Social Critique of the Judgement of Taste*. Trans. Richard Nice. London: Routledge, 1984.

³⁰⁸ See: Michel Foucault. *Discipline and Punish: The Birth of the Prison*. 1975. Trans. Alan Sheridan, 1977. New York: Vintage Books, 1995.

studies that have focused on military cultures as sites of value production, ritualization, or identity production, Lande's thesis is that "Embodiment is thus a crucial but missing theme from sociological accounts of military life. In short, breathing is far from being a taken-for-granted physical activity. It is the social sinew that holds together social institutions by anchoring norms and beliefs in viscera" (Lande 97). Lande importantly links this physiological training to more precise techniques of psychological and philosophical control. As example, military marksmanship traditionally requires attention to four motions: breath control, trigger, position, and aim. Lande traces the way in which, through repetitive training, these corporeal details become codified within military practices as coordinated movements to ensure soldiers embody norms and expectations of military culture. And yet the extensive training required to "institutionalize" breathing reveals the limits of the human body and provides one antidote to governmental and industrial discourses that prophecy the body's limitless potential for technological enhancement.

The Networked Soldier

It is impossible to discuss the possibility of a technologically-augmented soldier without examining the global relay systems and geopolitical space through which telecommunication transmissions occur. In *Desert Screen: War at the Speed of Light* (2005) French cultural theorist Paul Virilio suggests, "Henceforth, the instantaneous speed of the transmission of data, as well as the extreme precision of the guidance and navigation of projectiles, will surpass the destructive power of conventional or non-conventional arms" (Virilio 79). Virilio continues to argue in the chapter entitled "June

1991: Desert Screen” that Operation Desert Storm was an electromagnetic war, terminating at 2D television screens, rather than an environmental war waged on *terra firma*. He writes, “Thus, the military environment is no longer so much a *geophysical* one of the real space of battles...as a *microphysical* one of the real-time electromagnetic environment of real-time engagement” (Virilio 77, original emphasis). Virilio’s predictions of the control provided by the “efficaciousness of aerial power” (e.g. technologies of surveillance, satellites, and GPS) and the manner in which they “will come progressively to prevail over those of mass destruction: more precisely, those of land forces” (Virilio 81) has proven to be specific, thus far, to the 1991 Gulf War. It does *not apply* to many facets of the United States’ prolonged, distinctly urban land warfare in Iraq and Afghanistan. Virilio’s emphasis on the U.S. “satellite panoply” and commanders’ ability to follow the instantaneous speed of information in “real time” (84) does not address the civil engineering of satellites—while they orbit in the sky, they still need receivers on the ground. Electromagnetic transmissions require space, physical conduits, and receivers to energetically pulse through, which cannot be reduced to Virilio’s standard dromological equation of speed and collapsed time, physically or philosophically. Virilio suggests: “It is easy to see that with this conflict in ‘real time,’ we can no longer legitimately speak of a battlefield or of a ‘localized’ war” (84). While this observation is theoretically engaging, it simply does not correlate to the continually violent, embodied effects of urban land warfare in Iraq and Afghanistan, for example, in 2014. These conflicts have remained distinctly local and land-based theaters of war, despite the ubiquity of electronic satellite images and communication that Virilio claims

will substitute for land warfare. However, Virilio does astutely point out that in the 1991 Gulf War “stealth [*furtivité*] of the material tends to supplant that of the speed [*rapidité*] of the weaponry” (78, original emphasis). Indeed, for the U.S. it is the possibility of concealment and disappearance, rather than simply speed, that is critical for the 21st-century bionic soldier networked into global communication arrays. Here, Virilio’s argument finds stark continuity a decade later, “To no longer *lose sight* of the enemy is thus to *gain* the upper hand, or indeed even to win the conflict, in this war in which disappearance from sight tends to prevail over the power of conventional or non-conventional explosives” (78, original emphasis).

Operationally, soldiers move within very specific physical environs with unique spatial architectures, historically designated as “Theaters of War” since the turn of the 20th century. In military operations a theater is used to describe the site or geographic area in which strategic actions are coordinated by military personnel. The term is widely and diversely deployed, though it is often attributed to Carl Von Clausewitz from his canonical work, *On War* (1832). The term gained wide recognition during World War II when it was used to broadly designate critical land and sea territories (e.g. the Mediterranean Theater of Operations, Pacific Theater of Operations, and European Theater of Operations) and the accompanying administrative activities needed to sustain operations in each. In a U.S. Military diagram from 1940³⁰⁹ the war theater of operations is drawn almost identically to that of a proscenium space. The front line demarcates the invisible “fourth wall,” separating the actors (waiting combat divisions) from the “stage”

³⁰⁹ U.S. Army Medical Department. “War Department Field Manual 100-10 Field Service Regulations, Administration.” 9 Dec. 1940. Web. 10 Jan. 2009. <<http://history.amedd.army.mil/booksdocs/wwii/orgadmin/chart12.gif>>

where war is actually occurring. As in a physical theater, the further back one is from the stage—in the drawing these sections are penned just as they would be on a seating chart and marked advance section, intermediate section, and base section—the further removed one is from actual battle. However, the physical conceptualization of a theater of war has changed radically, necessarily adjusting to the reconfigured geopolitical, spatial, and technological realities of 21st-century warfare. In a 2000 RAND Corp. publication on commercial satellite applications for the U.S. Department of Defense, the authors describe the evolving geographic and equipment needs in modern theater operations:

To construct a theater network, the theater commander must determine the people, vehicles, systems, and headquarters on the network, and their individual communications needs. [...] The distinction between “within theater” and “outside of theater” may become increasingly arbitrary. The use of long-range forces from distant bases and “reachback” support tends to blur the theater boundary. The CRD [Capstone Requirements Document] defines notional major theater war (MTW) and small-scale contingency (SSC) boundaries as “2000 by 3500 km” and “1000 by 1000 km”, respectively.³¹⁰

As the geographic boundaries and combat communications of the theater have changed—particularly in Iraq and Afghanistan where the combat “front” is frequently acknowledged to be everywhere and nowhere at once—so too have the consequences for soldiers who are increasingly networked into global telecommunication systems operated by U.S. and allied governments. Yet it is inaccurate to conclude that Internet, GPS, and satellite transmissions, all frequently described as “invisible” technologies because their transfer of data is imperceptible to the human eye at some point in

³¹⁰ Timothy Bonds, et al. “Employing Commercial Satellite Communications: Wideband Investment Options for the Department of Defense, USA.” *Rand Research*. 2000. Web. 10 Jan. 2009.
<http://www.rand.org/content/dam/rand/pubs/monograph_reports/2009/MR1192.pdf>

transmission, do not have material and often damaging consequences. For example, satellite technologies have become undeniably connected—materially and metaphysically—to U.S. Soldiers in active-duty combat zones: it is impossible to conduct surveillance and attack without the continual feed of geographic and communication data that GPS provides. And while this interconnectivity may suggest a newly imagined ontology of the body that is materially “extended” beyond its literal physical boundaries such that it is no longer productive to discuss an isolated, singular body, networked technologies nonetheless present very real consequences for individual bodies—soldiers, citizens, and their “enemies”—in combat theaters. These include the increasingly efficacious and targeted killing that GPS surveillance facilitates (U.S. drone attacks), the instantaneous projection of insurgent violence (ISIS beheadings), and the exhaustive, digitized archive of violent combat available for continual, public viewing. All of these examples corporeally complicate the theoretical rhetoric of “invisibility” that often accompanies networked communication technologies.

The metaphor of a real net will serve, momentarily, in tracing the relationship between visible and invisible networked technologies and the conceptual lines of thought that inform them. As French cultural theorist Bruno Latour aptly observes in *We Have Never Been Modern* (1983), “Technological networks are nets thrown over spaces, and they retain only a few scattered elements of those spaces. They are connected lines, not surfaces. They are by no means comprehensive, global or systematic, even though they embrace surfaces without covering them, and extend a very long way” (Latour 118). The nets drawn by 21st-century technologies extend in

every spatial direction—policing nations and territories with surveillance technologies, sonically patrolling underwater boundaries, surveying atmospheric borders by satellite—and they are continually being redrawn. This is both a phenomenological and practical reality: for example, GPS satellites use atomic clocks to calculate time based on the oscillation of an atom. Depending on one’s location, national borders, geopolitical armaments, and military clearance, targets can thus be redrawn by the trilateration³¹¹ of invisible radio waves with millisecond accuracy. The system does not, however, provide seamless, synchronous readings. GPS communication is plagued by ephemeris errors—inaccuracies caused by gravitational pull as well as by the pressure of solar radiation. And like any wave traveling through space, GPS signals encounter many other unexpected detours: slowed speed from changes in the ionosphere and troposphere; multi-path errors (“ghost” reflections of the original signal); receiver noise; and clock errors. In standard GPS these “speed bumps” may cause meters of inaccuracy.³¹²

As with physical, unmonitored gaps along geopolitical borders, the inaccuracy of GPS signals literally draws discontinuous, interrupted mappings and creates blurred, “dark” spaces. Because satellites of any kind must obviously orbit to stay aloft, they are often only capable of gathering data from a specific location for fifteen to twenty minutes, and then sometimes only every few days. Thus, GPS potentially reveals not only the vulnerability of physically contested borders for soldiers, but also the discriminate power of invisible borders drawn in space by the governing operators of

³¹¹The term triangulation is often used to describe GPS satellite calculations; however, technically it is better termed trilateration (and it generally uses not three, but four satellites).

³¹²U.S. Government Official GPS Site. “GPS Modernization.” Web. 20 Jun. 2009.
<<http://www.gps.gov/systems/gps/modernization/>>

GPS technologies. Governmental ownership of both satellites and reception stations, as well as control of the classified data derived from GPS technologies, represents an entirely new atmospheric “space war” with the potential to continually and instantaneously shift the locus of power during discrete (Iraq War) and extended (War on Terror) military operations. Simply stated, at war the control and surveillance of permeable, invisible borders becomes as important as control of the visible ones. It is not a surprise that the projects of early cartographers were generally the result of ecclesiastic or sovereign concerns: maps draw power—they provide sightlines for attaining geopolitical domination.

While GPS technologies have invaded atmospheric space under the deliberate guise of surveying activities on land—to watch the target rather than the trajectory—the aerial lines are increasingly as important as their terrestrial mappings. Far from uniformly eliminating spatial borders, as proponents of media and cyber globalization tend to prophesy, invisible technologies simultaneously re-inscribe them. It is true, as the editors of *Media and Globalization: Why the State Matters* (2001) suggest in their introduction that, “Although states have been endowed with the task of cordoning off communicative spaces, the control of these intangible borders is seen as a Sisyphean task in the face of media globalization” (Morris et al. viii). Yet the “intangible” borders the authors invoke can often be traced quite directly from their origin to their target (i.e. GPS surveillance from a satellite to the body of an Iraqi military target), and their apparent intangibility is an illusion—technologies that operate under a rhetoric of invisibility carve out very real geopolitical spatial domains with the same shifting,

contested permeability as their terrestrial counterparts. Various countries have attempted to interrupt or block satellite transmission across the Middle East to impose sanctions or disrupt military operations. Iran and the U.S., for example, have engaged in reciprocal disruptions of transmissions in the last decade.³¹³ In the November 2012 Executive Summary “Satellite Jamming In Iran, A War over Airwaves,” issued by Small Media, an organization that documents media censorship, the authors assert: “Satellite jamming helps the Iranian government maintain a stranglehold over the flow of information and communication inside the country. Orbital jamming involves the perpetrator beaming contradictory signals directly towards a satellite via a rogue uplink station. Orbital jamming causes censorship not only to the receivers in Iran, but everywhere. Orbital jamming is global censorship” (Small Media 14). The strategies above demonstrate the contestation for ownership of the air in what has already become an increasingly complex “space” war of atmospheric territoriality, nationalism, and discursive control that runs parallel to ground operations.

During warfare, attending to the silhouettes of GPS, satellite, and telecommunication technologies is becoming increasingly important for U.S. soldiers and local communities in areas occupied by military forces. In addition, the tendency by military contractors and technology developers, outlined in this chapter, to emphasize theoretical possibility—a networked, U.S. phalanx of robotically and bio-technically enhanced digital armies—over the day-to-day realities of technological failure advances scientific teleology and obscures political intentions. And much like the failures of petite

³¹³ See: Joel Schectman. “Satellite Firm Gets New Iran Waivers.” *Wall Street Journal*. 28 Aug. 2014. Web. 1 Oct. 2014. <<http://online.wsj.com/articles/satellite-firms-gets-new-iran-waivers-1409180260>>

squares of Velcro, there have been many pedestrian obstacles for GPS and satellite operations for U.S. ground soldiers. In his 2004 essay, “The Military Takes Stock in Iraq,” Richard A. Muller, a U.S. national security consultant, writes:

The city environment also neutralizes much of our high tech advantage. GPS doesn't work indoors, and often fails outdoors in narrow alleys. Our high tech communications also have problems. Some of our radios use frequency hopping (rapid changes in frequency) to avoid detection and location, but they work only when there is good propagation at all frequencies, a condition often not met in cities. So after a few weeks urban fighting, some soldiers (and officers) had their families send them citizen band walkie-talkies from Radio Shack. When you are under fire, it may be more important to be able to call for help immediately rather than maintain covert communications. This experience is reminiscent of Gulf War I, when families sent soldiers cheap GPS receivers. (Muller 2004)

Muller's observation that high-tech technology was not inherently advantageous, published in the second year of Operation Iraqi Freedom, affirms a military predicament that would characterize the entire occupation—the failure of “big” technology by a military superpower to win a seemingly “small” war against disorderly insurgents after the removal of Sadaam Hussein. Muller provides one reason for this failure—the inability of U.S. Military to adapt technologies to the improvisational conditions of urban fighting in Iraq in real time. In computer science this is described as a rigid or brittle index, indicating the inertia of a technology to be updated and modified. Or, as one U.S. Army service member quipped in an interview, “The U.S. Military is the world's biggest bureaucracy. It takes a classified contract to change the type of toilet paper we use—how was the Army going to adopt new tech on the fly in a combat zone? Let alone admit the insurgents had expert tactics—they improvised, they didn't care about collateral damage, they used every stick, knife, rifle, cell phone, and bomb-building material they could find. Do you think they ever signed a piece of paper to check out a

weapon?”³¹⁴ This U.S. Army service member notes the procedural inertia that may have compounded the military’s ability to improvise tactically with technology. In my personal interviews, almost every soldier reported that he or she would have urgently requested improved GPS equipment as the number one aid to assist in navigation and threat identification of high-value sites (dams, bridges, religious temples). Dozens of soldiers reported that they brought GPS devices with them from the U.S. to Iraq and Afghanistan, purchased them online, or requested them from family members and friends in the United States. For example, U.S. Marine Corps Sergeant Roman Baca and other service members shared in personal interviews:

Roman Baca (U.S. Marine Corps 2000-2014) I bought a Garmin GPS before I left for Iraq [in 2005]. It was essentially the piece of equipment that saved my platoon. At that time, there were no maps of Iraq to upload, so we first had to drive the routes—very dangerous—mapping distance, buildings, and environmental features—and then create the maps back at base. We’d add to them every time we went out and then share them with other guys who were ordering GPS devices like crazy. We had a Blue Force Tracker in every Humvee. I was trained on it and it’s a terrific piece of equipment, except not a single one worked in any vehicle I drove in 7 months of deployment in Iraq. Without our personal GPS systems, we essentially would have been driving blind.³¹⁵

S.J. (U.S. Marine Corps 2005-2014) By the time I got to Iraq they were already having a lot of operational issues with the Humvees. There’d been so much bad press and bad reports about their failure to protect us from IEDs. So at that time, they weren’t even bothering to repair vehicles, they were just, like, really anxious for the new “upped” ones to get to base. The big issue for us was that the doors were jamming shut and sometimes we couldn’t get out. It might be hard to picture this, but the American bases in Iraq are like fully functioning cities—there are literally thousands and thousands of Humvees in Iraq. The war in Iraq is not a war of lined up troops like little toy soldiers all in a row—it’s a driving war. That’s what we do. We drive. We patrol. We eat a little. We drive. We patrol. We drive and drive and drive more. And when do they kill most of us? When we’re driving. So if we don’t have GPS, and most systems were s*** on the Humvees—it was a joke—we were dead even before they targeted us.³¹⁶

³¹⁴ Author’s personal interview: R.B., May 1, 2013

³¹⁵ Author’s personal interview: Roman Baca, August 16, 2014

³¹⁶ Author’s personal interview: S.J., April 12, 2014

B.C. (U.S. Army Military Police): As an MP, all I did was patrol and co-loc [co-locate] with other units patrolling, so GPS was key. I was told by guys from another unit before I deployed to buy as many GPS devices as I could. I started a drive in my hometown of G----- to get the hardware stores to donate stuff. I brought GPS for, like, my entire unit. Even the officers were amazed. One of them, real nice guy, actually said—“Yep, you’re probably going to save my a** with your damn Garmin one day.” And it did.³¹⁷

These soldiers’ experiences suggest that despite U.S. military superiority, the lack of technological improvisational flexibility of the kind frequently employed by enemy combatants in Iraq and Afghanistan poses a great limitation for the United States. They also signal that the types of war fought by the U.S. in the 21st century—asymmetric, guerrilla, and against non-state actors—will change how war strategy (and thus technology) must be used by standing state militaries that are potentially “out of their element” against non-state forces willing to use tactics of suicide bombing, beheadings, and deliberately targeted violence against women and children to achieve their stated goals. Corporeal technologies that primarily capitalize on scientific innovation without aggressive analysis of their strategic, geopolitical relevancy will likely fail. The U.S. Military will likely not alter their definition of war—the use of violent force to achieve a generally political outcome. But preeminent 21st-century U.S. military theorists argue that “War”—as a philosophical construct wherein war definitively begins and ends and as a strategic, physical operation where there is a decisive winner—can no longer be “won” by deploying superior technology because the demonstrated willingness of states and non-state actors to infinitely employ any violent means necessary, violating all internationally-agreed upon rules, will increasingly replace decisive ideological and operational military outcomes. Colonel Thomas X. Hammes of the U.S. Marine Corps,

³¹⁷ Author’s personal interview: B.C., June 20, 2013

an early definer of so-called “fourth-generation warfare,” aptly summarizes this shift in “The Sling and the Stone: On War in the 21st Century” (2006): “Conventional enemies exposed themselves to our military strengths. Insurgents found ways around them” (ix). David Kilcullen, former Chief Strategist for the U.S. State Department Office of the Coordinator for Counterterrorism (2005-2006) and Senior Counter-Insurgency Advisor to General Petraeus (2007-2008) writes of a new paradigm of war against combatant communities he calls “Accidental Guerrillas,” defined as non-state groups who may not have wished to engage with the U.S., initially, but were drawn to militant action when they were invaded or occupied by the U.S. Military. In the *The Accidental Guerrilla: Fighting Small Wars in the Midst of a Big One* (2009) Kilcullen offers:

The efforts of insurgents and terrorists since 9/11 may in fact have already put an end, through unconventional and asymmetric means, to the much-bruited military superiority of the United States. [...] How do we wage war on nonstate actors who hide in states with which we are at peace, even within our own society?” [...] And “War” is not the only paradigm being challenged by current conditions, the notion of “diplomacy” is similarly threatened. (24; 292)

Both theorists’ suggest there is a threat to a paradigm of war that was previously used for the U.S. Military’s strategic, tactical, and technological decisions. Any new paradigm, uneasily, must account for: non-state (as well as state) actors operating without fidelity to national or international rules of engagement; the march of technological innovation that prophesies technological superiority but must nonetheless confront improvisational, “low-tech,” highly-successful strategies; and the disquieting idea that warfare, once primarily restricted to low-elevation air, ground, and sea environs, has become atmospheric and cybernetic at a time when societies around the globe increasingly and critically depend on technologies and services that rely on “peace” in these domains.

War in the 21st-century seemingly has the potential to be waged across every geopolitical, environmental, digital, media, and virtual space, at once. The theory of silhouetting presented here suggests it is possible to deliberately map seemingly invisible technologies and techniques that target soldiering bodies within these various spaces. While this chapter has focused on 21st-century wearable technologies such as the U.S. Army uniform, U.S. soldiers will increasingly be required to defend not only terrestrial topographies, but to become networked across cyber and atmospheric geographies. Territoriality, borders, and nation-state formation inherently rely on linear demarcations—an invisible or literal line drawn in sand or space. And yet the hypostatization of geopolitical divisions—failure by the military, universities, private research stakeholders, governmental institutions, and everyday citizens to distinguish between the rhetoric of invisibility and the material realities it occludes—may impair greater understanding of how seemingly invisible techniques and technologies operate as visible silhouettes of war.

3.6—U.S. Corporeal Technologies: Future Soldier Initiative

In the darkest nights of World War I, soldiers were concerned with not only how to kill the enemy, but how to see the enemy at all. If the moon was high and sufficiently bright, soldiers could use it to maneuver into position, navigating on both land and sea by the luminary cast of what the British and U.S. militaries called “movement light.” However, without moonlight, the soldiers could often neither locate nor target the enemy. Major General J.F.C Fuller, a British tactician and theorist, is credited with innovating an application of the spotlight during World War I. Going

forward, technological advances in engineering would allow for large military spotlights—termed fighting by “artificial light”—to be trained upon enemies in battle. The technology of electricity would allow for engineered, precision killing in the dark: the silhouette of the enemy was illuminated.

In the article “Lighting in the Army” published in the October 10, 1916 issue of *Illuminated Engineering Society (IES)*,³¹⁸ U.S. Army Captain Edward D. Ardery describes the Army’s basic uses of military light sources and suggests: “In the army our use of illuminants causes us to have recourse, for one purpose or another, to bonfires, fireworks, candles, kerosene, gasoline, gas, acetylene, and electricity. Besides these, moonlight enables us to prosecute or to detect night operations of troops in the fields; while the sun affords a means of signaling with heliographs” (660). Ardery details the specific use of light sources such as upwardly visible bonfires to mark safe landing areas for aircraft or handheld lanterns with downward light to maneuver in trenches without visibility to the enemy. However, he observes that, “This matter of keeping the men together during night operations is no mean task” (660). The searchlight thus emerges as the most prized technology for its capacity to illuminate both a theater and human targets from a distance. Ardery summarizes its capabilities:

The lighting appliances already treated perform their several functions in their own quiet way, but the real eyes of our forts are the searchlights. [...] The ranges at which targets may be satisfactorily illuminated by a 60in. searchlight are as follows: With very clear atmosphere, 10,000yd. and sometimes farther; with average atmosphere, 6,000yd. to 8,000yd; through slight haze or rain, 3,000yd. to 4,000yd.; in medium haze or gray dawn, 1,000yd. to 2,000yd. (664)

³¹⁸ Capt. Edward D. Ardery “Lighting in the Army.” *Transactions of the Illuminating Eng. Soc*, Vol. XI, No. 7, 659-668. 10 Oct. 1916. Web. 10 May 2013.
<<https://ia600508.us.archive.org/8/items/illuminatingengi1illu/illuminatingengi1illu.pdf>>

The unprecedented distance and circumference of visibility were critical to extending the time that maneuvering could be successfully conducted. With the advent and application of the searchlight, developed as one of many technologies emerging from rapidly advancing experimentation with electricity at the turn of the 20th century, it became possible to see and kill the enemy not only from greater distances, but continuously within a 24-hour period. The technology of the searchlight offered luminous exitance to the brutal work of killing—not a killing technology itself, but rather one that critically facilitated it. Imagine the very first application of the searchlight—how improbable it must have been to move from the cover of darkness into flooded visibility. A description of the “new” phenomena of a spotlight appears in the article “Artificial Moonlight” in the August 1905 issue of *Popular Mechanics*: “The effect produced by this means is fantastic and beautiful in the extreme, as each succeeding phase of the panorama is brought out in a radiance of light against the dark background of the night, and then as suddenly lost as a new view succeeds it” (829). *Popular Mechanics*’ description invokes the imaginary of the technological sublime—the idea of transfiguration through technological innovation, even when it is potentially lethal—a characterization that will appear again and again in descriptions of military technology.

Into World War II, searchlights were still frequently exploited as strategic cover. Unfortunately, J.F.C Fuller’s theories on outmaneuvering the enemy at night did not end with his advent of artificial moonlight. In 1918, Fuller wrote a memo entitled *Plan 1919*—ostensibly on the tactical influence of tanks, but also part of a grander theorization of military mechanization—in which he outlined his strategy regarding

destroying the organization and supply lines of the enemy. Using the metaphor of the body to illustrate his plan for obliterating an army, at the time of publication on the German front, Fuller concludes:

Now, the potential fighting strength of a body of men lies in its organisation; consequently, if we can destroy this organisation, we shall destroy its fighting strength and so have gained our object. There are two ways of destroying an organization: 1. By wearing it down (dissipating it), 2. By rendering it inoperative (unhinging it). In war the first comprises the killing, wounding, capturing and disarming of the enemy's soldiers—body warfare. The second, the rendering inoperative of his power of command—brain warfare. To take a single man as an example: the first method may be compared to a succession of slight wounds which will eventually cause him to bleed to death; the second—a shot through the brain.³¹⁹

Fuller, anticipating a version of Blitzkrieg, would conclude it was necessary to conduct both “body and brain warfare,” emphasizing the need to destroy the brain (command) first to disorganize the body (forces) through technological innovation and application. A Nazi sympathizer who participated in Britain’s anti-Semitic activities, Fuller was a guest at Hitler’s 50th birthday party in 1939 and openly described himself as an elite fascist who envisioned supremacy through technological domination.³²⁰ Many of Fuller’s theoretical texts were translated into German, and he is credited with influencing Germany’s tactical and operational strategies during World War II.³²¹ As such, his recommendations for the development of new, mechanized weapons in *Plan 1919*—now eclipsed by historical atrocity—is a dark prefiguration for Wehrmacht tactics:

In addition to the shot through the brain we fire a second shot through the stomach, that is, we dislocate the enemy's supply system behind his protective front, his men will starve to death or scatter. Our present theory, based on our present weapons, weapons of limited range of action, has been one of attaining our strategical³²² object by

³¹⁹ Excerpted from Fuller’s memoir: J.F.C. Fuller. *Memoirs of an Unconventional Soldier*. 1938. Web. 2 Jul. 2013. <http://www.alternatewars.com/WWI/Fuller_1919.htm>

³²⁰ James D. Kiras. *Special Operations and Strategy: From World War II to the War on Terrorism*. NY: Routledge, 2006.

³²¹ Brian Holden Reid. *J.F.C. Fuller: Military Thinker*. NY: St. Martins Press. 1990.

³²² Spelling appears in the original text.

brute force; that is, the wearing away of the enemy's muscles, bone, and blood. [...] As our present theory is to destroy 'personnel,' so should our new theory be to destroy 'command,' not after the enemy's personnel has been disorganised, but before it has been attacked, so that it may be found in a state of complete disorganisation when attacked.³²³

While the commercial description of Fuller's searchlight emphasized its sublime luminosity, Fuller's second contribution to military strategy drew a far grimmer response. Reporting from London on the strategy of the 1940 German Blitzkrieg, British journalist Ernie Pyle ominously noted, "They came just after dark."³²⁴

The thrust of Fuller's theoretical texts, including *On Future Warfare* (1928) and *Machine Warfare: An Inquiry into the Influence of Mechanics on the Art of War* (1942), troubles the 21st-century scientific and military discourses that seek to, theoretically if not yet practically, merge man and machine in warfare. Fuller writes: "As warfare today is based upon science, not only must fighting forces become more and more scientific, but the scientific method must be applied to an entire nation, so that every man, woman, and child can be fashioned into an enormous catapult which will hurl war upon the enemy." In the 21st-century, a commitment to the science of military innovation that might turn a nation into a collective catapult to "hurl war upon the enemy" persists. It is evidenced by the U.S. Government's fiscal expenditure on war technology, as well as by the ubiquity of projects with military applications across U.S. private, public, and academic institutions.³²⁵ While less than .5 percent of the U.S. population is in active-

³²³ Excerpted from Fuller's memoir: J.F.C. Fuller. *Memoirs of an Unconventional Soldier*. 1938. Web. 2 Jul. 2013. <http://www.alternatewars.com/WW1/Fuller_1919.htm>

³²⁴ Ernie Pyle. "A Dreadful Masterpiece." 30 Dec. 1940. Reprinted in: David Nichols, Ed. *Ernie's War: The Best of Ernie Pyle's World War II Dispatches*. New York: Random House, 1986: 42.

³²⁵ For example, see: MIT ISN, Purdue University Research Park, University of Southern California (USC) Institute for Creative Technologies Theorized in: Mozghan Savabieasfahani. "Reflections of Academics on the Ethics of University Military Research," *Class, Race and Corporate Power*: Vol. 2: Iss. 1, Article 6., 2014.

duty military service in the 2010s, planning for warfare is omnipresent in U.S. society.

U.S. private corporations, publicly funded research institutions, and academic departments continue to augur that 21st-century technologies will so radically alter the exoskeleton, physiological systems, and even synaptic functioning of U.S. soldiers that they will simultaneously become optically invisible, robotically augmented, and biochemically immune to “enemy” attack. Conceived as such, even as the body becomes the primary site for integrated technological applications, such as TALOS, the unique, differentiated needs of bodies—guided by concerns for psychological trauma, physical overloading, and essential subjectivity—may be less prioritized in technological design. The danger of this paradigm is that while bodies are being physically manipulated and augmented as the primary subjects of military research and development (R&D), the consequences of fundamentally altering the boundaries of their bodies (through HORNET neurological implants) or effectively disembodimenting them (by bypassing their embodied situational awareness in favor of a superior officer’s evaluation of their HORNET stress levels) will likely *not* receive the same rigorous study. The research quality and treatment of Post-Traumatic Stress Disorder (PTSD) already presents one example of the discontinuity between soldiers’ tasks and the medical treatment they receive for enduring or inflicting violence during those tasks. Effective treatment for PTSD, a broad diagnosis given to U.S. Military service members and civilians who have experienced trauma, has been criticized as inadequate for decades. PTSD was added as an official, symptomatic illness by the American Psychiatric Association to *The Diagnostic and Statistical Manual of Mental Disorders (DSM)* in 1980. More than twenty-five years

later, in 2012, the U.S. Congress mandated a U.S. Institute of Medicine study of Pentagon and Veterans Affairs (VA) handling of PTSD treatment for veterans which resulted in a report that was declared: “A withering report that comes as the Defense Department and VA grapple with rising mental health issues within their ranks, including suicide.”³²⁶ The study itself, “Treatment for Posttraumatic Stress Disorder in Military and Veteran Populations,” concludes: “Without tracking outcomes, neither DOD or VA knows whether it is providing effective or adequate PTSD care, for which they spend \$294 million and more than \$3 billion, respective, in 2012.”³²⁷ The 2012 study confirmed the findings of an earlier 2007 investigation, also by the National Academies, and adds to it the issue of methodological corruption of published PTSD studies. As reported by *The Washington Post*, the 2007 report finds: “Most of the evidence supporting the use of medications and psychological therapies for PTSD has been assembled by pharmaceutical companies that make the drugs or by researchers with conflicts of interest in the outcome of the studies, and lack independent and rigorous proof.”³²⁸ Proposed U.S. Military technologies will likely further challenge how soldiers are medically supported after engaging in, inflicting, or witnessing violence, particularly if the definitional boundaries of the body and the body’s agency change vis à vis the technology. For example, will a soldier wearing a HORNET helmet, first, be held legally or professionally responsible if his neurological data is appropriated for a superior to

³²⁶ Patricia Kime. “Panel Says Pentagon Does Not Know if PTSD Programs Work.” *Military Times*. Reprinted in USA Today. 15 Jul. 2012. Web. 12. Jun. 2013. <<http://usatoday30.usatoday.com/news/military/story/2012-07-13/post-traumatic-stress-disorder-programs/56207754/1>>

³²⁷ U.S. Institute of Medicine of the National Academies. “Treatment for Posttraumatic Stress Disorder in Military and Veteran Populations: Final Assessment.” National Academies, 2012.

³²⁸ Shankar Vedantam. “Most PTSD Treatments Not Proven Effective.” *The Washington Post*. 19 Oct. 2007. Web. 12 Feb. 2009.

<<http://www.washingtonpost.com/wp-dyn/content/article/2007/10/18/AR2007101802186.html>>

initiate an attack or kill order? And second, how will the medical industry deal with a soldier whose body was physically present to experience an act of violence, at the same time her body was also remotely accessed to assess or engage with the situation? It is certainly possible to envision a nightmarish scenario wherein soldiers experience new variations of PTSD from knowing that their interior neurological experiences were harnessed to kill enemy combatants without their conscious “thinking” or embodied, deliberative processing of the situation at hand. How responsive agencies study and respond to the embodied consequences of for example, bionic soldiers, capable of inflicting bionic violence, is particularly important given the prognostication for “whole body” technologies such as the Future Soldier Initiative (FSI).

In 2009, the U.S. Army Research, Development and Engineering Command (RDECOM) published a white paper titled the “Future Soldier Initiative” (FSI) offering a detailed projection of future innovations for the U.S. Army through 2030 including robotically-enhanced exoskeletons, autonomous prosthetics for wound care, biometric friendly soldier-recognition devices, and nano-sensor suits for detecting biochemical weapons. The document proffers:

The future is always uncertain. However, by applying logic and imagination to current situations and technologies, the *Future Soldier concept* was developed to identify capabilities a Soldier might carry into battle. [...] *Our intent is to stir imaginations, and start a dialogue about how best to equip the Soldier.* Future Soldier 2030 is a concept of how the future Soldier might be equipped. The future Soldier shall be tailored with design considerations for each technology area named below³²⁹ with special emphasis on cognitive performance to improve Soldier effectiveness and increase operational tempo. [...] Augmented and virtual environments will be ubiquitous and will support almost every facet of warfare including communications, data visualization, system control, and training. Soldiers will be able to move seamlessly among real, augmented, and virtual

³²⁹ Technology areas listed in the document are: 1. *Human Performance and Training*, 2. *Soldier Protection*, 3. *Lethality*, 4. *Mobility and Logistics*, 5. *Soldier Network*, 6. *Soldier Sensors*, 7. *Soldier Power & Energy*.

environments. Using virtual reality (VR) systems and serious gaming technologies will be the primary mode of delivery for personnel selection and training. Training will be embedded and be available anytime, anywhere. (2-3, original emphasis).

FSI suggests that a new soldier “ensemble” with an electrochemical skin and bio-vascular augmentation will systematically reconfigure or replace the natural functioning of the bodies of U.S. Soldiers by 2020. FSI affirms that in the next decade:

The basic needs of the Soldier will be provided by the Soldier *ensemble*. The ensemble will feel like a second skin, instilling confidence in the system without inhibiting physical activity. Bio-inspired artificial vascular systems in materials will provide active multifunctionality for chemical/biological protection, climate control, and autonomic trauma care. The power and data network will be integrated into the textile as a self-forming network across the body without bulky cables and connectors. Power generation, energy storage and signal transduction will be provided by textile-integrated batteries, piezo-electrics, fuel cells, photovoltaics, bionic energy harvesters and electrically conductive fibers. Biometrics will be employed within the Soldier ensemble, ensuring that it is matched with a known friendly Soldier. If a Soldier expires, the system will provide a security-based zeroize function so that the enemy cannot exploit the ensemble’s technology (author’s emphasis).³³⁰

FSI presents one vision of how bodies will be augmented or replaced in 21st-century warfare: future U.S. soldiers will be artificially reconfigured, electromagnetically networked, and capable of posthumous “zeroization” (self-destruct) functions such that their bodies will act as both technologically “skinned” operators and satellite-networked operands. And as for protection, it will certainly no longer be necessary to place protective “cock flaps” designed for the groin on one’s shoulder to protect vital organs. Instead, “Today’s level of fragmentation protection will be provided in a form-fitting and flexible Soldier uniform that enables natural ventilation. It will provide protection in the torso and extremities against blast effects, such as overpressure, fragmentation, traumatic amputation, and burns. [...] The ensemble will use a Faraday cage to protect

³³⁰ U.S. Army Natick Soldier Research, Development, and Engineering Center. “Future Soldier White Paper.” Massachusetts: U.S. Army Natick Soldier Research, Development, and Engineering Center. March 2009. Web. 4 Jan. 2010. <<http://nsrdec.natick.army.mil/FSI/index.htm>>

the Soldier and also receive energy from vehicle sources” (7). Of course, the prophecy of technological alacrity is not intended to be a substitute for deliberative strategy—soldiers must still be present to organize this new hybridized corps. However, as conceived, the FSI ensemble replaces the natural body as both a mobile defensive system and an offensive weapon. The individual soldier’s body as a total ensemble thus becomes the site for fully integrated networked and prosthetic research and development, a shift from viewing complex weapon and communication systems as separate from, or even an armed extension of, soldiers’ material bodies. FSI is a highly advanced permutation of the U.S Marine Corps creed, “My rifle is human, even as I, because it is my life,” suggesting weapon and soldier may metaphysically converge.

In comparison to the technologies discussed in the earlier sections of this chapter, FSI is unique because it presents a vision to entirely reconfigure the whole body of a soldier, with a primary emphasis on physiological and neurological rather than prosthetic enhancements. FSI initiates an unprecedented engagement with technologies that suggest potentially irreversible biological alterations to soldiers’ physical bodies in elaborate concert with digital, electromagnetic, and robotic enhancements. FSI suggests that the “skin” of the suit will include antimicrobial properties “engineered into the fibers” to “enhance health and hygiene, reducing the incidence of skin irritation and fungal growth” (6), and also plans to monitor the body through a Soldier Physiological Status Monitor (PSM) and a Microclimate Delivery Network (MDN). With a tone of hyperbolic forecasting generally found only in science fiction, the report asserts: “The PSM report would contain information on energy levels, work load, hydration, stress

levels, thermal state, sleep, and development of a baseline along with functions for remote triage. The triage system would be able to assess traumatic brain injury, ballistic impact, and flame and blunt trauma” (8). As the anatomical body is being monitored, the brain will also be supervised. That is, FSI suggests that soldiers’ “cognitive status” will be continually monitored and networked to command officers in real time, similar to the HORNET electroencephalogram helmet in development. RDECOM white papers are widely read and reported on by U.S. media outlets, thus the language of the FSI paper provides a window into institutional discourse and paradigmatic thinking, as it has been crafted for a wider public. It is thus perhaps even more unusual that FSI unabashedly lauds the potential of soldier enhancement programs, many of them alarmingly invasive, and yet includes little mention of ethical constraints or deleterious physiological consequences for the soldiers. Without an ethical pause, FSI presents an institutional vision that is prophetic but perturbing. FSI offers: “A companion system using behavioral, environmental, and neurophysiological sensors would monitor Soldier cognitive status in real time to provide accurate assessments of mental workload and cognitive readiness. This data will be used by commanders to drive tactical decisions and tasking” (9). As with HORNET, this description implies that soldiers’ interior physiological data will be mined to facilitate remote decision-making regarding “tactical decisions and tasking.” In the section on “Human Dimension and Training” FSI proposes that cognitive monitoring by neurophysiological techniques may require additional neurological, that is neurotropic drug, enhancement. The only potential inhibitor to this

is the the paper's only mention of "ethics": it is suggested that "societal ethics" (not the military's ethics) might have to change to permit neural enhancers or "smart drugs."

Consumer demand and scientific exploration will yield an explosion in cognitive and physical enhancers, including memory and cognitive enhancement (smart) drugs, neural prosthetics, and permanent physical prosthetics. These could yield dramatic enhancements in Soldier performance and provide a tremendous edge in combat, but will require the Army to grapple with very serious and difficult ethical issues. At the same time, if societal ethics change to embrace such enhancers, the Army will need to decide to use these types of systems. (3)

In this description, FSI sounds one small note of ethical consideration before marching blithely to another section: "Lethality." This section provides the most alarming discontinuity between the embodiment of soldiering and the impact of war on civilians,³³¹ and the scientifically enhanced silhouette of war that FSI projects:

The FS weapons system will provide unequalled lethality and versatility on the future battlefield. The weapon system will permit direct and indirect target engagements, while effecting decisively violent and suppressive target effects at extended ranges and against defilade targets. [...] Wireless connectivity to the digital battlefield extends the lethality dimension by creating a "virtual trigger" capability for each Soldier. [...] A voice actuated or electronic trigger is activated which launches the projectile out of the lightweight weapon platform. The munitions will violently explode at the target effecting a 5M² lethal area. (10)

FSI's description of complete "connectivity to the digital battlefield to extend lethality for each Soldier" who can then "launch the projectile out of the lightweight weapon platform" bears an uneasy resemblance to J.F.C Fuller's dreadful vision to apply the scientific method "to an entire nation so that every man, woman, and child can be fashioned into an enormous catapult which will hurl war upon the enemy." Because U.S. Soldiers act in the representational interests of the entire nation, Fuller's hope that "every man, woman, and child" is involved is symbolically, although not literally, achieved through FSI's efforts to launch "unequalled lethality" in service of the state.

³³¹ While the U.S. Military is generally significantly concerned with technologies falling into the "wrong hands," FSI makes no mention of the strategic consequences were enemy combatants to also acquire neural enhancers.

In contrast to FSI's highly engineered 21st-century soldier, in *The Utility of Force* (2008) British General Rupert Smith analyzes weaponry of the last two decades and provides a stark assessment of contemporary warfare. In the chapter "Trends: Our Modern Operations" he suggests that, contrary to the perceived functionality of a diverse array of weapons originally designed for the Cold War and still in use, including expansive air, ground, and sea combat systems, the machete has been ubiquitous in warfare: "The most effective weapon of the last fifteen years was the *machete*. I am not proposing that we equip forces with just machetes, but we now have to adapt our own industrial, high-technology weapons to these circumstances" (299, original emphasis). While FSI portends a *cybergenetic* soldier with networked biodata and bio-recognition functions, Smith reminds readers of the delimiting conditions for bodies of war—the physical labor of killing through hand-to-hand combat, IED's, and machetes that has eclipsed, for now, the proposal that a bio-vascular "ensemble" will entirely transcend the demands of embodiment during war.

It is an eschatological, though commercially viable, paradox to insist that 21st-century U.S. culture is always in the presence of the "NEW." Commercial scientific research, in particular, is predicated on the cult of the new, continually rising from past discoveries in order to cleave new theories from old, justify new funding schemata, and catalyze development in fields that are politically alloyed. This phenomenon is nowhere more apparent than in the development of new military technologies—a consequence of the sizeable U.S. Military budget, Department of Defense contracting policies, changing theaters of war, and development in technology industries. While FSI suggests how

military researchers hope soldiers will evolve as bodies of war, others imagine soldiers will be rendered obsolete through the newest technologies. Robert Cone, the commanding general of the U.S. Army Training and Doctrine Command (TRADOC), addressed the ongoing necessity for soldiers in land theaters at the January 2014 Association of the United States Army Aviation Symposium in Virginia, first remarking “While human beings transit air and transit sea, they live on the land. And so your strategic outcomes are going to take place on the land.”³³² Cone then specified what *kind* of land soldiers might be needed in future land operations, and they are not all human. He noted the U.S. Army Brigade Combat Team will be downsized from 4,000 soldiers to 3,000 by 2030, with the reduction being made up in robot and drone replacements. Cone envisions that 25% of combat soldiers will be replaced by robots in fifteen years.³³³ In line with this projection of an increasingly robotic army, technology theorist Lance Ulanoff, interviewed on *America’s Newsroom* in January 2014, suggests that “The long-term vision is to really take people, humans, out of harm’s way and let a full-blown robot do the fighting, do the shooting, do the running.”³³⁴ While this scenario may seem to require a human operator, even manual oversight will be replaced in the future. That is, robot officers will control robot “boots on the ground.” In June 2013, Harry Lubin, Chief of the Experimental Division at the U.S. Army Maneuver Battle Lab at Fort Benning, discussed the future of unmanned aircraft currently being developed in

³³² Gary Sheftick. “TRADOC: Strategic Landpower Concept to Change Doctrine.” *U.S. Army*. 16 Jan. 2014. 12 Apr. 2014. <http://www.army.mil/article/118432/TRADOC__Strategic_Landpower_concept_to_change_doctrine/>

³³³ Kelsey D. Atherton. “Robots May Replace One-Fourth Of U.S. Combat Soldiers By 2030, Says General.” *Popular Science*. 22 Jan. 2014. Web. 13 Apr. 2014. <<http://www.popsoci.com/article/technology/robots-may-replace-one-fourth-us-combat-soldiers-2030-says-gene332ral>>

³³⁴ Fox News. “Robots Could Replace ¼ of U.S. Combat Soldiers by 2030.” *America’s Newsroom*. 14 Jan. 2014. Web. 4 Feb. 2014. <<http://foxnewsinsider.com/2014/01/24/general-robert-cone-robots-could-replace-14-us-combat-soldiers-2030/>>

collaboration with Georgia Tech. He provided a solution to the need for a human-controlled robot: "The more unmanned systems we get, the more of our [human] combat power we deplete [to operate them]. So, the more we can get robots operating on their own without having a direct controller and operator collaboratively, the more that would increase our combat power."³³⁵ Other Department of Defense (DoD) and military strategists echo the argument that robots will assist or operate autonomously in military operations. Major General Bill Hix, the Deputy Director of Army Capabilities Integration Center (ARCIC) which, among other functions, researches and evaluates proposals for Army modernization, has observed that robots provide "an additive capability that makes a Soldier that much more effective because the robot may carry additional munitions or logistics and even sensors that allow him to focus more on mission tasks and not deal with what's sometimes called dirty, dumb, dangerous and repetitive tasks." Colonel Chris Cross, Chief of Science and Technology at ARCIC, similarly observed at a seminar on U.S. Military strategic trends that, "It's hard to conceive that we'll fight a fight in 2035 without the integration of some type of unmanned combat platform. We will fight against robotic platforms in the future that are either autonomous or semi-autonomous."³³⁶ So, what is at stake in the replacement of human soldiers with their technologically enhanced human counterparts?

Clearly, the determinant for success or failure in late 20th-century and early 21st-century U.S. military warfare no longer relies on the basic physical health of bodies of

³³⁵ Ben Wright. "Georgia Tech Researchers Test Drones at Fort Benning Lab." *Macon Telegraph*. 6 Jun. 2013. Web. 8 Aug. 2013. <<http://www.mcclatchydc.com/2013/06/06/193220/georgia-tech-researchers-test.html>>

³³⁶ David Vergun. "Smarter Robots Likely in Army's Future, Planners Say." *U.S. Army*. 22 Jan. 2014. 5 Mar. 2014. <http://www.army.mil/article/118583/Smarter_robots_likely_in_Army_s_future__planners_say/>

war—conditions for shelter, nutrition, and medical care are not the impediments they once were throughout centuries of U.S. warfare. However, war still relies on a critical hermeneutics of bodies of war—an ongoing dialogue wherein technologies, techniques, and their silhouettes of war are continually negotiated by those soldiering bodies who participate most directly, and vulnerably, in waging war. In addition, without bodies of war—boots on the ground—the possibility for scenarios of war to approximate Fuller’s vision of annihilation through scientific advance, otherwise known as drone warfare in the 21st century, becomes even more probable.

As explored in this chapter, the threat to subjectivity and personhood for soldiering bodies as a result of U.S. Military corporeal technologies emerges from four primary concerns, which may be summarized as: anatomy, agency, alternative ethics, and aftermath. First, the traditional uniform has historically served as a symbolic silhouette in service of state interests that was materially distinct from a soldier’s own body—it was additive, removable, and temporary. However, corporeal technologies that are physiologically coextensive with a soldier’s body, such as HORNET or FSI, penetrate the interior anatomy of soldiers and transform the skinned boundaries of the body in ways that potentially upset the very definition of what it means to have a body, or to have rights to the interiority of one’s own body. Second, these corporeal intrusions compromise the agency and subjectivity of embodiment, enabling a technological military corps to become a technocorpus wherein a soldier’s ability to make decisions during combat are neurologically and kinesthetically bypassed. Third, corporeal technologies that transform the bounds of the body present challenges to the legal, international, and

ethical guidelines designed to protect soldiering bodies of war and provide rules of engagement in areas of operation. What rules apply to soldiering bodies of war if they are, problematically, no longer quite *bodies* that can be held accountable for their actions? It's possible to imagine an account such as: "My commanding officer read my brain waves through my helmet and decided to fire"—whose "body" is responsible? As well as a scenario wherein a deployed standing army is able to kill combatants "on the ground," but is cloaked invisibly in metamaterial camouflage and thus not entirely materially present to be accountable for their actions. Finally, if soldiers with military mental health diagnoses such as PTSD, which has been studied for decades, still receive woefully inadequate health care services, which agencies will be responsible for treating the inevitable psychological and physical difficulties that result from using corporeal technologies? It seems unlikely that soldiers who are neurologically enhanced by the U.S. Military with smartdrugs, bionically and prosthetically strengthened, and physiologically networked to and continuously monitored by commanding officers will emerge unscathed from their experience as bodies of war. U.S. Military service members are employed on behalf of the majority of an American society that stands, at best, at a safe if critical distance from the embodied force and consequences of war. Soldiers' philosophical and political deliberations have critically shaped the course of U.S. safety and security and will continue to do so in the 21st century. Their reflections should increasingly inform our own paradoxical position: as U.S. civilians we are complicit in offering up—even while decrying war a moral offense—the bodies of soldiers who fight on our behalf.

Conclusion

The probabilities of real life replace the extreme and the absolute required by theory.

—Carl von Clausewitz, *On War*

I don't think we should be striving for a video-game type of mentality of warfare for the future where people are just standing behind a computer console controlling robots.

—Aaron Cota, *U.S. Marine Corps*

In the future, there will be no need for ground soldiers. Standing armies will disappear altogether. War will be fought by robots against robotic systems. Humans, even Marines, will just need to stay out of the way.

—Lt. Col. *U.S. Marine Corps*

Conclusion: The Humanity of War

In 1921, Karel Čapek's three-act play *R.U.R (Rossum's Universal Robots)* debuted the term "robot" for English-speaking audiences—in Czech, *robota* means "forced labor" performed by serfs or slaves. The play introduced European and American audiences to the idea of a society entirely serviced by engineered, robotic automatons. It also presaged early 21st-century military innovation wherein robots are anticipated to augment or replace human soldiers, taking over load-bearing tasks, navigation, bomb detection and detonation, piloting, and even algorithmic decision-making previously done by human calculation and deliberation. Invented by Dr. Rossum and modified by his son, Rossum's robots are entirely human-like in appearance and speech but are differentiated from humans by their inability to feel pain, process emotions, fear death, or contemplate a soul—that is, they lack embodied subjectivity. Both Rossums are long deceased at the play's start, but their humanist and economic philosophies are referenced throughout to convey the various dilemmas of deploying robots for societal

tasks ranging from housemaids to conscripted soldiers. The younger Rossum theorizes: “A human being. That’s something that feels joy, plays the violin, wants to go for a walk, in general requires a lot of things that—that are, in effect, superfluous. That are superfluous when he needs to weave, say, or add” (9). Rossum’s robots are engineered with only the minimal skills deemed requisite for physical labor or basic computational work and they take over all of the labor and military tasks that humans previously completed. In the play, robots compose the Nation’s standing military force.

Foreshadowing the 21st-century reality of robots that in turn fabricate more robots, Rossum’s robots are created by secret recipe in labs where robots assemble one another in “bone factories,” “intestine mills” and “spinning mills” for nerves and veins. Made of materials that replicate the quality of human muscle and movement, they appear physically indistinguishable from humans and offer significant commercial appeal because they can ingest any material as a fuel source, including refuse. Dr. Hallemeier, Head of Robot Psychology and Behavior, reports, “They can be fed on pineapples, straw, anything you like; it’s all the same to them, they haven’t got a sense of taste” (16). In the Prologue, the character of Harry Domin, the Director General of *Rossum’s Universal Robots* company who will not be alive at the play’s close, discusses the flaws of human embodiment with two other human characters at the robot factory. One is Helena Glory, the visiting daughter of the president of the generic Nation that has sovereign authority over the island where the robots are fabricated.

DOMIN: *What do you think? From a practical standpoint, what is the best kind of worker?*

HELENA: *The best? Probably the one who—who—who is honest—and dedicated.*

DOMIN: *No. It’s the one that’s the cheapest. The one with the fewest needs. Young Rossum successfully invented a worker with the smallest number of needs, but to do so he had to*

simplify them. He threw out everything not directly related to work, and in so doing he pretty much discarded the human being and created the Robot. My dear Miss Glory, Robots are not people. They are mechanically more perfect than we are, they have an astounding intellectual capacity, but they have no soul. Oh, Miss Glory, the creation of an engineer is technically more refined than the product of nature. [...]

HELENA: Why do you make them?

FABRY: For work, Miss. Glory. One Robot can do the work of two and a half human laborers. The human body is very imperfect; one day it had to be replaced with a machine that would work better.

In the play, replacing the “imperfect” human body with machines will result in humanity’s demise. In what is now an eschatological trope in science fiction, in Act Two a deliberate ingredient change to the robots’ bodily engineering gives them subjectivity—specifically, the capacity to “feel” they are enslaved and initiate preemptive warfare—and the robots band together in armies and violently revolt, exterminating all but one human being. The robots spare one engineer they believe can help them rebuild their bodies from Dr. Rossum’s original recipe. The robots can replicate all parts of the recipe, but cannot fabricate the flesh of their own bodies. In a panic, the first rebellious robot leader pleads: “We have increased productivity. There is nowhere left to put all that we have produced. The only thing we cannot produce is Robots. The machines are turning out nothing but bloody chunks of meat. The skin does not stick to the flesh and the flesh does not cling to the bones. Only amorphous lumps pour out of the machines” (73). In R.U.R. the body provides the irreplaceable interface for both consciousness and violence: to be alive is to be forcefully embodied. Only embodiment confers the capacity to both precipitate and prevent warfare. And yet a century ago, Čapek intuited that although waging war with robots appeared to represent progress, removing humans from warfare, in theater or at decision-making command levels, would mean abandoning responsibility for the ethics of war and ceding it to (humanoid) killing machines.

Bodies have not yet disappeared from 21st-century U.S. warfare to be replaced by their robotic descendants, but the body is poised at a precipice of technological revolution, concurrent with advances in nanotechnology, robotics, and biophysics, as well as strategic shifts in military theaters that increasingly rely on electronic warfare to both defend and destroy. Rossum's literary robots now have digitally engineered descendants that will require far more comprehensive, rigorous scrutiny of the ethical and corporeal dilemmas of a robotically engineered military, that Čapek himself anticipated: Will removing human bodies from the violence of warfare also remove the human capacity to deliberate, and potentially prevent, killing in theaters of war? Can robots commit torture or war crimes, or might a robotic military eliminate instances of abuse, rape, and unauthorized violence during warfare? Will a robotic soldier be more or less violent if it is unable to consider the consequences of its actions in real-time? Is the robot engineer, operator, or the robot itself responsible for violent acts during war? And most essentially, as horrific as warfare is, does the involvement of human bodies—boots on the ground—in any way prevent a future of war as total, mechanical annihilation of a temporally designated enemy? Without question, the role of soldiering bodies will change in the 21st century as technology is increasingly designed to augment or replace the human body. And yet in considering bodies of war, which predicament is more ethically alarming—the presence or absence of soldiering bodies in warfare?

Phalanxes of aligned and choreographed human soldiers characterized Western European warfare for centuries. This dissertation has suggested that 17th- and 18th-century warfare, particularly in France, not only relied on orchestrated, elaborate

battalion arrangements to enact war, but rigorously scrutinized the training and pedagogical instruction of soldiering bodies, simultaneously reinscribing the human body as a primary site of discipline, military display, and embodied defense. Text formats utilized newly innovated methods in printing, as well as figurative, symbolic, and annotated drawings to enliven the body as an agent that seemed to leap from the pages—drilled and deployed in geometric figurations in service of sovereign and emergent European States. However the detailed, and often artistically and visually exquisite, presentation of the 17th-century soldiering body in military drill and manuals evades a facile equation of the soldiering body with a “docile” manipulated body. Rather, it suggests that military theorists deliberately chose soldiering bodies as subjects for the artful rendering of motion. Coordinated, soldiering bodies were displayed in visual geometries that symbolically traversed political geographies as they moved across the page, visually approximating dance spatial patterns as much as efficacious military tactics. In some cases, the choreographed military formations presented in treatises were part of a creative imaginary that eclipsed the tactical realities soldiers could achieve on French battlefields, and thus were decidedly performative. In addition, the individual training, skill, and arms handling that soldiers, generally commissioned rather than conscripted, would have displayed on the battlefield suggests that soldiering was a performative labor of individual, as well as state and sovereign, force and soldiers’ individual bodies and performances cannot simply be disregarded in favor of theorizing their function as “one body” of the state. The composition of French armies, variously comprised of noble, contracted, mercenary, and standing forces, practically affirms that

soldiering provided a profession that was not only voluntary but often highly desirable. Thus soldiers, not yet widely conscripted for the French Revolutionary Army, would likely have chosen the profession and been actively invested in their training, bodily techniques, and tactics. The economy of 17th-century soldiering appears to have offered various ways for professional soldiers to perform and excel based on individual accomplishments and impedes the assertion that they were simply manipulated bodies.

As reviewed in Chapter I, dance studies' efforts to scrutinize the body in motion offers a productive disciplinary lens to view historical military movement manuals that is not provided by approaching the soldiering body from the vantage of military history.³³⁷ By doing so, the soldiering body may be contemplated as a performative agent of embodied force rather than a strategic pawn of discrete political campaigns. Where evidence is available, it appears that 17th-century soldiering bodies, like their dancing counterparts at court, were agents with *kinetic potential* to represent individual, sovereign, and state interests, although the study of military bodies *in motion* certainly remains undertheorized. As Sydney Anglo observes of Renaissance martial arts:

Despite the constant reiteration by humanist educational theorists of the value of training the body as well as the mind, we still know next to nothing about the practice of physical education and the provision of combat training for youths. [...] The relevance of systematic personal combat training, wholly aggressive and homicidal in purpose, has not even been recognized let alone studied. The intellectual atmosphere has become so rarified that nobody asks how students studied the art of killing, who taught them, and where. Furthermore, the techniques of personal violence were studied not only by emperors, kings, and princes, but by their most humble subjects. The carrying and use of lethal weapons was normal throughout social hierarchy. Yet, although social historians are remarkably keen on violence...their pages will be searched in vain for mention either of the men who taught the martial arts, their principles, or

³³⁷ Dance scholar Jens Giersdorf has made notable contributions in dance scholarship in relation to East Germany and the production of nationhood and state and folk choreographies. See: "Dancing, Marching, Fighting: Folk, the Dance Ensemble of the East German Armed Forces, and Other Choreographies of Nationhood." *Discourses in Dance*, 4.2 (2008): 39-58.; *The Body of the People: East German Dance Since 1945*. Madison: U of Wisconsin P, 2013.

their methods of instruction (2-3)

Anglo's assessment of the field affirms why a dance studies perspective will continue to be useful to examine how soldiers, past and present, embody force and violence, particularly in movement forms such as drill, physical training, and embodied combat. The methodological questions of dance studies intervene productively to widen the historical and modern lens trained on moving and performing bodies to include those of soldiering bodies and enable new inquiries such as those examined in this dissertation: Does the trained and disciplined soldiering body also rebel or resist like the dancing body? Are theories of choreography shared across martial arts and dancing arts disciplines? How do soldiering bodies perform ideological, nationalist, and cultural narratives that emerge from embodied practices intrinsic to the profession? What concerns for gender, race, sexuality, violence, brutality, and oppression are experienced or expressed by soldiering and dancing bodies in different "theaters?" Dance scholars have consistently conducted this kind of "widening," breathing disciplinary application to examine the cultural, political, and historical preoccupations that moving and choreographed bodies reveal. Susan Manning observes in *Ecstasy and the Demon: Feminism and Nationalism in the Dances of Mary Wigman* (1993) that she deliberately "moves from the discipline of dance studies into an interdisciplinary space bounded by ongoing dialogues on the history of the body and the sexual and national politics of artistic modernism' (xiii). Manning suggests that Wigman's dances are located at a "convergence between feminism and nationalism" and their politics "paradoxically supported and undermined fascist aesthetics" (xv). She invokes Benedict Anderson's

ideas of “imagined communities” to initially consider how moving bodies may project or instantiate nationalism and “articulate imagined connections between individual bodies and the collective body of the nation” (1). Study of soldiering bodies similarly suggests that while soldiers are, by profession, physically coordinated representatives of the state, they may nonetheless deliberate, resist, and even refute a facile conflation of a trained body with a tamed body. In *The Work of Dance: Labor, Movement, and Identity in the 1930s*, Mark Franko attends to the professional work of moving and choreographed bodies in the 1930s and argues that the American dancing body may be theorized in relation to productive action or “organization.” Like Manning, Franko is concerned with how moving bodies engage with and influence structures within a larger narrative of nationalism and performative labor. Franko observes: “Whether aimed at revolution, management, or entertainment, mass action in the thirties depended on the social organization of cooperative movement on a mass scale. [...] Choreographic rationales influenced the goals of structures administering the organization of the mass, and...choreographic poetics thus came into contact with other social systems” (21). Franko situates American dancing bodies within a broader “performative economy” that attends to how performers became “culturally coded” as *moving* participants, shaping both a historical narrative of labor after World War I and an American body politic (47). Individual American soldiering bodies not only “move” across the American sociopolitical landscape as part of a performative economy and physically extensive body politic wherein their physical tasks and successes reflect directly back as accomplishments of the state, they move across international borders as “culturally

coded” agents, physically transferring and translating American ideology and ideas, primarily through their embodiment of force. Linda Tomko in *Dancing Class: Gender, Ethnicity, and Social Divides in American Dance, 1890-1920* (1999) suggests that the industrial, scientific, and economic processes shaping identity formation in the Progressive Era for American immigrant and laboring communities necessarily located bodies within important cultural spheres of production and signification. Tomko writes, “human bodies offered potent sites for figuring identities and configuring social relations in the United States” (1). Tomko examines, among other groupings, laboring, urban, “extensive,” “poised,” and “well-rounded” bodies to present ways in which the body was variously considered in Progressive Era culture (7-18). In particular, Tomko’s framing of movement systems to produce “extensive” and “poised” American bodies also translates to the historical training of American soldiering bodies. The “extensive body” Tomko describes was in part cultivated through the influence of Ludwig Jahn’s gymnastic system, which incorporated weights, competitive games of rope jumping, ladder-climbing, and running, and “quite possibly required practitioners to stand in orderly rows and attempt unison execution” (Tomko 12). Tomko observes of a Jahn-based Germanic training system: “It cultivated the strength and specific skills that enabled bodies to lengthen out in space, stretch away from the trunk’s core toward their periphery, yet remain securely linked to their originating launch points. It also promoted external focus and linkage among practitioners” (12). While Tomko reviews cultivation of the “extensive body” en route to suggesting that Progressive Era dance was “yet another facet of the period’s absorption with and investment in

instrumentalizing bodily discourse” (20), the American military was simultaneously relying on Jahn’s system to develop bodily techniques and discourses to train “extensive” soldiering bodies to perform tasks in “unison execution,” and continues to use a system that relies on basic callisthenic, physical load-bearing, and competitive activities.³³⁸ In *A Historical Review and Analysis of Army Physical Readiness Training and Assessment* produced for the U.S. Army Combined Arms Center in 2013, military historian Whitfield B. East surveys American military training programs from the pre-Revolutionary period to the 2010s. East cites the same influencers on American military bodily systems as Tomko, including originators and interpreters of European military gymnastics such as Denmark’s Franz Nachteggall (1790s), Sweden’s Pehr Henrik Ling³³⁹ (1810s), and Prussia’s Frederic Ludwig Jahn (1810s), whose systems were all used by their country’s respective militaries to train soldiers and officers. The first illustration in East’s monograph is Jahn’s *Turnplatz* (school of military gymnastics) and East, like Tomko, notes that Jahn’s *turnen* (gymnastics) system “focused on the whole body,” and was also used “to improve the fitness levels of young males in preparation for war” (7);

³³⁸ For example, the U.S. Army Physical Training Guide includes only three basic exercises in Conditioning Drill 2, designed to enhance upper body strength: “The Push-Up, The Pull-Up and the Sit-Up.” Conditioning Drill 3, which describes the five exercises for developing “complex motor skills” performed to cadence includes a power jump, mountain climber (bicycling legs in a push-up), and single leg push-up. The document states: “Conditioning Drill 3 (CD3) consists of five higher-level toughening phase exercises that develop more complex motor skills while challenging strength, endurance, and mobility at a higher intensity. All of the exercises in the drill are conducted to cadence, and are always performed in the sequence listed. Exercises are performed to cadence for five 4-count repetitions, progressing to 10 repetitions. Precise execution should never be sacrificed for speed” (27). *U.S. Army Pocket Physical Training Guide*. Web. 12 Aug. 2014. <<http://www.goarmy.com/downloads/physical-training-guide.html>>

³³⁹ Tomko observes that the Swedish gymnastics systems (of Dio Lewis and Pehr Henrik Ling) produced “poised bodies” by “placing individual exercisers at carefully spaced intervals in orderly rows, each person working as an autonomous individual, everyone performing the same tasks simultaneously” (12) with “Teachers [who] put students through their paces by voicing sharp commands, the cast of which struck many at the time as militaristic” (15). In comparison, in *A Historical Review and Analysis of U.S. Army Physical Readiness Training and Assessment* (2013) Whitfield B. East observes of Ling, also a fencing master at the University of Lund, that “His program received such positive attention that in 1814 the King commissioned the Royal Central Institute of Gymnastics to serve both the public education and the military” (East 6).

Jahn served as a battalion commander in the Prussian Army from 1813-1815, and East suggests that approximately 15,000 “Turners,” as the followers of Jahn’s *Turnvereine* system were called, fought as infantry in the Franco-Prussian War (8). The convergence of these bodily systems as early influencers on both American dance and military practices suggests one way in which dance and military history—converging at the site of the moving body—provide reciprocal insights that are gleaned by attending to soldiering bodies with dance studies’ methods.

American soldiering bodies would benefit from the kinds of analyses that Manning, Franko, and Tomko deploy and dance studies routinely theorizes: the U.S. Military is institutionally defined by labor that, in Franko’s language, is enacted via “cooperative movement on a mass scale”; however, soldiering bodies are tasked to move through the performative labor of representing resistance, force, or power to actualize it violently or defensively through the body. Soldiering bodies are located at culturally convergent points that most obviously imbricate economies of technological production, geopolitics, and state-sanctioned violence. However, U.S. soldiering in the 21st-century engages with important concerns that dance studies is well-poised to consider. U.S. Soldiers perform (in the utilitarian definition of the word) bodily labor and technical tasks that place their bodies and those of the communities they engage with at the epicenter of deliberating, deploying, and enduring seemingly unfathomable, yet often governmentally-approved, physical violence. And the profession of U.S. Soldiers may be considered performative (in the theorized definition of the word) bodily labor that: first, materializes U.S. problematics concerning gender (women in combat),

race (representations of female bodies of color), sexual orientation (institutional acknowledgement of gays in the military); and second, tasks soldiers to embody violence, force, and shifting power relations in the name of state ideology to perform as a political corps. In this latter sense, soldiering is a decidedly performative political action. Randy Martin's definition of politics as instantiated through movement, examined in *Critical Moves: Dance Studies in Theory and Politics* (1998), applies to 21st-century soldiering as well as to dance:

Theories of politics are full of ideas, but they have been least successful in articulating how the concrete labor of participation necessary to execute those ideas is gathered through the movement of bodies in social time and space. Politics goes nowhere without movement. [...] For political theory in general (that would not necessarily take dance as its object of analysis), this writing elaborates the dynamics of mobilization that is already implicit in politics. [...] By mobilization I want to stress not an alien power that is visited on the body, as something that is done behind their backs, so to speak, but what moving bodies accomplish through movement. (3-4)

Martin's definition at once affirms the way in which soldiers, too, act as political agents and thus carry, using Martin's framing of politics, "the presumption of bodies already in motion" (3), and also forwards the individual subjectivity of political movers: soldiers are not "visited" by power, but rather acquire and execute it through their embodiment of force across geopolitical territories. And yet it is important to note, particularly when deliberating how decision-making occurs and where ethical responsibility lands during U.S. military occupations, that while power is not "visited upon" soldiers but rather enacted through their movements, it is also not necessarily *voluntarily* enacted. It is fallacious to infer that a "volunteer" U.S. Military should or will result in U.S. Soldiers "voluntarily" complying with all instructions issued by higher orders of command (such as using U.S. governmentally-approved techniques of torture). Rather, as evidenced in

some of the narratives presented in this dissertation, U.S. Soldiers may feel they volunteered for the U.S. Military but did not “sign up” for perpetuating violent acts they believe are unethical or illegal in accordance with U.S. and U.N. regulations governing warfare. The techniques and tactics that enable power and force to be demonstrated (or inflicted) by soldiering bodies in motion do not imply that these bodies will not actively resist, critique, or defy them. This is precisely why considering soldiers matters; while they are tasked to protect the U.S., their experiences may directly contradict governmental or institutional decisions that suggest waging war is the best way to do so.

The shift in attention towards the military body in motion and the embodiment of force is a deliberate pivot in this dissertation: the choreography and complex arrangements of hundreds of individual, 17th-century French soldiering bodies provides both a counterpoint to and convergence with 21st-century soldiering bodies. U.S. soldiers are no longer maneuvered in orchestrated battalion figurations in coordinated time to military music during deployment, although these choreographies certainly persist in U.S. military ceremonies and formal performances.³⁴⁰ However, the U.S. soldiering body remains a primary research site for scientific innovation and military corporeal technology. While the disappearance of human soldiers may be inevitable, in the 2010s and likely the next decades, even as the movement of soldiering bodies becomes “choreographed” in relation to technological interfaces rather than technical drill, the soldiering body remains the agent tasked to physically deploy, endure, and operate technologies of violent force. And thus, locating and articulating responsibility

³⁴⁰ For an excellent study of the historical and extant role of music in 21st-century U.S. combat see: Jonathan Pieslak. *Sound Targets: American Soldiers and Music in the Iraq War*. Bloomington: Indiana UP, 2009.

for the engineering of 21st-century U.S. Soldiers becomes critical: are engineering bodies responsible for designing corporeal weapons; is it hypocritical for civilian bodies to use technologies derived from military contracts while decrying military spending; are university bodies complicit with military agendas when employed by or studying at institutions that receive U.S. Department of Defense funding; should U.S. congressional and executive bodies be required to provide more disclosure regarding the loss of life of “foreign” bodies? As a country with the largest, and arguably most lethally efficacious, state military in existence in the 2010s, these questions are urgent to deliberate for a U.S. citizenry. Communities of bodies—including non-U.S. civilians, soldiers, and enemy combatants—continue to suffer the most devastating consequences of war, a bodily fate unchanged over centuries. As suggested at the outset, *war has not yet succeeded in sundering bodies from the violent force of battle*. Both soldiering bodies and impacted human communities remain the most critical (often unwilling) actors in theaters of war.

As suggested in Chapter 2, bodies should be more seriously *counted*—as in accounted for and considered—in scholarly analyses of war. As theory, training, and technology have reconfigured U.S. soldiering bodies of war from the late 18th to early 21st centuries, theorizing the body as a site of change is further enabled by drawing on dialogues and debates that are integral to the disciplinary terrain of dance studies and generally absent from military studies. Scholarly dance interventions have expanded understandings of the ways in which bodies “work”—that is, produce, labor, protest, signify, innovate, improvise, resist, and rebel. And dance scholars have already considered how physical force, and even the force of war, may be both performed and

performative. In *The Archive and The Repertoire: Performing Cultural Memory in the Americas*, Diana Taylor examines the “live” performances and memorial installations created in the weeks after 9/11 in New York City in 2001 in response to what news media outlets, as Taylor describes, preemptively characterized as “America’s New War” (241). Taylor posits: “The events of September 11, however, make me think that we’re looking at not only a different kind of war but a different kind of tragedy” (261). Her chapter suggests that the physical movement of New Yorkers—protesting, participating, photographing, and performing—created and interpreted cultural memory even as the event unfolded. Taylor offers: “Photography was evidence, proof not so much of the existence of the object of the photograph but of our own existence. We, the backgrounded participants in this drama, were nonetheless *there*” (255, original emphasis). Randy Martin argues in the chapter “Between Technique and the State” in *Critical Moves* that the state cannot be viewed as a singular “body”; rather, despite its primarily regulatory function, it is *a priori* constituted by participants who, as bodies (of force) themselves, may resist or protest state coercion. Martin argues:

The social body that the state seeks to hold and wield can also stand against the state and loosen that grip. It is not that the state stands as one social body against that of the citizenry but that the state is above all a nonproductive mechanism, a device of regulation, whose existence depends on the appropriation of what other bodies produce (whether for revenues, performance of functions, or applications of force). Hence, the notion that the state is without a productive body generative of participation suggests that coercion itself is not simply a force directed against bodies but a bodily capacity that could be directed against the state. (157)

Martin suggests that the “breakdown in the U.S. fighting machine in Vietnam might be understood in these terms” (157) and that soldiers’ resistance to the military draft throughout American history demonstrates ways in which soldiering bodies rebelled

against coercive state functions.³⁴¹ Regarding an earlier period in U.S. dance and military history, in his opening remarks at the National Theatre Conference in New York City in 1947, American dancer and choreographer Erick Hawkins frames dance as a critical cultural response after World War II and begins his talk, “The Rite in Theater,” by quoting General G. B. Chisholm of the Canadian Army. Hawkins interprets Chisholm’s remarks on the nature of morality and warfare and observes:

The only basic prevention of war is the existence of a preponderance of individuals in the world who are mature, who are—in psychological terms—not at war with themselves. [...] If the conscious and unconscious of the individual psyche are not functioning in balance, one or the other being over-dominant and top-heavy, you find an inner civil war, which enlarged is civil war, or international war. (Hawkins I)

Hawkins will use Chisholm’s reflections as a pendulum to articulate the ways in which, in the years after World War II, “the return of freedom of the human body in Western Civilization” would allow theater, broadly, and dance, more specifically, to embody and express the best capacities of humanity (at peace), including the possibility for social harmony, sacred cultural rites, and the artistic subversion of death and killing instincts. Critically, the subjectivity and societal “growth” that Hawkins envisions is possible only by considering the entire body as a powerful and productive agent for change. Hawkins writes, “It is as though in this way, we could bring back into play the unconscious,

³⁴¹ While “the draft,” singular, in public vernacular is at times associated with the controversies and protests of the Vietnam War, the U.S. has a lengthy history of using conscription or drafting to force civilians into military service. In the American colonies, select 18th-century militias as well as the Continental Army variously required (involuntary) enrollment; national conscription occurred for both Union and Confederate troops during the Civil War and was mandated both by the Confederate Congress and later the U.S. Congress in 1862. Woodrow Wilson’s “Selective Service Act of 1917” required involuntary enrollment; a peacetime draft, the “Selective Training and Service Act” (STSA), was enacted in 1940 (through 1973); and President Carter required that men of military age (18-25) register with the U.S. Selective Service System agency (SSS) in 1980, a requirement still in place as of 2014 for young men in order to participate in certain U.S. federal programs, such as becoming naturalized or receiving federal student loan aid (FAFSA). See: <www.sss.gov/FSwho.htm>

For considerations of the politics of drafted bodies in U.S. history see: Barnet Schecter. *The Devil’s Own Work: The Civil War Draft Riots and the Fight to Reconstruct America*. New York: Walker Books, 2009; Micheal Stuart Foley. *Confronting the War Machine: Draft Resistance during the Vietnam War*. Chapel Hill: U of North Carolina P, 2003.

directly through the body, and allow the intuition to find its balance against the present preponderance of the intellect and arrive at the whole man” (4). Hawkin’s articulation of the ways in which the body should be counted to constitute the “whole man” is set against the “intellectual” decision-making responsible for sending and sacrificing soldiers to international war, which Hawkin views as an outgrowth of broader failures to consider bodies as expressive, deliberative actors in American culture.

The history of U.S. warfare has developed from so-called first generation warfare (conscription, Napoleonic military formation, and early handheld firearms) to second generation (Civil War and World War I nation-state alliances with advanced systems of weaponry), to third generation (World War II maneuver and coordinated air, ground, and sea formations) to fourth generation (networked guerrilla warfare and distributed technologies).³⁴² As Chapter 3 examines, it has arrived in 2014 with molecular advances in nano, micro, metamaterial, robotic, and biometric surveillance technologies that purport to alter the material substrate of soldiering bodies, and by extension, military performance in U.S. theater operations. Research advances in artificial life may render Rossum’s robots a reality that exceeds even Rossum’s vision for a robotic military force, one without the embodied humanity to deliberate the ethical consequences of and pose alternatives to warfare. However, the fictitious engineering of Rossum’s robots as primarily laboring bodies with commercial and military applications is very much “alive” in the 21st-century. One area for future research wherein dance studies’ concerns for the erasure of human subjectivity and the presence of the body may intervene to

³⁴² For significant examinations of the shifts in generational warfare, see: John Robb. *Brave New War: The Next Stage of Terrorism and the End of Globalization*. Hoboken, NJ: Wiley Press, 2007; Thomas G. Mahnken. *Technology and the American Way of War Since 1945*. New York: Columbia UP, 2008.

creatively critique technology regards the development of commercial robots intended to replace various types of human labor and activity, including by replicating the flesh, organs, anatomy, physical motion, and even artistic expression of humans.

A somewhat whimsical, though racially and representationally problematized, example of performing robots includes the NAO robot series, which are desktop sized, humanoid robots engineered by the French-based company Aldebaran Robots that rely on inverse kinematics to achieve “whole body” motion. In 2010, twenty Japanese-styled NAO robots performed for France’s Pavilion Day, including conducting dance “rehearsals” prior to the event. On film, the robots begin their performance in synchronized unison with gestures patterned on Japanese Noh dancing, but then move into alternating facings, patterns, and styles best described as modern dance.³⁴³ NAO robots have subsequently been programmed and choreographed to dance Michael Jackson’s “Thriller,”³⁴⁴ Psy’s “Gangnam Style,”³⁴⁵ and in one online performance entitled “The Evolution of Dance,” a NAO robot performs over twenty popular American dance styles, recognizable by distinctive gestures, beginning with Elvis Presley’s “You Ain’t Nothing But a Hound Dog,” and sequencing through choreographed moves to the musical numbers of “YMCA,” “Greased Lightening,” “Mr. Roboto,” and “Jump On It.”³⁴⁶ Aldebaran’s company literature suggests that their humanoid NAO robot, although only available in male gender with a seemingly Caucasian ethnicity, is intended to be “a true,

³⁴³ See documentation at YouTube Video: “World Premiere: 20 Nao Robots Dancing in Synchronized Harmony.” 18 Jun. 2012. Web. 8 Jan. 2013. <<https://www.youtube.com/watch?v=4t1NWH6GIf0>>

³⁴⁴ See documentation at YouTube Video: “Nao Robots Thriller Dance.” 10 May. 2012. Web. 8 Jan. 2013. <<https://www.youtube.com/watch?v=n8-SSwKMGnY>>

³⁴⁵ See documentation at YouTube Video: “Nao Robots Dance Gangnam Style.” 5 Nov. 2012. Web. 2 Jan. 2013. <<https://www.youtube.com/watch?v=51vQo-imc4Q>>

³⁴⁶ See documentation at YouTube Video: “Evolution of Dance by NAO Robot” 12 Jul. 2012. Web, 4 Jan. 2013. <<https://www.youtube.com/watch?v=2laujomh0JY>>

daily companion who will help you be your best.” Further anthropomorphizing NAO, with a specific emphasis on his achievement of human qualities through both conscious evolution *and dancing*, the company asserts: “Since his birth in 2006, he has been constantly *evolving* to please, amuse, understand and love you. In short, to one day become your friend. [...] You can program him to walk, catch small objects and even dance!” (original emphasis).³⁴⁷ NAO’s life-sized and more advanced male robotic colleague, “PEPPER,” is designed as a “true social companion,” engineered to model the subjectivity of humans by responding to emotional life through human’s *body language*:

To be a true social companion Pepper needs to be able to understand your emotions. If you burst out laughing, he will know you are in a good mood. If you frown, Pepper will understand that something is bothering you. Pepper can translate what state you are in using his knowledge of universal emotions (joy, surprise, anger, doubt and sadness) and his ability to analyze your facial expression, body language and the words you use. He will guess your mood, and will even adapt to it.³⁴⁸

The advent of NAO and PEPPER suggest one way that the technology sector may create humanoid dancing and performing “bodies” intended for use in assistive, educational, and commercial sectors that still elide very basic concerns for bodily representation, creating, in essence, a corps of male, “ethnically” white, elite robotic companions.

Decidedly less whimsical, the development of Rossum’s humanoid robots that can “ingest any material as a food source” and have anticipated military applications include a cadre of robots termed “gastrobots.” Gastrobots have artificial digestive systems to ingest living or decaying organic matter for biofuel and perform various duties, ranging from serving as household “maids” to performing duties as self-fueling,

³⁴⁷ For a complete description of the Aldebaran NAO Robot series see: Humanoid NAO Robot. Nov. 2014. <<http://www.aldebaran.com/en/humanoid-robot/nao-robot>>

³⁴⁸ For a complete description of the Aldebaran PEPPER Robot series see: Humanoid PEPPER Robot. Nov. 2014. <<http://www.aldebaran.com/en/a-robots/who-is-pepper>>

weaponized military personnel. Initiated in 2003 as a partnership with Defense Advanced Research Projects Agency (DARPA), the U.S.-based company Robotic Technology Inc. (RTI) debuted a “vegetarian” military robot in 2009 termed an “Energetically Autonomous Tactical Robot” (EATR™ for short). Designed with a hybrid, external combustion engine, the military robot is designed to run on traditional fuels (e.g. gas, coal, diesel) or biomass (e.g. grass, leaves, wood), allowing the robot to potentially forage for its own energy sources while assisting in agricultural, commercial, and military operations. EATR’s touted capabilities range from eating invasive plant species in state parks to carrying military weapon systems that have, “the ability to occupy territory and perform missions with sensors or weapons indefinitely.”³⁴⁹ Public fear of EATR’s potential appetites, flamed by press reports in popular media outlets such as *The Huffington Post* and *Fox News* that the robots fed on deceased human bodies as a fuel source,³⁵⁰ led RTI and the engine designer Cyclone Power Technologies, to issue a joint statement in 2010 titled “Cyclone Power Technologies Responds to Rumors of ‘Flesh-Eating’ Military Robot.” In an attempt to assuage the public the companies declared:

The public can rest assured that the engine Cyclone has developed to power the EATR runs on fuel no scarier than twigs, grass clippings and wood chips—small, plant-based items for which RTI’s robotic technology is designed to forage. Desecration of the dead is a war crime under Article 15 of the Geneva Conventions, and is certainly not something sanctioned by DARPA, Cyclone or RTI. (I)

³⁴⁹ Robert Finkenstein. “EATR: Energetically Autonomous Tactical Robot” 13 Jun. 2010. Web. 12 Feb. 2014. <<http://www.robotictechnologyinc.com/images/upload/file/Presentation%20EATR%20Brief%20Overview%2013%20June%2010.pdf>>

³⁵⁰ See: *Huffington Post*. “Military EATR Robot Could Feed on Dead Bodies on the Battlefield.” Posted 15 Aug. 2009. Web. 12 Mar. 2010. <http://www.huffingtonpost.com/2009/07/15/military-eatr-robot-could_n_233418.html>

FOX News. “Biomass-Eating Military Robot Is a Vegetarian, Company Says” 16. Jul. 2009. Web. 12 Mar. 2010. <<http://www.foxnews.com/story/2009/07/16/biomass-eating-military-robot-is-vegetarian-company-says/>>

Chris Matyszczyk. “Dawn of the Corpse-Eating Robots?” *CNET News*. 15 Jul. 2009. Web. 12 Mar. 2010. <<http://www.cnet.com/news/dawn-of-the-corpse-eating-robots/>>

Harry Schoell, the CEO and founder of Cyclone additionally noted in the press release, “We completely understand the public’s concern about futurist robots feeding on the human population, but that is not our mission. We are focused on demonstrating that our engines can create usable, green power from plentiful, renewable plant matter. The commercial applications alone for this earth-friendly energy solution are enormous” (1). While public concerns regarding necrophagous robots are currently unfounded, a future wherein robots consume not only fresh biomass, but also waste products and living organic matter, has already arrived. In 2010, Bristol Robotics Laboratory at the University of the West of England (UWE) debuted the latest iteration of the Ecological Robot (ECOBOT) series, a robot designed to consume both organic waste and living matter for self-fueling energy. Both EATR and ECOBOT robots are classed as “energetically autonomous,” a rapidly expanding family of robots that are designed to be energetically self-sufficient without human monitoring, ultimately for months or years, in environments that present challenges for traditional refueling. Unlike EATR, the ECOBOTS use microbial fuel cells (MFCs) to drive the engine with a food substrate and digestive bacteria to break down the organic matter.³⁵¹ In the report “EcoBot III: A Robot with Guts,” presented at the 2010 Proceedings of the Alive XII Conference in Odense, Denmark, the coauthors write: “Possibly the technology could be scaled sufficiently to generate energy from large ‘reservoirs’ of biomass such as those found in sewage treatment works. [...] To the best of the authors’ knowledge, this is the first

³⁵¹ For example, Ecobot-I is run by e-coli bacterial colonies and sugar; Ecobot-II relies on microorganisms in sludge to digest live flies and rotten fruit; Ecobot-III uses pasteurized sludge or live flies attracted by chemical pheromones. ECOBOTS are thus designed to self-sufficiently harvest both decaying and living matter, convert it into energy, and even excrete the excess biomass (in the case of Ecobot-III).

example of a robot which integrates real life and machine in a symbiotic manner (Symbot) for digestion and autonomous operation as an exemplar of artificial life” (Ieropoulos et al. 739-740). Symbots represent an iteration of gastrobots that herald not simply the physiological merger of humans and machines for basic biological functions, such as pace-makers and mechanical prosthetics, but the development of robots that physiologically replicate human biology, thereby presaging a future of robots that incorporate fully-functional internal digestive, nervous, and reproductive systems in addition to exterior anatomies, and could be integrated with or replace human systems.

Karel Čapek’s literary robots anticipate their 21st-century incarnations such as EATR, Ecobot, TALOS, and the Future Soldier Initiative by nearly a century. He also signaled the numerous ethical questions that accompany the development of humanoid robots, particularly those designed as “symbots” to combine biological and mechanical operations within one robot and those designed for applied military applications in the name of geopolitics. Throughout his political and literary life, Čapek was considered one of Europe’s great advocates for intellectual and cultural independence from oppressive institutional and governmental forces. He worked tirelessly at the end of his career in opposition to the German National Socialism movement—in fact, the Nazis publically deemed him an enemy of the state. As Ivan Klíma writes in his “Introduction” of Čapek, “No writer in Czechoslovakia (and very few elsewhere in the world) reacted with such accuracy and with such passion to the Nazi takeover” (Klíma 24). The themes of R.U.R are not politically static, but are situated within the broader philosophical dilemmas and ethical precepts that Čapek was preoccupied with and that still trouble the use of

robotic and corporeal technologies in the 21st century U.S. For example, the term “Universal” in the title of R.U.R. was not coincidental; Čapek was not simply concerned with the bioengineering of robots for commercial use, but with their inevitable appropriation and deployment as nationalized, military bodies of force. In a desperate attempt to stop the robot revolution, the Director of R.U.R. contemplates how to prevent future uprisings by creating xenophobic laborers and soldiers:

DOMIN: There'll no longer be just one factory. There won't be Universal Robots any longer. We'll open a factory in every country, in every state, and can you guess what these new factories will produce? National Robots. Each factory will be making Robots of a different color, a different nationality, a different tongue; they'll all be different—as different from one another as fingerprints; they'll no longer be able to conspire with another; and we—we the people will help to foster their prejudices and cultivate their mutual lack of understanding, you see? So that any given Robot, to the day of its death, right to the grave, will forever hate a Robot bearing the trademark of another factory. (46)

This description is similar to that of the U.S. Army Future Soldier Initiative (FSI), a century later. FSI proposes to use militarized “national” robotic systems—linked into corporeally embedded and remote weapon platforms—to identify and eliminate designated enemies by first accessing biometric data and then presenting human targets as projected digital “avatars” on personal screens within soldiers’ exoskeleton suits.

The headgear system of the Future Soldier incorporates sophisticated “all directions” display technology for high fidelity vision under all battlefield conditions. [...] The headgear system will be able to provide face detection and store or compare those images against an established repository of biometric data and make face positive detection and identification of targets. [...] System-on-chip (SOC) embedded processing integrated into the headgear system will meld data into a fused, coherent, tactical situational picture (perhaps displayed as a “situational avatar” on the Soldier’s tactical display). [...] In addition, the sensors on the helmet will incorporate geo spatial registration and weapon targeting features that assist in navigation, sniper detection, biometric facial recognition, and target detection.³⁵²

³⁵² U.S. Army Natick Soldier Research, Development and Engineering Center. “Future Soldier White Paper.” Massachusetts: U.S. Army Natick Soldier Research, Development and Engineering Center, 2009. Web. 10 Jan. 2010. <<http://nsrdec.natick.army.mil/FSI/index.htm>>

Like their human soldiering counterparts, robotic exoskeletons and robotic systems may also be tagged by the U.S. Military to take on a distinctly nationalist identity in the future. Engineered with biometric recognition capabilities, it is certainly possible to imagine American robots that, following Čapek, target any “Robot bearing the trademark of another factory,” providing another example of how robotic “bodies” may become politically performative for the U.S. Government in future theaters of war.

The U.S. government and U.S. Military agencies undeniably seek every advantage, even those that are economically adverse to the nation’s debt accumulation, to deploy soldiers with the greatest technological advantage to both ensure their safety and eliminate designated enemy targets. And yet the emphasis on technological, electronic, and digital warfare that has characterized the last two decades of warfare obscures one persistent reality: the most devastating outcomes of war—what defines war as “war”—have always been endured by and waged on civilian, citizen, and combatant bodies with great violence regardless of a war’s decisive outcome. Thus, it is the sacrifice, injury, protest, and rebellion of these bodies within the communities most impacted by war that must be attentively considered to contribute to a history of U.S. war that prioritizes the embodiment of force at war as well as strategy, tactics, and technology.

In personal interviews with me, U.S. Soldiers echoed many of the concerns outlined in this dissertation regarding the ethical dilemmas of removing human soldiers from military action. One U.S. Air Force service member remarked, “I don’t envy my colleagues who are drone operators. There’s no amount of money you could pay me to leave the pilot cockpit and kill people from a computer. The further we’ve gotten from

hand-to-hand combat, even in the planes we fly now, the more opportunity there is that you'll make a mistake."³⁵³ Another U.S. Navy service member theorized:

C.C. (U.S. Navy, 2003-2014): If you study global military history you know: war often kills, or directly targets, the wrong people. Modern war conventions are designed to prevent this, but they are very, very, very recent in the human history of making war. Canons, nuclear and chemical weapons, the atomic bomb—these were all designed to kill large numbers of people indiscriminately. Now, we are moving toward far more specific targeting, but the technology is still in its infancy, and this means our modern, precise ethics are being applied to a technology that remains very imprecise.

And Aaron Cota, a former U.S. Marine observed:

Aaron Cota (U.S. Marine Corps, 2001-2009): It's usually the case, for example with drones, that human operators are thousands of miles away and they can only see whatever the drone happens to be showing them. There's not anybody on the ground to verify exactly what is going on. You can't take the human element completely off the battlefield, yet, and I don't think it would be a good idea to ever do so. As much as we want to protect our military members, I think it's going to be a very bad idea to take humans out of war.

These U.S. soldiers all suggest that removing humans from U.S. acts of war that remain directed at human communities may cause more mistakes and accidental casualties during war. As emphasized in this dissertation, the forceful presence and violent disappearance of bodies has characterized warfare for centuries. However, will war in the future—fought by robot infantry, remotely-operated technologies, and soldiers so augmented by corporeal technologies they may no longer be characterized, exactly, as human—be defined as *the use of violent force without human bodies in theaters of war*? And will the “humanity of war”—previously, the presence, if not always the admirable actions, of ethically deliberative human participants on the battlefield—become synonymous with preemptive or retaliatory attacks wherein technological systems rather than living human beings are sacrificed? And will this make war more “humane?”

³⁵³ Personal interview with R.A. January 20, 2013.

If future 21st century wars indeed remove human bodies as direct combatants—for example, by conducting cyber warfare that targets and collapses state financial, telecommunications, and energy arrays—then perhaps “winning” war will not require direct human casualties, but will be measured by the impact on state economic and institutional infrastructures. And yet in calculating the total impact of this kind of cyber or systemic warfare, conducted by either state or non-state actors, it quickly becomes apparent that the loss of energy grids, digital communications, electronic financial systems, and the ensuing impact on food production, water filtration, housing, and medical aid would still be measured—quantitatively and qualitatively—by the impact on *communities of bodies*, particularly impacting those with fewer resources. Thus, it appears war will always be defined as *the use of force against bodies*. Recalling General Rupert Smith’s theorization: “Military force when employed has only two immediate effects: it kills people and destroys things” (8). And by the U.S. Military’s own definition: “Warfare remains a violent clash of interests between organized groups characterized by the use of force” (13).

This dissertation has argued that soldiering and dancing bodies and their disciplinary bodily practices, particularly in regard to the embodiment of force, may be analyzed in relation to one another and present significant historical correspondences and modern opportunities for productive theorization. In the 21st century, U.S. Military branches no longer require strategy and tactics to be embedded in the complex bodily etiquette of court politics, nor enacted within traditions of physically nuanced drill and choreographed infantry formation. If there was ever a time when war “kept time” on

the battlefield, it would appear that in 2014 war has become physically asymmetrical, arrhythmic, and continually improvisational. And yet the human body, even as it becomes the site of technological revolution, still remains “center stage” in war. Thus it may not be surprising to find that—like their 17th-century counterparts and their World War II swing dance contemporaries—deployed U.S. Military soldiers continue with startling frequency and with a continuum of styles that convey the diversity of American creative cultures—to dance through war. Perhaps the most intriguing opportunity for future scholarship that addresses a rapport between dance and war may be found in the phenomena of 21st-century “combat dancing.” While the correspondence between Early Modern soldiering and dancing has been studied by scholars in various disciplines and is apparent to historians, future scholars may note, particularly if the extensive digital records remain extant that, however improbable, in early 21st-century U.S. military engagements U.S. soldiers continued to dance during active deployment.

As a dancer, it was far easier for me to perform the marching, drill, and cadence. It was all very similar to a ballet barre, or a formal warm-up or going across the floor and learning different combinations. I was able to hear the instructions from the drill instructor and execute them as if it were dance.

–Aaron Cota, U.S. Marine Corps & Dancer

As dancers, we’re using our time to try to transcend the average everyday experience. Likewise, I think Soldiers anywhere will always try to transcend the situation to distract them from the stress that they’re in, including by using dance.

–Andrew Enriquez, U.S. Army National Guard & Professional Ballet Dancer

Tempus plangendi et tempus saltandi
(A time to mourn and a time to dance.)

–Ecclesiastes 3:4

Directions for Future Research: Dancing Through Deployment

In a sweeping phenomenon U.S. Soldiers refer to as the “Combat Dancing” craze, hundreds of videos of dancing, deployed soldiers have been uploaded to YouTube, LiveLeak, and U.S. Military video channels since the first invasion of Iraq in 2003. All branches of the U.S. Military, including the U.S. Air Force, U.S. Army, U.S. Coast Guard, U.S. Marines, and U.S. Navy, as well as U.S. Navy Seals,³⁵⁴ West Point Academy,³⁵⁵ U.S. Naval Academy,³⁵⁶ U.S. Merchant Marine Academy³⁵⁷ cadets, and even United States Central Command (CENTCOM)³⁵⁸ teams, have participated. Inspired in part by the popularity of *So You Think You Can Dance* and *America’s Best Dance Crew* television shows, the soldiers choreograph individual and group numbers, as well as dance and “battle” competitions wherein units and service branches compete against

³⁵⁴ For U.S. Navy Seals example, see: https://www.youtube.com/watch?v=45xDF-P_x3Y

³⁵⁵ For West Point Academy example, see: <https://www.youtube.com/watch?v=Aa4RLoG9234>

³⁵⁶ For U.S. Naval Academy example, see: <https://www.youtube.com/watch?v=Od92ghaoa4U>

³⁵⁷ For Military Merchant Marine Academy example, see: https://www.youtube.com/watch?v=JyOy_G4ac0c

³⁵⁸ For CENTCOM example, see: <https://www.youtube.com/watch?v=jcxfHXsutXw>

one another within and across theaters of operation. The dancing includes elaborately staged routines to online, meme dance sensations such as “Harlem Shake” and “Gangnam Style” alongside Top 40 music videos wherein the original dance choreography, staging, stylistic techniques, and costumes from the productions are replicated, often frame by frame. Across the videos, dancing soldiers frequently improvise with artillery, smoke flares, machine gun ammunition, aircraft, and Humvees as stage props. In July 2012, U.S. Military active-duty units submitted dozens of dance videos to YouTube for U.S. National Dance Day, and the U.S. dance video sensation has been replicated by British, Dutch, Israeli, Norwegian, and Russian State armies.³⁵⁹

In a decade wherein warfare has been digitized and widely broadcast, dancing by members of the U.S. Military has also been recorded, elaborately edited, and posted online to create an extensive cultural archive of dancing during 21st-century wartime. U.S. soldiers are not dancing, as often occurred during earlier 17th-century performances in France, because it facilitates military strategy, executes tactics, or explicitly performs political alliances. Rather, one explanation proposed here is that soldiers are dancing because being human is an irrefutably embodied experience—even primarily embodied—during times of war and the expressive physicality of dancing affirms the act of living when faced with the immediate possibility of dying. In the soldiers’ own words, from personal interviews, dancing during wartime “boosts morale,” “alleviates boredom,” “channels stress into creative outlets,” “transcends the ordinary,” “expresses emotions other than anger and frustration in combat zones,” “builds a creative

³⁵⁹ For video examples of non-U.S. combat dancing, see: *Dissertation Appendix B: Sample Online Military Dancing, 2003-2014*

community,” “allows soldiers to culturally connect with Iraqi and Afghani civilians,” and “temporarily distracts soldiers from death.” Like their avidly swinging, World War II counterparts, U.S. Military soldiers are also dancing during wartime. And due to technological advances, they are able to record their own dancing while stationed at posts, on patrol, waiting for combat, with civilians, and in the field. For stages, they dance atop Humvees, on airstrips, in cockpits, in barracks, on aircraft carriers, in helicopters, and during dining hall flash mobs.³⁶⁰ For props, they dance with night vision goggles, gas masks, ballistic vests, smoke signals, ammunition, grenades, rifles, and machine guns. For choreography, they dance hip-hop, classical ballet, house, merengue, salsa, samba, jazz, modern, and Korean Gangnam Style. Soldiers disco, break, krump, moonwalk, vogue, pop and lock, Robot, Harlem Shake, and Cupid Shuffle across U.S. military bases and battlefields.

In the introduction to one music video posted online that originally aired on the official U.S. Military Channel as a television commercial in 2008, the fade-in caption offers one obvious explanation for why soldiers dance while deployed—stress. The video begins with Billy Idol’s track “Dancing with Myself” and reads, “In a war, combat stress can turn any Soldier, Sailor, Airmen, or Marine into...a really good dancer” (Figure 35). The next three text captions describe the choreography. The text “They dance alone” is followed by U.S. Soldiers dancing salsa and hip-hop against diverse backdrops, including airfields, Humvees, and barracks. “They dance in groups” shifts to a split screen of both improvised and choreographed dancers performing for the camera

³⁶⁰ See: “U.S. Soldiers Doing a Flash Dance in Afghanistan.” Task Force CORSAIR Flash Mob FOB Shank, Afghanistan. 12 Jul. 2012. Web. 10 Jun. 2013. <<http://www.youtube.com/watch?v=iFPYBnkKmQo>>

on sandbags, and the third caption, “They dance with stuff” cuts to soldiers dancing with shovels, rifles, and machine gun ammunition against a barbed wire “scrim” (Figure 36). The next caption reads, “Or they just cut loose when the moment strikes them.” Here, the camera shows soldiers dancing—generally in full gear—in every imaginable style. They moonwalk, robot, vogue, and running-man. They pop and lock, dance-spank one another, and even Rockette kick. The video concludes: “Regardless of rank, Military branch, or mission...one thing is for sure...the troops gotta dance.”³⁶¹



Figure 35. “Troops Dancing” Video Frame:
U.S. Military Channel, 2008



Figure 36. “Troops Dancing” Video Frame:
U.S. Military Channel, 2008

Online meme dance sensations such as “Gangnam Style” and “Harlem Shake” that swept the world—showing communities around the world grinding, gyrating, and gesturing together with collective enthusiasm that was both recognizably stylized from the original and yet distinctly nationalist—have found some of their best choreographers and dancers on U.S. Military bases in the Middle East and U.S. Military academies (Figures 37-42). Andrew Enriquez, a U.S. Army National Guard member who also

³⁶¹ Originally shown as U.S. Military Channel television commercial and later posted on YouTube. See: “Troops Dancing” 9 Jul. 2008. Web. 1 Aug. 2009. <<http://www.youtube.com/watch?v=PYUAShj-dCY>>

performed as a contemporary ballet dancer with the 2010 U.S. Army Soldier Show, the modern version of historic USO dance and musical tours, offered this explanation for the rage of combat dance videos in personal interview with me:

Andrew Enriquez (U.S. Army National Guard, 2008-2014): Anytime you have a population of people who can't go anywhere—soldiers and prisoners have a lot in common in this regard, and especially if soldiers are in a combat zone—the tendency to grab onto any positive way to channel energy towards creative pursuits happens. When people are in constrained circumstances they find a creative outlet and put an extraordinary amount of energy into it because their freedom can't really be expressed any other way.



Figure 37. U.S. Army Starting “Harlem Shake” from Drill Line with Solo Performer (Top)



Figure 38. U.S. Army Performing “Harlem Shake” After Removing Uniforms (Bottom)



Figure 39. U.S. Army and U.S. Marine Corps Afghanistan: "Gangnam Style" Video



Figure 40. U.S. Army and U.S. Marine Corps Afghanistan: "Gangnam Style" Video



Figure 41. U.S. Army “Cupid Shuffle Video”



Figure 42. U.S. Air Force “Dance Video”



*Figure 43. U.S. Marine and Ballet Dancer Aaron Cota
Fouette Turns in Iraq, Camp Fallujah, 2005*



*Figure 44. U.S. Marine and Ballet Dancer Aaron Cota
Pirouettes in Iraq, Camp Fallujah, 2005*

In personal interview, Aaron Cota, a former U.S. Marine with both a BA and MFA in Dance, described his own combat dance video entitled, “Yeah, We Were Bored,” which has over 300,000 views on YouTube.³⁶² Staged and choreographed at Camp Fallujah, Iraq in 2005, Cota, who appears dancing in Figures 43-44, reflects:

Aaron Cota (U.S. Marine Corps, 2001-2009): I think the [combat dance video] craze has to do with the widespread popularity of TV shows such as *So You Think You Can Dance*, *Dancing With the Stars*, and *America’s Next Dance Crew* and the other international versions of those shows. But I also think the technology that we have available has lent itself and made it possible to do this at bases—easy access to video cameras, and once we get set up wherever we are we have access to the Internet. We shot that video over the course of a week and put it together and showed it off. And people liked it. It gave us something to do because there is a lot of down time. We had one guy over there wanting to try to commit suicide because he was so depressed because didn’t want to be there. He didn’t, but he had to be medically discharged. We didn’t even have it that hard over there; there were people who had it much harder than we did it. Dance brings joy to people no matter what kind of dance it is whether you’re watching it or doing it or both. It brings some sort of happiness and emotion other than anger.

Cota’ states that the title of his video was accurate—he and his fellow soldiers were bored during the down time that punctuated patrol, survey, inventory, and mission operations—but his remarks above suggest that dancing also allowed individual soldiers to feel embodied emotion and subjectivity amidst an experience that was particularly dehumanizing, for soldiers and Iraqi civilians alike. Cota first notes, “We were over there for obviously the wrong reasons, but we all knew this and we couldn’t really say anything about it.” And then he describes the choreographic process, conducted and filmed amidst the combat stress and duties at Camp Fallujah, “It was surprisingly easy to gather these guys up and say, ‘Hey, we’re going to teach you some very basic choreography that you’ve all seen on TV. We’re going to give you the pattern and film

³⁶² See: Aaron Cota. “Yeh, We Were Bored.” 18. Sep. 2006. <<https://www.youtube.com/watch?v=Qi6QS-yrIvc>>

you doing it multiple times from different angles.’ They all said, “Great, let’s do it.” Cota’s video includes him performing classical ballet in combat boots and fatigues,³⁶³ as well as soldiers performing in choreographed groupings, at night with directional glow sticks, in duets on various military vehicles, and in improvisational solos and pairings.

One of the most elaborately choreographed combat dance videos, by a group of U.S. Soldiers calling themselves the Iraq “Desert Dynamic Group” is set to N’Sync’s “Bye Bye Bye” and has also received more than 300,000 online views as of 2014. The caption to the 2008 upload reads, “N-Sync is back-with the Desert Dynamic Duo Music Group...Another video done in the desert.” The four performers are in identical costumes, bare-chested with army caps and black pants held up by utility straps, and change footwear during takes between army boots and flip-flops. The dance is four minutes in length and the choreography, performed on sand against a backdrop of mortar barriers, is unusually complex and would have required multiple rehearsals to memorize and perform in sync. The dancers execute intricate partner lifts and aerial jumps, perform shifting configurations of linear and circular arrangements and level changes, and break up the synchronized quartet work with stylized and improvised solos, duets, and trios. The video is unusual in that, unlike other combat dance videos that include military props, vehicles, or some recourse to the military activities being conducted, this footage is tightly shot and the sand stage has clearly been delimited to give no indication of the surrounding military activities; it deliberately appears to remove any sense that the performance is not occurring on a regular “stage” (Figures 45-47).

³⁶³ In personal interview, Cota apologized for not having “great spotting technique” in the video shot at Camp Fallujah. To which I replied that, if noticeable, I believed any observer would certainly give him a “pass” given he was performing pirouettes on a military base in a highly mortared combat zone.



Figures 45-47. Video Dance Frame: U.S. Soldiers, "Bye Bye Bye"³⁶⁴

³⁶⁴ See: "Bye Bye Bye" YouTube. 28 Feb. 2008. <<https://www.youtube.com/watch?v=f9DHTNqBVmc>>

Another video filmed in Iraq in 2007 titled “Combat Dancing in Baghdad, Iraq, Operation: Rock The Casbah,” is set to Eddy Grant’s “Electric Avenue.” It asserts in the description that it is one of the “ORIGINAL Combat Dancing videos. Filmed Feb-Apr 2007. East Baghdad, Iraq. 3rd Squad. 2nd Platoon. 46th MP Company. 759th MP Bn. 89th MP BDE,” and notes: “All soldiers participating made it back safely.”³⁶⁵ The video showcases U.S. soldiers dancing with Iraqi children, civilians, and soldiers at checkpoints, Iraqi Military Police posts, and in front of Iraqi homes and storefronts. Dance in these settings—the improvised, bodily performance of non-violence—seems to suggest that dance may be a strategy to “win the hearts and minds” of the Iraqi people, a cultural art form that soldiers perform in a real theater of war to assuage Iraqi citizens that U.S. soldiers, if not the government itself, are there with diplomatic intentions. Former U.S. Marine and professional ballet dancer, Roman Baca observed that dance was invaluable in communicating with Iraqi civilians:

Roman Baca (U.S. Marine Corps): In the absence of an interpreter, sometimes we would try to mime or gesture our intent or instructions. With a few Iraqi soldiers, this naturally developed into more elaborate movement. There was one soldier in particular, who I will really miss, who danced with us a lot. He was fascinated by American popular culture—many Iraqi young men study breakdancing and hip-hop with whatever materials they have access to and are really quite good. And of course, there were the Michael Jackson imitators. They were extremely eager to show us their styles and skills. Dance sometimes provided the best translation service we could have asked for to let people know we were not there to harm or hurt them in any way.

What makes combat video dance so compelling is the window it provides into the embodied lives of U.S. soldiering activities—viewers are able to see soldiers on patrol, in the interior of their living quarters, cleaning their weapons, in transit in military tanks, helicopters, and aircraft, and interacting with Iraqi civilians. But it has also created a

³⁶⁵ See: “Combat Dancing in Baghdad, Iraq.” 10 Apr. 2007. <<http://www.youtube.com/watch?v=C3iY45m0vIY>>

digital archive to document contemporary dance styles, particularly those that sweep across the Internet in waves of collective, dancing fever. One example of this is the 2012 video of the Miami Dolphins Cheerleaders dancing to Canadian singer Carly Rae Jepsen’s song, “Call Me Maybe.” The cheerleaders were filmed dancing, most often in bikinis, in various locations including at the beach, against palm trees, and in a swimming pool. In 2013, U.S. Army service members stationed in Afghanistan recreated the music video frame-by-frame. They worked to match each soldier to the ethnicity of each cheerleader, copied the cheerleaders’ precise gestures and timing, and substituted machine gun ammunition, guns, Humvees, sand, and colored gas flares for their props.



Figures 48-49. U.S. Army Afghanistan: “Call Me Maybe” Copy of Miami Dolphin Cheerleaders Video



Figures 50-53. U.S. Army Afghanistan: "Call Me Maybe" Copy of Miami Dolphin Cheerleaders Video

U.S Military combat dance videos suggest how war stresses soldiering bodies in particular ways and the potential that dance has as an embodied practice to transpose energy through creative expression. However, many of the dance videos also present disquieting signs of the far more violent political backdrop of war—provided as a real scrim in the dance films. In an informal video of U.S. Army service members doing the *Cupid Shuffle* posted online in 2011, male soldiers improvise in a small group with rifles, shouting “You go, girl!” and “Break it down!” as they turn towards and away from the camera in the recognizable shuffling pattern performed at weddings since the song debuted in 2007.³⁶⁶ However, enlarging video stills of the images on the back wall reveals more than a dozen photos of injuries, some of which appear to be young people and others full human figures seated or standing in seemingly contorted positions of pain (Figure 41). This alarming juxtaposition most accurately captures the reality experienced by bodies of war and conveys a far grimmer theater of war than the videos suggest. It also suggests that the images presented in the videos may themselves be viewed as “silhouettes of war”—framing and presenting particular embodied responses to war through a camera lens and concealing others.

When asked to describe the similarities between dance and war, Roman Baca remarked, “Dancers make excellent military personnel. They are already trained to be disciplined, to sacrifice their bodies for a greater good, to work in a corps, and are accustomed to great physical stress. That essentially describes war and dance. Both use

³⁶⁶ See: “The Cupid Shuffle: Army Edition.” 1 Mar. 2011. <<https://www.youtube.com/watch?v=IbDHvtIjEYo>>

the body as a tool or a weapon.”³⁶⁷ As theorized in this dissertation, war has historically been waged by soldiering bodies who use, in both Baca’s and Clausewitz’s descriptions, their bodies as “weapons” of war and endure, or are professionally tasked to inflict, physical and psychological acts of violent force. However, it may be a far more alarming scenario to *remove* soldiers from theaters of war: while the robotic soldiers that may replace them cannot die, they also cannot deliberate the ethics and consequences of killing in real-time in theaters of war. Despite the horrors of war, only human soldiers maintain the in-theater capacity to “move” towards or away from killing—to perform the deeply contemplative and consequential acts of embodying violence and force that will likely continue to characterize human warfare in the next decades. And this requisite deliberation, for as long as human soldiers perform in theaters of war, will continue to rely on the (augmented) body as a weapon of force, but may also carry the insights of human subjectivity that are gained through embodiment to propose potentially less violent outcomes for bodies of war.

³⁶⁷ Author’s personal interview: Roman Baca, August 16, 2014.

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Appendix A: Instructional Letter for Écoles Royale Militaire, I

instruction
pour les familles qui voudront faire admettre leurs enfans aux écoles royales
militaires

il y a deux écoles militaires: l'une est établie dans le village royal de la flèche, l'autre est établie dans le village royal de Saint-Ey, près de Chartres.

Dans ces deux écoles, les élèves sont reçus dès l'âge de huit ans et y restent jusqu'à quinze ans: lors qu'ils auront atteint cet âge ils passeront à une troisième école pour continuer leurs études, le nom de cette école sera à leur dernière école, elle n'est point encore formée.

Les élèves de la première école, à la grande école, et de la seconde école, à celle de la flèche ou à celle de Saint-Ey.

Dans ces deux écoles préparatoires, on enseignera aux élèves les langues françaises, l'écriture, les mathématiques, de l'histoire et de la géographie; on leur apprendra le latin, on les exercera à l'école de soldat et à celle de cavalier.

À la grande école, on fera continuer l'étude des mathématiques, de l'histoire et de la géographie; ils feront un cours de belles-lettres; ils apprendront l'allemand, l'anglais, l'italien, le latin de la cour, l'école de bataille et celle de cavalerie, la fortification, les principales manœuvres de l'artillerie, l'exercice, la manœuvre. Tous les élèves indistinctement vont en campagne à la fin de leurs études, les élèves indistinctement vont en garnison, avec la garde de l'armée, dans les régimens d'infanterie ou de cavalerie.

Les élèves qui, après avoir terminé leurs études à l'école de la flèche ou à celle de Saint-Ey, sont destinés par leur famille à une carrière militaire que celle des armes, peuvent se retirer de cette école, sur la demande que leurs parents adressent au ministre de la guerre.

Les élèves sont admis aux frais du gouvernement, ou aux frais de leurs familles. Pour l'école de la flèche et celle de Saint-Ey, ils sont reçus, à l'âge de huit ans, et jusqu'à l'âge de quinze ans. (Les enfans qui habitent

Appendix A: Instructional Letter for Écoles Royale Militaire, 2

Après de voir passer les papiers jusqu'à l'âge de six ans
 et de les en députer, en conséquence, et à tout moment infirmité;
 2^e. Avant de s'en aller.

Les papiers de naissance et de décès aux frais de l'administration,
 de tout de plus, les fils de parents qui soient hors de l'état de payer
 un part de leur situation.

Les parents de tout âge pour la plus de l'école aux frais de leur
 papiers, de tout de plus, qu'ils ont une fortune de l'école pour payer
 la pension de leur enfant. L'administration de 1200 francs par an à
 l'école de la fin, et de 1000 francs à celle de la fin de l'année.

Les élèves admis à l'école de la fin de l'année ou à celle de la fin de l'année, aux frais
 de leur situation, pourront en la même qualité à la grande école.
 Les élèves admis aux frais de leur parent, continueront à payer leur pension
 de l'école de l'administration et les élèves pensionnaires continueront, en
 outre, à payer à la fin de l'année de l'école de la fin de l'année, en tout cas, qu'il
 soit de l'administration de l'école de l'établissement, de rien
 faire point en absence lorsqu'ils sont envoyés à la grande
 école.

Les parents qui désireront faire admettre leurs enfants aux écoles
 Royales Militaires adresseront leur demande au Ministre Secrétaire
 d'Etat de la guerre - il y joint

1^o l'acte de naissance de leur enfant. 2^o un certificat de médecin ou de
 chirurgien, légalisé par l'autorité du lieu, attestant que l'enfant
 n'a aucune infirmité, ni de la tête, ni de la face;
 il faudra aussi lui faire signer si l'enfant a eu la
 petite vérole naturelle, ou a été vacciné;

3^o un certificat d'un instituteur tenant une maison publique
 d'instruction, ou d'un professeur attaché à une école quelconque
 attestant que l'enfant sait lire et écrire.

Ce Certificat sera légalisé par une autorité de l'école.

Appendix A: Instructional Letter for Écoles Royale Militaire, 4

en the faite dans les archives du commandement de la guerre.
qu'ils que doit la part de l'enfant pour le quel on restituer une
place à l'école aux faits de guerre en service, les parents ne doivent pas
négliger d'indiquer,
(ils ont plusieurs copies),
leur nombre,
leur sexe,
leur âge,
les services qu'ils ont obtenus par un acte de gouvernement
les emplois qu'ils occupent, & de leur être en garde
répondre quel que chose.
tous les renseignements que d'ordinaire on ne fournit de ces
enfants sont trop peu commodes, pour leur propre intérêt, & n'en
donne au rang plus avantageux que les autres qui leur ont été
général de la discipline.
au service & renseignements que d'on donne les familles de la guerre, les
lettres, dans leur honneur, & les enfants qu'ils produisent ont été placés
dans la manière naturelle, ou ont été mis dans des pensionnats particuliers
ou écoles publiques, en obligeant les écoles ou pensionnats.

Appendix B: Sample Online Military Dancing, 2003-2014

U.S Military	U.S Military
<p>Aaron Cota: U.S. Marines “Yeah! We Were Bored!” Published: 18 Sep. 2006 https://www.youtube.com/watch?v=Qi6QS-yrIvc</p> <p>Blah Blah Blah “Military Blah Blah Blah Remake- If the Army Goes Gay” Published 12 May 2010 https://www.youtube.com/watch?v=6x6m-JZTrjs</p> <p>Call Me Maybe: U.S. Marines Afghanistan “Miami Dolphin Cheerleaders Call Me Maybe vs. US Troops Call Me Maybe” Published: 19 Feb. 2013 https://www.youtube.com/watch?v=KOfsOHOCX0</p> <p>Call Me Maybe: U.S. Marines “Call Me Maybe Spoofed Again by U.S. Marines” Published: 18 Jul.2012 https://www.youtube.com/watch?v=R2ySHSTeZjQ</p> <p>Call Me Maybe: U.S. Navy “Call Me Maybe in the Navy” Published: 16 Jun. 2012 https://www.youtube.com/watch?v=S9uoC6z8LNI</p> <p>Call Me Maybe Compilation (with Aaron Cota) “Marines Response to Call Me Maybe” Published: 14 Jul. 2012 https://www.youtube.com/watch?v=kplmIve6j38</p> <p>Cha Cha Slide: U.S. Marines “You’re Tax Dollars at Work” Published 23 Nov. 2007 https://www.youtube.com/watch?v=NX5ZVC1YYIk</p> <p>Cupid Shuffle: U.S. Army “The Cupid Shuffle-Army Edition” Published: 1 Mar. 2011 https://www.youtube.com/watch?v=IbDHvtIjEYo&list=R DZiyCkLkT8z4&index=2</p> <p>Dance Off: U.S. Soldier vs. Iraqi Soldier “American Soldiers vs. Iraqi Soldiers Dance Off” Published: 23 May 2011 https://www.youtube.com/watch?v=mHxch-o5qll</p> <p>Dance Party in Iraq: U.S. Military “Dance Party in Iraq” Published: 16 May 2007 https://www.youtube.com/watch?v=UWltoLy_FMQ</p>	<p>Dancing Troops: U.S. Military and Iraqi Military “American Soldier Dancing with Iraqi Troops Funny” Published: 24. Jul 2010 https://www.youtube.com/watch?v=KWXbjWb7K3s</p> <p>Dancing with Myself –Compilation: U.S. Military Channel “Troops Dancing-Military Channel Commercial” Published 9 Jul. 2008 https://www.youtube.com/watch?v=PYUASHj-dCY</p> <p>Ding Dong Song: U.S. Army Mortars HHC 1-21 “U.S. Soldiers in Iraq-The Ding Dong Song” Published 22 Mar. 2008 https://www.youtube.com/watch?v=j8rm56hTDDs</p> <p>Electric Avenue: U.S. Military “Combat Dancing In Baghdad, Iraq” Published: 10 Apr. 2007 https://www.youtube.com/watch?v=C3iY45m0vIY</p> <p>Gangnam Style: U.S. Air Force Academy “Gangnam Style U.S. Air Force” Published 1 Dec. 2012 https://www.youtube.com/watch?v=N3mQlhC_hQM</p> <p>Gangnam Style: U.S. Coast Guard “Gangnam Coast Guard Style” Published: 15 Sep. 2012 https://www.youtube.com/watch?v=7XIUpMCBEms</p> <p>Gangnam Style: U.S. Marines “Marines Gangnam Style” Published: 1 Dec. 2012 https://www.youtube.com/watch?v=Myo6MvQMGIk</p> <p>Gangnam Style: U.S. Military Merchant Marine Academy “Military News-U.S. Merchant Marine Academy Gangnam Style-Winner” Published: 24 Oct. 2012 https://www.youtube.com/watch?v=JyOy_G4ac0c</p> <p>Gangnam Style: U.S. Naval Academy Spirit Spot “Military News-U.S. Naval Academy Gangnam Style” Published: 24 Oct. 2012 https://www.youtube.com/watch?v=Od92ghaoa4U</p> <p>Gangnam Style: U.S. Navy and Marines in Afghanistan Shock Trauma Platoon “U.S. Navy and Marines in Afghanistan Gangnam Style” Published: 1 Feb. 2013 https://www.youtube.com/watch?v=Wt7pevlvCbQ</p>

Appendix B: Sample Online Military Dancing, 2003-2014

U.S Military	U.S Military
<p>Gangnam Style: West Point Academy “Gangnam Style-West Point” Published: 3 Oct. 2012 https://www.youtube.com/watch?v=Aa4RLoG9234</p> <p>Harlem Shake: Norwegian Army vs. U.S. Marines “Harlem Shake-Army vs. Marine Corps” Published: 21 Feb. 2013 https://www.youtube.com/watch?v=t_cjhulETHk</p> <p>Harlem Shake: U.S. Army “U.S. Army Harlem Shake” Published: 19 Feb. 2013 https://www.youtube.com/watch?v=WT2KLVhRuQM</p> <p>Harlem Shake: U.S. Marines “Harlem Shake Marine Style” Published: 22 Feb. 2013 https://www.youtube.com/watch?v=9P36rI3XHps</p> <p>Harlem Shake: U.S. Navy Seals “Navy Seals Harlem Shake” Published: 4 Jul. 2013 https://www.youtube.com/watch?v=45xDF-P_x3Y</p> <p>Harlem Shake: U.S. Marines 2 “Harlem Shake (U.S. Marine Edition)” Published 11 Feb. 2013 https://www.youtube.com/watch?v=lqZyDPCyxTM</p> <p>Harlem Shake Competition “Best Military Harlem Shake Compilation” Published: 9 Mar. 2013 https://www.youtube.com/watch?v=ed0TTrhUR4I</p> <p>Happy: U.S. Military “Wonderful! Soldiers Film Dance Video for Pharrell Williams’ Hit Song Happy” Published 8 Jan. 2014 https://www.youtube.com/watch?v=3vL0jEblSPw</p> <p>I Like to Move It/Thriller Flash Mob (Afghanistan Fob Shank): U.S. Military “U.S. Soldiers Doing a Flash Mob Dance in Afghanistan” Published: 21 Jul. 2012 https://www.youtube.com/watch?v=iFPYBnkKmqo</p> <p>I’ve Got the Power: U.S. Air Force “Air Force Funny Crew (Part 2)” Published: 2 Sep. 2011 https://www.youtube.com/watch?v=tejqAjCenAg</p>	<p>I Love the Way You Move: U.S. Military “Dancing in Iraq-I Love the Way You Move” Published: 16 May 2008 https://www.youtube.com/watch?v=MHW9NW4HMPs</p> <p>I Wanna Be a Rockstar: U.S. CENTCOM CJTF (Africa) “Hey, I Wanna Be a Rockstar” Published 26 Apr. 2008 https://www.youtube.com/watch?v=jcxfHXsutXw</p> <p>Jump on It: U.S. Marines “Marines Jump On It” https://www.youtube.com/watch?v=X_FKNCph5tc</p> <p>Justin Beber Fever: U.S. Marines “Baby-The Fever (Justin Beber Cover)” Published: 12 Dec. 2011 https://www.youtube.com/watch?v=jKcSSEWt2mg</p> <p>Lady Gaga Compilation: U.S. Military “Gaga Poker Face” Published: 18 Aug. 2010 https://www.youtube.com/watch?v=d8mIP_banxY</p> <p>Lady Gaga-Telephone: U.S. Military (Afghanistan) “Telephone Remake” Published 23 Apr. 2010 https://www.youtube.com/watch?v=haHXgFU7qNI</p> <p>Lady Gaga Compilation-Just Dance “Just Dance Remake U.S. Troops Style Lady Gaga” Published: 3 Oct. 2009 https://www.youtube.com/watch?v=o2DJCX4kcAY</p> <p>Lady Gaga-Bad Romance: U.S. Military Afghanistan “Bad Romance Marines” Published 13 Oct. 2011 https://www.youtube.com/watch?v=y68lhvoBtHc</p> <p>Lady Gaga: U.S. Marines and U.S. Army “The Straight Military Celebrates the End of Don’t Ask Don’t Tell-Lady Gaga ‘Born This Way”” Published: YouTube-2 Feb. 2011 https://www.youtube.com/watch?v=6o0zsIHTx2A</p> <p>Lazy: C-130 Air Crew “Deployed Lazy Song-Bruno Mars Tribute” Published: 22 Jul. 2011 https://www.youtube.com/watch?v=y5A6E1XJNd0</p> <p>LMFAO Party Rock: U.S. Army Afghanistan “U.S. Army LMFAO Party Rock in Afghan” Published: 21 Jan. 2012 https://www.youtube.com/watch?v=ZiyCkLkT8z4</p>

Appendix B: Sample Online Military Dancing, 2003-2014

U.S Military	Non U.S Militaries
<p>N-Sync Bye Bye Bye "Bye Bye Bye" Published: 8 Feb. 2008 https://www.youtube.com/watch?v=f9DHTNqBVmc</p> <p>Part of Me (U.S. Marines) "Katy Perry 'Part of Me' (By Marines)" Published: 2 Aug. 2012 https://www.youtube.com/watch?v=oroV7T5Csek</p> <p>Peanut Butter Jelly Time: U.S. Army "Peanut Butter Jelly Time in Iraq" Published 30 Sep. 2007 https://www.youtube.com/watch?v=uezJfTG9ELI&index=2&list=RDC3iY45m0vIY</p> <p>She Got a Donk: U.S. Marines "Marines Dancing Bored to She Got a Donk" Published: 9 Dec. 2010 https://www.youtube.com/watch?v=zgeZDRUs_JA</p> <p>Tik Tok: U.S. Air Force "U.S. Air Force Academy-Tik Tok" Published 21 Feb. 2010 https://www.youtube.com/watch?v=awaGFgsHD9A</p> <p>Vanilla Ice Remix: U.S. Military "Vanilla Ice Remix" Published 7 May. 2007 https://www.youtube.com/watch?v=eI-5I25T7fM</p> <p>We're Unforgettable: 764 California Marines "HMM 764 California Marines We're Unforgettable" Published: 13 Jan. 2012 https://www.youtube.com/watch?v=kBInFc9B3P0</p> <p>What is Love: U.S. Marines "What is Love" Published 19 Sep. 2009 https://www.youtube.com/watch?v=LGE_vpPIoIU</p>	<p>Call Me Maybe: British Royal Engineers "Call Me Maybe Afghanistan Royal Engineers" Published: 21 Sep. 2012 https://www.youtube.com/watch?v=K-ZFKU2OIZk</p> <p>Greased Lightening: Swedish Marines-Afghanistan "Swedish Marines Making Parody of Grease Lightening in Afghanistan" Published: 24 Jan. 2014 https://www.youtube.com/watch?v=cbLwmUdee64</p> <p>Harlem Shake: Dutch Army "Harlem Shake Dutch Marines Norway" Published: 27 Feb. 2013 https://www.youtube.com/watch?v=jdGGznsaDhs</p> <p>Happy: British Army "British Soldiers Dancing in Afghanistan Dancing to Pharrell's Happy" Published: 11 Jan. 2014 https://www.youtube.com/watch?v=5npyj_of86o</p> <p>Japanese Coast Guard "Dancing at Senkaku Japan Coast Guard" Published: 6 Nov. 2010 https://www.youtube.com/watch?v=MY_nhXtoqv8</p> <p>Russian Military "Amazing Russian Military Dancing" Published: 17 Nov. 2011 https://www.youtube.com/watch?v=PW3tgXUxYj0</p> <p>Satisfaction: British Army "British Army Men Dancing to Satisfaction" Published: 7 Feb. 2013 https://www.youtube.com/watch?v=JRfD9BdHC5o</p> <p>We Will Rock You: Russian Dance Crew Circle! "OMG! Russian Army Rock" Published 30 Jan. 2012 https://www.youtube.com/watch?v=n3_wzoGtIms</p>

Appendix C: Sample Questions for U.S. Military Soldiers

[For video and audio recording: state date, location, and participants.]

As we spoke about by phone or email, this series of interviews with former or active duty U.S. military is to better understand the role of 21st century training and technologies in your day-to-day operations. The research is concerned with how soldiers view the function and significance of training and technology in their combat or support duties. The project also examines developments in the U.S. service uniforms and technologies that soldiers wear as part of their day-to-day duties. Can you please verify that you've read the project description and signed the consent form that allows me to tape this interview with audio and/or video, as I'm doing now? Many of my questions will be about technologies that you use and how this impacts your job and personal experience, but I will ask some general questions about your impressions of Operation Iraqi Freedom (OIF), Operation Enduring Freedom (OEF), and Operation New Dawn (OND), as well as about your training and deployment. As the consent form states, please don't hesitate to respond no comment to any question that you'd prefer not to answer. May I begin? Thanks.

1. What was your service unit and rank in the U.S. Military? What was your MOS?
2. How many tours did you serve in Iraq/Afghanistan and when? Were you (co) located?
3. Can you tell me about the path you took to the U.S. Military—did you recruit and complete basic training or did you attend a U.S. (war) college?
4. How would you describe the primary duties of your job(s) in Iraq/Afghanistan?
5. Did your duties change during your deployment(s) in Iraq/Afghanistan?
6. In a single day during (*date of soldier's specific tour*), was there a lot of variation in your professional duties?
7. Following that question, can you describe one day on your job in Iraq—walk me through it from the time you get up until the day is over for you.
8. I'm going to move into a few questions about the service uniform and some of the technologies that have been developed to work with it in Iraq. For a civilian unfamiliar with the U.S. Military uniform, can you describe your uniform and the basic gear worn with it?
9. Has the service uniform that you were first issued changed during your service?
10. The uniform has been a distinguishing feature for U.S. soldiers throughout military history—in WWI, WWII, Korea, and Vietnam—how would you characterize the function of your uniform in Iraq/Afghanistan?
11. Following that answer, do you think the U.S. uniform has a specific meaning for foreign citizens that you encounter, for example in Iraq/Afghanistan?
12. The military uniform has always required rituals to maintain a soldier's appearance and signal his or her professionalism. My father, for example, still keeps his U.S. Air Force uniform pressed in the closet and polishes his shoes regularly. But the new ACU is not supposed to be starched or pressed. Have the rules for taking care of your uniform changed in Iraq/Afghanistan or during your time in service?

Appendix C: Sample Questions for U.S. Military Soldiers

13. Did you have any concerns with the performance of your uniform during duty?
14. In addition to the gear you've described, what other technologies are integrated into your basic uniform? For example, Night Vision goggles, helmet video, or personal cameras?
15. Can I ask a few more specific questions about (technology a, b, or c)? For someone unfamiliar with that technology, can you describe how it works? How does that technology affect your ability to (see the enemy, manipulate your weapon, navigate?)?
16. Do any of these technologies have an effect on your body when you use them—would you say they cause you to feel or move differently?
17. For a civilian who has never worn a uniform with military gear, how would you describe the experience of wearing a uniform and gear, and now being without it as a veteran?
18. Were you trained prior to deployment (in school or basic training) on the technologies that you used in Iraq/Afghanistan?
19. Can you talk a little bit more about the training for (technology a, b, c)? How did you train on it for the environment and combat scenarios in Iraq/Afghanistan?
20. A number of embedded reporters and soldiers have written about soldiers using their own technology in Iraq/Afghanistan in operations—GPS phones, video cameras, laptops, etc.—did this ever occur for you or did you see it in your unit?
21. There's a lot of talk in the U.S. about the advanced technologies of the U.S. Military, and yet many deaths in Iraq/Afghanistan result from relatively simple technologies being expertly placed to engineer the most destruction—what do you think of the differences between the U.S. Military's use of technology and the use of technology by combatants?
22. Do you think technology—any of those that we've discussed—is significant in determining how Operation Iraqi Freedom (or Operation Enduring Freedom) has gone and might go in the near future?
23. As a follow-up question, how do you think any of the technologies that we've discussed play a role in day-to-day strategic decisions in Iraq?
24. From your perspective as a U.S. Soldier, what changes or recommendations would you make to your training or technologies to prepare and assist you for active-duty service?
25. Is there anything else you'd like to add, or thoughts you've had in relation to earlier questions?

Appendix D: Informational Table for U.S. Military Interviews

The data that appears below was collected on pre- and post- interview survey forms during interviews I conducted from 2008 to 2014 and is provided in consideration of the personal information participants consented to disclose. The designation of N/A notes that a participant did not consent to publically disclose the information or did not provide it. Service members were provided blank space to respond to the question: “What is your ethnicity, race, or nationality?” and “What is your gender?” Some participants provided more than one answer, as noted below. Naming conventions reflect the information provided by service members. The active-duty service dates indicate activity only up to or at the time of the interview. Active-duty locations may only indicate one location out of many for service.

	BRANCH	RANK	SERVICE DATES	ACTIVE-DUTY SITE	GENDER	ETHNICITY RACE NATIONALITY
1	USAF	Officer	N/A	Everywhere	Female	White
2	USAF	Officer	N/A	All	Male	Asian-American
3	USAF	Officer	2006-2014	Various	Male	Hispanic
4	USAF	Officer Class	2008-2013	Global	Male	N/A
5	USAF	E5 Staff Sergeant	1980-1985	N/A	Male	U.S.
6	USAF	Sergeant	2000-2005	U.S.	Male	Latino
7	USAF	Pilot	N/A	Middle East	Male	White
8	USAF	E Class	N/A	U.S.	Male	Black
9	USAF	Senior Airman	N/A	Middle East	Male	Caucasian
10	USAF	N/A	2000-2014	Afghanistan Iraq	Female	White
11	USAF	Technical Sergeant	N/A	Iraq	Male	Hispanic
12	USAF	Airman FC	2005-N/A	Middle East	Male	N/A
13	USAF	Master Sergeant	1990-N/A	Global	Male	White
14	USARMY NG	N/A	2008-2014	N/A	Male	N/A
15	USARMY	Military Police	2005-2013	Middle East	Male	African American
16	USARMY	Specialist	2009-2012	Iraq	Male	Black
17	USARMY	E Class	2002-2007	Iraq	Female	Black
18	USARMY	Enlisted	2006-2014	Afghanistan	Male	Black
19	USARMY	Officer	N/A	Middle East	Male	N/A
20	USARMY	N/A	N/A	Germany/Iraq Afghanistan	Male	Black

Appendix D: Informational Table for U.S. Military Interviews

21	USARMY	Military Police	2005-2010	Afghanistan Iraq	Female	Hispanic
22	USARMY	Officer Class	2005-2013	Middle East	Female	Caucasian
23	USARMY	N/A	2010-2014	Middle East	N/A	N/A
24	USARMY	N/A	2003-2012	Iraq	Male	White
25	USARMY	MP Lt.	2002-2012	Afghanistan Iraq	Female	N/A
26	USARMY	E Class	N/A	Iraq	Female	African American
27	USARMY	0-1	N/A	N/A	Female	White
28	USARMY	0-1	N/A	N/A	Female	Caucasian
29	USARMY	0-1	N/A	N/A	Female	Caucasian
30	USARMY	0-3	N/A	N/A	Female	Caucasian
31	USARMY	0-2	N/A	N/A	Female	Caucasian
32	USMC	Sergeant	2001-2009	Afghanistan/ Kuwait/Iraq	Male	N/A
33	USMC	N/A	2008-2011	Afghanistan	Female	Black
34	USMC	E3 LC	2012-2014	N/A	Male	U.S.
35	USMC	Sergeant	2001-2009	Iraq	Male	U.S.
36	USMC	Officer	1999-2014	Multiple Locations	Male	American
37	USMC	Sergeant	1999-2004	Iraq	Male	U.S.
38	USMC	N/A	N/A	Afghanistan	Male	Asian
39	USMC	Sergeant	2000-2007	Kuwait/Iraq Afghanistan	Male	Hispanic
40	USMC	N/A	2000-2014	Iraq	Male	U.S.
41	USMC	N/A	N/A	Iraq	N/A	U.S.
42	USMC	N/A	N/A	Afghanistan	N/A	U.S.
43	USMC	N/A	N/A	Afghanistan	N/A	U.S.
44	USNAVY	O-2	N/A		Male	U.S.
45	USNAVY	Officer Class	2003-2014	World	Male	N/A
46	USNAVY	N/A	2000-2014	Global	Male	Latino
47	USNAVY	N/A	N/A	U.S.	Male	Hispanic
48	USCOAST	N/A	N/A	All locations	Male	Hispanic
49	USCOAST	N/A	2005-N/A	All locations	Male	White
50	USCOAST	N/A	N/A	U.S.	Male	Caucasian