Killing at a Distance in a Post-Panoptic Society

Courtney Michelle Mitchell

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Priya Dixit Committee Chair
Ioannis Stivachtis Committee Member
Laura Zanotti Committee Member

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Abstract

The military's armed surveillance drones are the most elite modernized weaponry in the twenty-first century. They have introduced a new way to see without being seen. In this paper, I investigate the US military's use of drones in warfare, specifically in terms of distance and what that entails for the operator physically, mentally, and emotionally. My analysis will address the question: how are remotely piloted aircrafts connecting distance and humanity in asymmetric warfare? I argue that drones are unlike any other weapon produced thus far because they introduce a completely new way to fight wars at a distance; therefore, a new understanding of humanity and warfare needs to be established. Warfare by remote control in a post-panoptic society has ended the era of mutual engagement and created one of extensive asymmetry. This thesis also examines the militaries historical motives for pursuing weapons that make the enemy into an objective target below. The data that I use to explore these implications is second-hand anecdotes and interviews of former RPA operators, and various media accounts. Based on this data, I find that drones have made it more difficult to kill a target due to the added surveillance technology that allows the operator to see the effects of his or her weapon in real time. This visualization then has the effect of creating intimacy/reducing emotional distance between the operator and the target.

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Introduction

Remotely piloted aircrafts (RPAs), also known as unmanned aerial vehicles (UAVs) or drones, are the newest form of weapons technology that can survey a target for an extended amount of time and then kill them with the click of a button. The amount of funding that was requested for Unmanned Aerial Systems (UAS) for fiscal year 2013 was 26.16 billion of the US President's defense budget (Roberts 2013), indicating that RPAs will continue to be used for intelligence, surveillance, and reconnaissance (ISR) purposes and their role will grow in the near future. Many countries use RPAs to spy on their neighboring countries. For instance, China uses them to spy on Japan near disputed islands in Asia (Taylor 2013). Turkey uses them to eyeball Kurdish activity in northern Iraq, while Bolivia uses them to spot coca fields in the Andes (Taylor 2013).

The US military has found RPAs most helpful flying above war zones as well as areas considered hostile that are located in foreign countries. From September 2001 to April 2012, the number of RPAs in the US military grew from 50 to 7500 (Zenko 2013). RPA's are used for surveillance operations but approximately 5 percent of these weapons can be armed with hellfire missiles (Zenko 2013). This new added feature onto the initial surveillance drones has allowed the military to kill with more precision. The drone program has expanded under the current Obama administration and has been described as an economical and effective military tool for US operations in the Iraq and

Afghanistan wars (DoD 2011), as well as a political tool for the targeted killing of suspected terrorists in Pakistan, Yemen, and Somalia (Plaw et al. 2012).

While the military role of drones has been generally praised, there has been a considerable amount of push back regarding their effects on civilian populations. These effects range from continuous surveillance to even being killed. The New American Foundation recorded that as many as "2,600 people have been killed by drone strikes in Pakistan alone from their first use in 2004-2012" (New American Foundation 2012). However, the Bureau of Investigative Journalism estimates the total number of people killed by the "344 drone strikes so far in Pakistan as somewhere between 2,562 and 3,325, with as many as 881 confirmed civilian casualties" (Bureau of Investigative Journalism 2012). The drone program continues to expand in these remote areas overseas.

Because of a lack of first-hand information, there is still limited research on the effects of drones on individuals. My research investigates and theorizes how surveillance of others, via drones, affects conceptualizations and experiences of distance. By "distance", here, I mean the physical, mental, emotional, psychological distance between those operating the drones and those being watched.

Surveillance coupled with drone warfare has created a new sense of agency and understanding of humanity through the digital lens and my research will explain the many implications that have arisen due to this new technology. My argument in this thesis is that while drones are conceptualized as making

killing and warfare easier (Chamayou 2013) they are actually more complex in that they make operators more aware of the humanity of others far away. They do this by reducing the mental, emotional, and psychological distances between the operator and the target, and these distances create an intimate viewing lens during war. The impact of this for warfare could be that killing others with drones will be more difficult. This thesis will not only detail the implications of these types of distances for operators, but will also discuss how the US military's drone strategy frames (or conceptualizes/identifies) its targets.

The surveillance aspects of drones may have been incorporated with this weapon in order to be more accurate with its missile destinations, but seeing the targets as people below could make it harder for the operator to kill the opponent. At this point, I should clarify that I will be using the terms drone, remotely piloted aircraft, and RPA interchangeably; as well as the terms operator, soldier, and pilot. I should also point out that when I use the word subjective, I mean the operator using their own judgment with facts in order to decide the course of action (Doyle 2004), and when I use the word objective, I mean a person that only acts on facts or data that is given to them and does not integrate emotions into the decision making process (Doyle 2004).

This research is important because unlike video games and bomber pilots, drones introduce a completely new way to fight wars at a distance; therefore, a new understanding of humanity and warfare needs to be established. People below RPA's are now re-faced and their humanness is made visible to the

operator once again. Death at a distance is viewable and even though the operator is physically distanced, they are mentally and visually proximate to the person under review. In my research, I find that instead of drones making killing easier for the soldier, drones have actually made it more difficult because with the advanced surveillance technology (scopes, cameras, heat sensors, etc.) the operator has to see the target before, during, and after the explosion in real time. This could make it extremely difficult to deny the target as a human. In this paper, I unpack the US military's use of drones in warfare, specifically in terms of distance and what that entails for the operator physically, emotionally, and socially. I detail what happens when those who are expected to kill begin to see the enemy as human and perhaps just like them.

Drones are a controversial topic because of the lack of information that the public has access to, the reported killing of civilians in areas where drones are used, and the drone created anti-American sentiment in these countries (Pakistan, Afghanistan, Yemen, Somalia, Iraq, etc.). Drones are seen by some as a cowardly form of killing (Benjamin 2013), because they distance the operator from feeling any sense of risk for one's own life. This last criticism is the one that I am most concerned with because the critical response is that this weapon psychologically disassociates the operator from his or her actions. However, drones have received a significant amount of support from US citizens because they reduce 'boots on the ground', and minimize civilian casualties due to their

accuracy and precision to hit their targets. Drones are framed as almost a heroic

weapon from this perspective (Asaro 2013, 200).

However, these perspectives and prior research fail to address the effects

of drones on individuals; they do not investigate the many implications that

come with being a RPA operator. RPAs were given the name 'unmanned vehicle'

when the military first introduced them into the war scene; yes, it may have been

physically unmanned, but its brain and functioning capabilities is that of a man

or woman who utilizes technology to use and guide the aircraft. This is why the

name was changed to remotely piloted aircraft. The previous terminology for

drones—unmanned aerial vehicle—was an inaccurate name for this weapon

because it implies that there is not a person that is operating the weapon. The

weapon was renamed to its current title remotely piloted vehicle because it

brings the operator back into the loop and they are seen as an active agent in the

daily operations of the vehicle.

Yet, there is little information about how these operators feel about their

actions. By examining the existing data, I show how agency and humanity have

been placed within a larger theoretical framework that attempts to make sense of

how RPAs operate. The public has tried to strike up criticisms such as

comparing drones to videogame-like situations, but this is simply trying to

categorize this new and distinct technology into a previously understood

theoretical framework. Drone operators are physically located further away than

bomber pilots, but are visually as close to the opponent as if they were killing

them with a knife. I use Dave Grossman's diagram of resistance to killing later on in the analysis section in order to show how the drone optics bring the operator so close to the opponent that it is as if they were 8 inches away from them (from eye to screen).

I use discourse analysis to study second-hand interviews with drone operators, and to analyze the panopticon theory that has now evolved into its current post-panoptic form in order to unpack the questions: how are remotely piloted aircrafts connecting distance and humanity in asymmetric warfare? And, have these systems made killing easier or harder? This connection is essential during warfare because without the operator, it would be a weaponized robot deciding who lives and who dies. I am concerned with the practice of surveilling and targeted killing because surveillance and the separation of the operator from the geographic location of the drone have had a counter effect on the drone operator.

The development of RPAs with hellfire missiles has ended the era of mutual engagement and created one of total asymmetry. What I mean by "total asymmetry" is that the operator enters into the conflict without the other person's knowledge that they were ever in a fight, while also killing the person and never putting their own life at risk. This is how total asymmetry has become a war environment that is one-sided fighting (removal of two people engaged in a fight) and one-sided viewing, because the operator is never humanized to the people below. This is different to conventional airstrikes, which also have pilots

who remain unseen by those on the ground, because of physical distance. The conventional airstrike pilot is closer in proximity to his or her target than RPA operators but they are still removed physically. RPA operators have the ability to see the effects of their weapons on the humans below whereas conventional pilots do not. Conventional pilots are both physically and visually distanced from the target while RPA operators are physically distanced and visually present.

The US government and the military have developed a more modernized system that incorporates a surveillance society that operates under their watchful eye. No longer do they operate under the notion that serving a prison sentence and being disciplined back into society is the way to assimilate those that disrupt the system. Instead the current system skips disciplining and goes right to punishment. The current system is one in which there is "liquid surveillance" within a post-panoptic society, or a prison without borders (Bauman & Lyon 2013). I will unpack the RPA and surveillance relationship under the US military system in section two. Before that, I will give an overview of the main literature that I have come across in my research, including the debate about drones. Next, I will detail my methodology and analysis of the data using discourse analysis of second-hand interviews and accounts with drone operators. Lastly, I will talk about what this means for the nature of war and killing by remote control.

My overall argument is that the era of mutual engagement is dead and asymmetric warfare—complete removal of one person's (operator) humanness

with the insertion of the other persons' (target) humanness—is a one-sided lens tasked to punish instead of discipline. The surveilling and engaging in firing the weapon from one-side does not give the person below a chance to even enter into a fight, or know that they were ever in an altercation with another person. Instead, this person is digitally targeted and killed by the remotely operated aircraft. This removes the humanness of the operator and makes killing a target harder. My research findings display why killing at a physical distance coupled with the ability to visibly see the person on the ground--face, body, and everyday human interactions--makes killing harder. This is how the US military's war tactics and goals have shifted in a post-panoptic era and the analysis of how and why this has occurred will be unpacked in my empirical analysis sections.

I. Literature Review

The literature on various kinds of distance (physical, mental, emotional, etc.), the ethical implications that are present with the new asymmetric warfare when using drones, and the debates surrounding the topic are detailed here. I unpack the notion of distance by conceptualizing what distance actually entails today now that people/the US government can digitally watch anything or anyone at increased physical distance. The debate over whether remotely piloted aircrafts make it easier or harder to kill has resulted in a significant body of interesting and varied research on weapons development over time. The authors who contribute to this research are interested in the amount of targeted killings that occur, surveillance, weapons over time that distance the soldier from the

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battlefield, and the effects advanced weapons have on the people that operate the vehicles. Researchers like Grossman, Chamayou, Coeckelbergh, and Bauman, are all trying to answer one question of whether it is ethical to survey and kill the target from another geographic location? Some researchers such as: Singer, Grossman, and Gregory have looked to the development of weapons and the amount of people killed during wars over time, to explain how RPAs have developed into their current form, and if these weapons are ethical to use against suspected targets that are watched by operators located in another country.

Researchers who look towards history in order to foresee the future of wars have tried to pinpoint when bombing wars morphed into surveillance wars. Evangelista and Shue (2014), for instance, ask, "Why did the US conduct the bombing of Iraq in 1991 so differently from the bombing of North Korea in the 1950's?" Weapons have constantly been evolving in order to decrease the time it takes to fight a war--such as the Korean War compared to the bombing of Iraq-- due to the increase in the distance that the war is fought from. Those that turn to the amount of people killed in wars over time often reference the fire bombings in Dresden, and Hamburg, and the atomic bombs dropped over Hiroshima and Nagasaki (Grossman 1995). Grossman (1995) echoes Evangelista and Shue's question when he describes the way that one engages in warfare with changing time periods, and how one operates on or off the battlefield with this new advanced weaponry. He says,

> "The pilots, navigators, bombardiers, and gunners in these aircraft were
> able to bring themselves to kill these civilians primarily through

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application of the mental leverage provided to them by the distance factor. Emotionally, the distance involved permitted them to deny it"(167).

Some researchers agree with Grossman that distance makes it easier to kill because at a distance, the viewer is now looking through an objective lens at the target below. Similarly, Ricks (2014) argues that subjectivity is a necessity in times of war, stating that there needs to be an empathic component guiding our technological advancements. For instance, he mentions that empathy is crucial in wars that use surveillance technology, "As the range of our weapons increased, the perceived utility of empathy on the battlefield diminished. No longer did the soldier have to hold his fire until he saw "the whites of their eyes", and the days would not be far off when soldiers could pull triggers that killed men on other continents" (Ricks 2014). Researchers like Grossman and Ricks are arguing for the continuous co-presence, or a close proximity of those fighting against each other because it creates empathy. The implications of this during war can be tremendous because having an empathic understanding towards one's opponent makes it less likely for the soldier to be able to kill.

Remotely piloted aircrafts have changed the manner in which wars are waged. Martin and Sasser (2010) touch on Evangelista and Shue's question in their book *Predator The Remote-Control Air War Over Iraq and Afghanistan: A Pilot's Story*. They write,

> "The history of warfare might be considered a history of missing the target while attempting to become more accurate. In 1942 and 1943, it took thousands of B-17 sorties over Germany to make sure of having at least a 90 percent chance of hitting the intended target. Today, a single Hellfire

missile fired from an unmanned aircraft could do a job that would have required a hundred or more B-17 sorties during World War II" (216). The shift from wars being fought mainly on land to wars being fought predominately from the sky has progressed with new innovative technology developments for aviation.

For instance, Gregory (2014), talks about President Obama's reference to 'boots on the ground' as having some other underlying message for the shift from land warfare to air warfare stating, "No worry of self and survival because drones replace the boots. No need to protect one's feet in order to travel from location to location because man has now reproduced a technology that acts as the operators extended mind and body on the battlefield, while also being able to move from location to location" (Gregory 2014). Gregory is saying that RPAs have removed our place history meaning that technology has advanced to the point of soldiers never having to physically move while surveilling and killing. In other words, the operator is not at risk of dying unlike the many soldiers who had no other option than to physically enter into the warfare environment.

Drone crews are physically located in another country while operating drones located in a distant geographic location, which to some has created a schizophrenic reality. To emphasis this point, Martin and Sasser (2010), former drone operators, talk about how distant their physical battlefield was from their actual home arguing that, "At any other point in history, it would have been inconceivable that a combat pilot could take time out from fighting to have a leisurely at-home breakfast with his wife and then get a speeding ticket on the

way to work" (275). Similarly, Adey and Fregonese (2012) agree with Martin and Sasser's argument, detailing that those involved in the remote kill-chain typically feel remarkably close to the ground troops and remain distant from the 'life-worlds of the population at large'. Those researchers who argue for and against the other form of distance--cognitive distance--look at personal antidotes by former drone operators. These researchers believe that drones bring the soldier back to understanding the effects of using their weapons due to the optical surveillance and visual targeting.

They argue that modern weapons are actually pushing the soldier back into the past, to the moment of understanding the effects of one's weapon, however the intent of developing weapons has been to move away from this understanding (Chamayou 2013). This has been said to make drones a more inefficient weapon than previous ones because of the added surveillance to targeted killing. For instance, Coeckelbergh (2013) argues, "the influence of seeing one's face is at least weakened by current surveillance technologies, which makes possible a kind of 'empathic bridging' by which the fighter's opponent on the ground is re-humanized, re-faced, and re-embodied" (Coeckelbergh 2013). Researchers like Coeckelbergh understand the importance of empathy in times of war, but also reflect on the problems that arise when one sees the target as a subject instead of an object below. This development is an unintended consequence of RPAs, and while some would say RPAs have minimized the issue of seeing the target as a subject by removing the operator from physical

proximity, others would say that it has maximized the operator's viewpoint so that he or she has no other choice but to see the person as a human instead of a target.

Moreover, Chamayou (2013) touches on both sides of this debate in his *Theorie du Drone,* and notes that throughout history weapons have been created to physically distance the warrior from the opponent.

> "Technically, this is marvelous. Look at the history of weapons development: catapult, crossbow, cannon, rifle, revolver, machine gun, tank, bazooka, bomber, helicopter, submarine, and cruise missile. Every step forward consists of a physical step backward: the ability to kill your enemy with better aim at a greater distance or from a safer location. You can hit him, but he can't hit you" (Chamayou 2013).

This is an argument of physical proximity that can be countered with one of visual proximity. Chamayou (2013) continues his argument saying that, since 'increased distance no longer makes violence more abstract or more impersonal but, on the contrary, more graphic and more personal'. He is arguing that RPAs are the exception to the rule in weapons that distance one opponent from another.

Distancing weapons have always been measured in one's ability to see the other opponent, however drones are labeled distancing weapons even though they do allow the operator to visualize the target below. Therefore, the drone falls into its own category of a distancing weapon because no longer is the opponent visually removed because of the increased distance but rather reappears in close visual proximity. Operators have described their experience of watching in a God-like way (Benjamin 2013). Surveillance may have created a

significant connection between the operator and the target, but this is a very one-sided personal connection because the person being watched does not know the person that is doing the watching. Some researchers have found that the surveillance aspect of drones creates the connection between the watched and the watcher.

Researcher Kyle Grayson's (2012) third thesis on targeted killing indicates that the relationship the operator develops is one of visual power into another person's personal life. Grayson writes,

> "This mode of 'seeing without being seen' is constitutive of an asymmetrical power relation that produces pleasure for the viewer and can empower acts of violence. Similarly, the demonstration of 'scopic power' attempts to create anxiety for potential targets (and wider populations) about being monitored so that preferred norms are internalized and behavior is shaped into forms more amenable to the goals of the counter-insurgency project" (Grayson 2012, 123).

The last point parallels researchers Bauman and Lyon (2013) in their book on *Liquid Surveillance* and post-panopticism. Both researchers derived their claims from Michel Foucault's understanding of power in the panopticon model. Bauman and Lyon (2013) say that surveillance has shifted from a solid form (panoptic) to a liquid form (post-panoptic) and "if then we could assume that the panopticon inspector was present, in today's power relations, those holding the levers of power can at any moment escape beyond reach-into sheer inaccessibility" (11). The surveillance researchers are looking at the dynamics of distance and power, and how surveying at a distance reduces one's ability to

care about pulling the trigger because the incident is so far away from the operator's current reality.

Drones are different from any other weapon produced thus far because of the combination of surveillance and missile guided technology. The critics and supporters have tried to place drones into categories that compare them to bomber pilots, video gamers, and snipers (Asaro 2013). These comparisons are derived from old technologies. The bomber pilot is distanced from the target far enough away that they don't see the effects of their weapon, but are physically located in the same area. Both are different in comparison to drones because the drone operator does see the effects of their weapon and are not physically located in the same area.

The videogame comparison is abstract when aligned with drones because the drone operator does not 'play fight' on the screen in order to advance to another level (Bumiller 2012). Drone operators' day jobs have often been described as boring because they stare at blank screens all day (Bumiller 2012). The fact that RPAs and videogames use the same kind of interfaces to gaze upon the subject under review is the only aspect that is relatable between the two. Lastly, the sniper is located close enough to the target in order to see the effects of his or her weapon in real time, while also watching the target for a brief period of time before firing. This comparison comes very close to a drone operator's situational awareness of exactly what is occurring, because both have been surveilling before and while the target dies. However, they differ because the

drone operator watches the target for weeks to months on end, and they are not located in the same location as the target.

Most researchers have concentrated on issues of sovereignty and legalization of armed drones flying in other countries with very little attention to the domestic and international impacts on humans. Some impacts include: the machine does not have a valued life and can enter into environments that would normally put the operator or any other human-being into harm's way, its ability to stay in the air for hours on end, cost effectiveness, invisibility, and its verticality (Singer 2009). Peter Singer (2009) indicates that,

> "In many situations, robots have faster reaction times and better aim than human beings. Unlike humans, who get tired and hungry and lose concentration and effectiveness, robots can perform boring tasks with unstinting accuracy for long periods of time. They can operate in dirty environments, such as battle zones filled with bio and chemical weapons, or under other dangerous conditions, such as in space, in rough seas, or in flights with very high gravitational pressures" (31).

The differences between using drones--domestic and international—compared to previous weapons do not outweigh the downfalls according to some researchers. The Predator and Reaper drones are designed to be more accurate and precise with the newly equipped laser guided missiles, but this technology does not have the ability to redirect the missile once it is fired off the rail and locked on the intended target; ultimately resulting in the killing of innocent bystanders, or commonly known as collateral damage. Ultimately the 'collateral damage' has had outstanding affects on drone operators that will be analyzed later on in my analysis.

Foucault developed a way of thinking which only analyzed those that were affected from being watched rather than one that also looked at how the watcher was affected by the watching. His way of thinking was that government systems were constructed to discipline individuals in order to have control over their lives while they were watched within the panopticon walls, and when they were not being watched outside the panopticon structure. He uses the Panopticon as a metaphor for surveillance and power relationships that 'If one is always being watched in society then one is always being watched in the mind'(Foucault 1995), in order to indicate how the punishment aspects of a watched society leads to a disciplined one. Researchers who study the current surveillance society say that the older panoptic metaphor has evolved into a new post-panoptic society with no discipline and only punishment for both the watched and the watcher. Deleuze (1994) says these are 'virtualities', or 'potentialities that condition and give rise to actual events', and Tiessen (2011) touches on Deleuze's concern with the government developing systems that are used to predict future events. He says that, "State apparatus operates according to what Deleuze would regard as an ontologically impossible logic of clairvoyance, a logic that requires citizens to trust that our politicians and security experts can see the future and that the future is knowable"(Tiessen 2011, 172).

Deleuze and Guattari (1987) point out that this shift has transitioned many aspects of society from the old disciplined reality to the new society of control.

They say that, "the post-panopticon signals a shift from the Foucauldian society of discipline to a society of control where production of social life is governed by global relations in which surveillance practices permeate geographic mobility, economic production, and consumption" (Zureik 2007, 113). Society is now controlled by mechanisms that are larger than those one could once see. Governments no longer need to have a solid structure of intimidation but rather a liquid stream of information that can control an individual or organization through hacking technology such as tapping cellphones, hacking into personal email accounts and computer files, and Global Positioning Systems (GPS).

GPS is one of the main technology advancements in the new digital post-panoptic age that has created this new heightened sense of a controlled society. Drone technology relies on GPS tracking systems in order to gain more adequate information on a suspect(s) and to follow them. Together these two systems have made the government re-create a strategy that no longer needs to discipline a society because society can now be controlled through surveillance. David Shenk (2006) notes that the government has developed more advanced and far reaching technology that expands across the globe to predict what an individual, organization, or another country will do next. Global surveillance is not only applicable through remotely piloted aircrafts hovering above, but has entered almost every home and office that has Internet access. Individuals are tracked and watched by their own will with every site googled; online purchases made, and open email, or live chat that one engages in.

Shenk (2006) says that, "We are, without question, headed into a world in which--mostly by our choice--the minute details of our bodies, lives and homes will be routinely tracked and shared, with the potential for more convenience and safety but also abuse"(31). The only difference between the advocates who oppose RPA surveillance and those who oppose media and big corporation surveillance is that drones survey without ones knowledge of being watched, and individuals use social media willingly. However, if someone makes an online purchase and then sees a related pop-up an hour later, the customer can only speculate that they are not willingly being watched anymore, but rather their patterns are being tracked by global media surveillance. The new post-panoptic society means that surveillance—whether in a foreign country or domestically—has no borders or boundaries and only a set agenda for its 'next' target. The next target to be digitally tracked in order to advertise based on their buying trends and preferences or the next target to be visually tracked to decide if they are a threat to US security. Both types of global surveillance are intended to watch targets in order to predict one's future actions.

This literature that I have reviewed here fails to bring aspects of distance, humanity, and power together to make one overall claim of distance being reduced psychological, mentally, and emotionally. Distance is too broad of a word to be used in relation to drone warfare because this term implies that there is only one significant form of distance during war, and that is one of physical distance. My research argues there is more than one way of understanding and

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conceptualizing "distance" in regard to drones and new warfare. It is the

psychological, mental, and emotional distances that have proved to impact

operators (PTSD) and this could make killing more difficult with RPA weapons.

Surveillance has created a new type of world that bridges distance with one of

proximate visibility. The viewing or mental distance is not one that is mutual for

both individuals in the viewing relationship, which has formed a power dynamic

over another person(s) life. There is literature on distance and surveillance that is

separate from the literature on individuals who operate the technology, and

theses two need to be laced together so that society can understand exactly what

our current surveillance society and warfare will entail. My research will address

this gap in the literature by exploring meanings of distance (physical, mental,

social) and surveillance by examining actions and perspectives of drone

operators.

My research also explores how allowing one individual to see another

individual's humanness can create the perfect dynamic for the viewer to be

unable to carry out their duty to kill the viewed subject. This is an effect of

military technology use that is not often discussed in existing literature. I will use

remotely piloted aircrafts as my case study for a better understanding of how

distance is affecting the individual designated to kill another individual

thousands of miles away, and how distance and RPA technology have

intertwined themselves to create an environment of seeing without being seen in

warfare and society.

II. Methodology

Understanding the operator's perspective of viewing is what I am investigating in this thesis, and one of the challenges of gathering data from drone operators is one of access. Drone operators are usually under strict orders to keep quiet about the images that they see and the type of work they do during their long shifts. This should call one's attention to the heightened secrecy of this program considering these restrictions are not applied to the soldiers and pilots who participate in the Iraq and Afghanistan war zones (Bumiller 2012). The data for this research includes: second hand interviews of sensor and pilot operators, documented media accounts of drone operations, theories about the shift in surveillance from panoptism to post-panoptism, and the recurring pattern of drone operators being medically diagnosed for Post Traumatic Stress Disorder (PTSD).

These interviews and accounts that I have gathered and reviewed contradict the general understandings that drones make killing easier, operating a drone is like playing a videogame, and how these subjectivities relate to the heroic and antiheroic mythologies surrounding the use of drones in the operators daily killing and surveying routine. However, the panoptic and the post-panoptic theory that I base this information around does indicate that ways of killing have changed for the operator through this type of warfare. This is because killing remotely gives complete control to one person—the viewer-- and no control to the other—the viewee (or those being watched). In this way, there is

actually a different kind of asymmetry because the visual target has no control over the conflict that is ultimately affecting the operator. I analyze drone operators' narratives in order to note how they describe their jobs and how they feel about targeting others. Essentially, I investigate how the spoken words of the operators during interviews are the only concrete information that the public has access to on the day-to-day experiences for drone operations.

The operators are speaking out in the interviews in order inform the public that even though they are physically removed, they are mentally present before, during, and after a target is killed more so than with any previous weapon used by the military. The military tried to accommodate this new weapon with a new discourse calling the drone 'remotely piloted'. Ultimately, the military tried to portray the operator as an objective viewer who uses a joystick to maneuver the robot (Asaro 2013). However, this is a distorted image to the public eye because there is a human being that is interpreting the actions on the ground, and is also drawing connections between their own lives and those they observe for days to months on end. I look at the operator with a subjective lens to investigate the experience of the drone operator in real time.

By subjective lens, I mean an individual subject (the operator) who sees another individual subject (the target) as a human being instead of an unknown object that the operator has never seen before. I have gathered several second hand accounts of former drone pilots and sensor operators (those who target the opponent) who talk about their experiences during surveillance and killing

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operations. The drone operator cannot take an objective approach when surveilling and killing the target, just as a researcher cannot be objective while doing field research.

When a person is the object of study, it is difficult for an individual to view them objectively because the person doing the observing sees qualities of the observed that is relational to their own lives and subjective being (Lynch 2000). The new advanced capabilities of RPAs cannot achieve the positivist approach that the military has pursued for many years in weapons development. As Adorno (2000) writes, "For if all social action is really to be interpreted as subjectively meaningful, this implies that all social action is already endowed with meaning" (107), implying that subjective relationships connect individuals who may or may not ever meet one another. Just as the researcher cannot distance him or herself from the object of study, neither can the operator from his or her target.

Essentially, research is a circular relationship between one individual observing another individual who is actually the object of study. This dynamic aligns with the politics of knowledge production, one subject producing knowledge for another subject to interpret. The target is a subject who produces knowledge for the operator to analyze and then interpret that information to decide if the subject will live or die. The knowledge that an individual produces can cost them their lives in this particular type of field research. In this sense, my research has an interpretive approach in which I seek to explain the meanings of

the operator's actions.

Illustrating the operators' actions while they survey and kill a person is beneficial to this research because even though drones distance the operator from the target in order to make killing easier, the target is re-visualized and re-embodied from the operator's viewing perceptive. This type of warfare makes the operator seem machine-like but in reality they have become more human-like through the surveilling process. While physical distance is increased between the operator and the target, psychological and emotional distance is decreased in today's asymmetric warfare.

This viewing process occurs by a remotely piloted aircraft that gathers information with its advanced cameras and lenses, then bounces this information off of satellites and sends it back to the operator in another geographic location, while the operator chats in a social mediatized chat room with his or her commanding officer about the information gathered, and will ultimately receive an order through this same type of chat room to kill someone half a world away. In discussing the details of the interviews and anecdotes that I have gathered, we can find more insight into the kind of work that drone operators do, the kinds of decisions they face, the technologies and information resources they draw upon and how they make sense of their actions.

Some limitations of my research were I was unable to interview the drone operators or get access to the actual questions and answers that were used during the interviews. Drone operators may also hesitate to tell the public their

entire story of operating a drone in international territory because of the tremendous push back abroad on the use of drones, as well as the US military and government's secrecy of the drone program. Lastly, my research is focused on the drone operators and not the civilians that are affected by the drone program; therefore, I will not detail the implications of how drones affect civilians in the strike zones.

Analysis of Data

Since drones fall under the surveillance category of a 'liquid digital age' (Bauman & Lyon 2013) that is all seeing and all knowing, it makes this technology even more complex. The metaphor of panopticism interpreted by Michel Foucault was taken from Jeremy Bentham's model of the panopticon in the late 18th century (Foucault 1975). This was a prison structure that had a watchtower in the center and the prison cells assembled in a circular manner around the tower. The tower had a single watchman to observe all the cells and even though he or she could not watch all of the inmates at once, the inmates never knew when they were being watched which modified their behavior to act as if they were always being watched (Foucault 1975, 201). This structure was then used by Foucault to devise a metaphor for a power relationship of a few watching many others without the viewing being a reciprocal watching, therefore giving the power over another intimate's life to the watcher (Foucault 1975). Researchers such as Bauman and Lyon (2013) have taken Foucault's analysis of a panoptic world--one of a disciplined and punished society--and

transitioned it into its current form of a post-panoptic society (Bauman & Lyon 2013).

Essentially, Bauman is saying that the post-panoptic world 'works at a distance in both space and time, circulating fluidly with, but beyond, nation-states in a globalized realm' (Bauman & Lyon 2013, 5). In this type of world, one can be physically distanced and still have power over another individual's life. This new kind of power is digitally made and at almost every individual's fingertips who have access to technology and the Internet. The current surveillance regime is one in which those who are watched do not know they are being watched by another individual, as Foucault has indicated with his metaphor of the panopticon. However, my research is concerned with those who are doing the watching/observing and how watching has rehumanized the operator. The post-panoptic society is different from the panoptic society because the process of watching and surveilling the target is now affecting the operator psychologically. Therefore, this research is distinct from the original panopticon because the viewing lens of the current surveillance society has created an intimate relationship for the watcher through his or her action of watching. Remotely piloted aircrafts are the technology that is now being used in warfare to control whether someone lives or dies. The power lies in the hands of individuals who are operating the drone and with one click of a button they can kill someone across the world. The post-panoptic watching has reached a new peak so that the individual who is killing another individual never has to be in

the same geographic location for it to occur. Using these interviews, journalist accounts of mistakes that happen during operations, and the visual stresses that contribute to the psychological repercussions operators encounter, will indicate how killing by remote control can be more difficult for the operator.

However, anecdotes alone cannot settle whether a drone operator is mentally closer to the target below, but the reports by operators who suffer from PTSD due to the high-resolution images on their screens, and the after-action reports of making sure the target was hit should be taken very seriously. Operators survey and kill targets at a close visual distance, or from eye to screen, therefore at this range re-visualizing the target can affect those who are doing the watching. This new type of asymmetric drone warfare re-humanizes the operator in the process of the operator watching the target. Unpacking the intricate details of who gives the command to kill, who fires the weapon, and who guides the laser to the target is a very complex dynamic to understand. Disler (2003) detailed the importance of understanding that when an order is given by the chain of command it is not negotiable among those who have to carry out that order.

One drone operator, Brandon Bryant, talks about his experience of working within the military's chain of command. He received an order to fire and another human subject happened to run into the kill zone after he had already released the missile. There is a certain window of time between when a drone is fired and when it hits the target. Brandon Bryant states, "The figure runs

around the corner, the outside, toward the front of the building. And it looked like a little kid to me. Like a little human person" (Power 2013, 3), he goes on, explaining that "I typed in the chat message to our intelligence observer who was watching from somewhere in the world, asking if a child had just run directly into their shot". The observer then states, 'Per the review, it's a dog' (Power 2013, 3).

The operator is situated within a chain of command in the military, and those who are watching the target may interpret the actions on the screen differently. The drone operator received the order from someone who is of a higher rank and located in a completely different location. The anecdotes on killing, surveilling, and the media accounts, all indicate that drones have brought the soldier back to feeling empathic towards one's opponent (Power 2013). This is not sympathy, but rather an ability to understand and share the feelings of another human being. Drone operator Brandon Bryant has been interviewed more than once on CNN, NBC, and in GQ magazine.

In his interview with Power (2013) in GQ magazine, Brandon Bryant mentions the visual clarity that he saw first hand while operating a drone on countless occasions. He says, "The cameras are so clear depending on atmospherics and elevation of the drone that I could see the guy I just killed bleeding out. I watched him turn the same color as the ground. He lost his sense of life or his heat signal" (Power 2013, 1). This interview with Powers reflects Omer Fast's (2011) short film titled *Five Thousand Feet is the Best,* which

interviewed another drone pilot. Fast is the interviewer, and he makes a

comment in his final analysis about the film that technology acts like a prosthetic

arm or leg attached to the drone operator. Fast says,

> "The distance that's compressed is prima facie optical. And is interesting
> in as much as the technology involved-scopes, cameras, heat sensors,
> satellites, etc.-can be seen as virtual extensions of the operator's body,
> much like a prosthetic or cyborg. But where it gets even more interesting
> and messy is when you consider the psychological effect this prosthetic
> compression has on the person operating the machine" (Fast 2011).

Fast is drawing a connection between advanced technology and human

qualities. That the technology becomes one with the operator and creates a

'visual stress' (the pilot indicated in the film) on the operator. Brandon Bryant

makes a reference to his recent diagnosis of Post-Traumatic Stress Syndrome

(PTSD) that developed because of the advanced cameras and visual lens

operators view a person through for hours on end. As indicated by Fast's

anecdote, 'visual stressors' (Fast 2011) lead the operator to see the images (while

surveying and killing) over and over in their minds after they leave the base and

head home. The graphic images that operators have to watch during their shifts

do not fade away once they leave the job.

PTSD has become very common among drone operators. 'Over 40% of

drone crews surveyed reported moderate to high stress. One in five reported

emotional exhaustion or burnout' (Chappelle et al. 2011). Also, this study found

that operators suffered from the same levels of depression, alcohol abuse, and

anxiety as traditional bomber pilots and combat aircrews (Chappelle et al. 2011).

One operator compared his life work of killing to an assassin. He says, "We were

just permanently between war and peace. We commute to work in rush-hour traffic, slip into a seat in front of a bank of computers, fly a warplane to shoot missiles at an enemy thousands of miles away, and then pick up the kids from school or a gallon of milk at the grocery store on our way home for dinner" (Asaro 2013, 202).

This is almost like a schizophrenic existence that has been created because the operator has to separate being at "war" all day and then leaving the "war zone" or the base, and driving a couple miles down the road to his or her house. There is not a clear separation between the location of the war zone and the location of their homeland. RPA operators cannot talk about their work at home over supper (Power 2013); they are in an environment that is supposed to make it easier to kill but it might be making it harder. In a war zone, a soldier can talk about his days work because the person sitting next to him usually experienced something quite similar. Drone operators do not have a person to vent the frustrations of witnessing death, and this could be the reason why they experience higher PTSD rates than the average soldier (Power 2013).

The interview account in Chamayou's book (2013) details that living in two worlds, one physically removed (war) and the other mentally excluded (home) creates the perfect situation for one to have no other alternative than to view the blimps on the screen as objective targets. This makes the operator function in a robotic manner, almost as though they are the emotionless machines that they fly. Ultimately the remote split dehumanizes the operator.

However, the accounts by former operators indicate that the targets are re-humanized, re-faced, and re-embodied from the newly created vantage point. In this way the observer has morphed into a robot that sees with emotions in two different spaces, one that is spatially dehumanized and one that is visually re-humanized. The link is the digitized viewing machine that has power over the individual below while also having power over the operator viewing the target. The power that ripples out onto the operator(s) is seen partly in the increasing diagnosis of PTSD among drone operators.

This split reality is almost like a voodoo trance that comes over the operator. Drone operators may be strung out between two separate worlds and cannot tell the difference between the subjective and objective world. To understand the psychological effects of PTSD on drone operators, the study was conducted to measure the sources of stress between Predator and Reaper operators, and to identify if PTSD was operational or combat related (Chappelle et al. 2011). The authors Chappelle et al. (2011) conducted several standardized individual interviews (sample in Appendix) and held a meeting with a large panel of "RPA MQ-1 Predator and MQ-9 Reaper subject matter experts from training and operational squadrons"(11). The authors of the study found that it is possible many Predator and Reaper operators "experience the deployment of weapons and exposure to live video feed of combat (i.e., destruction/death of enemy combatants and ground forces) as highly stressful even though occupational burnout was found to be the biggest stressor in the field"

(Chappelle et al. 2011, 8), indicating that daily surveilling and killing at a distance may cause PTSD in drone operators.

The increasing diagnosis of PTSD for military soldiers has been aligned with the advancing technology of weapons over the years. Understanding how previous distancing weapons evolved into the current remotely piloted aircraft is significant to this analysis because the history of weapons over time reveals the military's war motives and tactics for initially creating distancing weapons. US military war tactics seem to have shifted from capture and interrogate, towards kill once the target is identified around the time that the US military began to produce bomber planes. The history of weapons shows how group weapons—such as drones—have been around for many years dating back when the chariot was first invented.

History also indicates that distance has been a factor in weapons development in order to decrease the visibility of the target while increasing the distance since the bow and arrow (Grossman 1996). Ultimately, increased physical distance and visual distance has made it easier to kill the target. This progression has resulted in asymmetric warfare, or making it so that one person or group of people can target and kill another person without the targeted individual(s) being able to reciprocate.

III. The Nature of War

Drones are the US military's greatest creation thus far to physically distance the operator(s) from a target. The operators' have indicated in various

narratives that the targeted individuals are re-faced and re-embodied with the high definition cameras that are used to watch the people below. These interviews and accounts indicate that the operators are re-humanized by the drone weaponry because they are affected by their actions that they witness on the screens in front of them. However, understanding the effects of one's weapon was not always the case with previous aerial weaponry. The idea that whoever controlled the skies controlled the war has been around before the first airplane took flight by the Wright Brothers in 1903 (Cockburn 2012).

During the Napoleonic War in 1812, Count Rostopchin developed a plan of "vengeance promised to drop from heaven: a huge balloon, constructed at great expense, was to float above the French army, pick out the Emperor (Napoleon) among his thousands, and fall on his head in a shower of fire and steel"(Cockburn 2012). Cockburn (2012) states that the source of this account came from the, 'memoirs of the French writer Chateaubriand but details that from the first moment man took to the air, he has seen it as a means of assassination'. The current strategy of using drone systems to do most of the targeting and killing in foreign countries by the Obama administration reflects the same idea that Rostopchin had 200 years ago. However, Rostopchin overestimated his weapon because in 1812, there was not any way to identify one person out of thousands of people below. It was not until many years later that a plane would be able to hover over a group of people and spot one individual from a couple thousand feet above.

History of Drone Warfare

Remotely piloted aircrafts are not a new weapons technology. In fact, experimentation with remotely controlled vehicles dates back to WWI (Singer 2009). "The Allies and the Axis powers both used remote-controlled bombs in WWII but not much advancement occurred during the Cold War or Vietnam" (Singer 2009, 29). There were minor advancements on remotely piloted aircrafts after the Vietnam War but none of the advancements to the system compared to when the Global Positioning System (GPS) was incorporated to the technology. Being able to track one individual and gather information on them for an extended period of time is what makes drones a distinct surveillance weapon from any others produced thus far.

The Predator and Global Hawk RPA's were introduced during the Balkan wars in the 1990s, which were first used to gather information on Serb air defenses and refugee flows (Singer 2009, 32). It was not until the War on Terror that RPA's began to have Hellfire missiles strapped to them. Current and future designs of RPA's are becoming smaller in size, are more accurate with precision guided missiles, and have the ability to stay aloft for months to even years at a time (Singer 2009). However, most of these future advancements will not include a person operating there every move, instead they will most likely be autonomous robots functioning by preprogrammed algorithmic equations (Singer 2009).

So, why have military's decided to use robots (unmanned and autonomous) to fight contemporary wars more so than previous wars? Since US enemies (terrorist networks located in foreign countries) have shifted from countries to individuals within countries, robots are seen as the better method to fight current wars because of the three D's. Or as Singer (2009) describes them as,

> "Dull jobs, such as extended reconnaissance or patrol beyond limits of human endurance, and standing guard over perimeters; dirty jobs, such as work with hazardous materials and after nuclear or biochemical attacks, and in environments unsuitable for humans, such as underwater and outer space; and dangerous jobs, such as tunneling in terrorist caves, or controlling hostile crowds, or clearing improvised explosive devices (IEDs)" (31).

The three D's of drones all have one aspect in common, and that is distance. Distancing a soldier from seeing or hearing the enemy die during war is a pattern that can be seen with the development of each new weapon that has been introduced by the US military.

Remotely piloted aircrafts have proven to be able to carry out tasks designated to them that previous bomber pilots could not. The previous way to drop a bomb from a plane was to position the plane over the suspected enemy while the plane was on autopilot and write down the coordinates of that location to send back to base for analysis. Once these coordinates were received, the base would interpret the pros and cons of dropping a bomb, and then a bomb would be dropped, usually by another plane if there were not too many civilians in the area (Singer 2009). Drones have incorporated this process into utilizing a crew of operators who work together using the same field of sight as well as one full

motion that is made by many people in order to carry out the task given to them. However, weapons that are specifically designed to have a group of people operating them are not a new idea.

Crew-served weapons have been around ever since the chariot was developed. Grossman (1995) details the role of groups in military history in his book *On Killing* and says that,

> "The key issue is that the chariot crew traditionally consisted of two men: a driver and an archer. And this was all that was needed to provide the same accountability and diffusion of responsibility that, in World War II, permitted nearly 100 percent of crew-served weapons (such as machine guns) to fire while only 15 to 20 percent of the riflemen fired" (153).

He goes on to explain how the phalanx, cannon, and the machine gun functioned in a similar way to the chariot (Grossman 1995, 154). These older weapons all operate with the same strategic dynamic as the drone does; the soldier is bonded to his fellow soldiers and feels accountable to the person next to him, therefore, with crew weapons the soldiers are more likely to pull the trigger every time because others relay on his or her action. This military strategy is designed to allow the crew to be accountable to each other, however it leaves no accountability for the enemy that is fired upon.

This makes it easier to cope with killing because several people are to blame rather than one person. Drones fall into the category of a group weapon because like the chariot, the people who operate the laser (sensor operators) and the people who fire the weapon (pilots) are all accountable for killing the target. Also, the drone operators are accountable to one another because each task that

is given to the operator(s) is vital in order for the weapon to work correctly. Essentially, if one operator decides to reject the order then they have to answer to the entire group instead of answering only to themselves (singular weapons). Soldiers that work with group weapons have been trained to obey authority and orders.

The power of discourse in the military context is so strong that soldiers rarely stray from the orders that their superiors give (Disler 2003). In the past, orders may have been received by radio or telephone, but with drones they are in a live chat room over the Internet. Drone commanders and operators are located in many different geographic locations when they give and receive the order to fire a missile at the intended target. As Derek Gregory (2014) details that the aircraft might be "flying a combat mission in Yemen by a pilot based in Nevada, overseen by a manager in Virginia, and supported by intelligence officers in Tampa". Orders are now given across a more dispersed chain of command that relies completely on mediated discourse given through cyberspace chat rooms (Disler 2003). However, if the operator(s) who are firing the missile interpret the information differently than the commander giving the order to fire, will it make it harder for the operator to follow the orders?
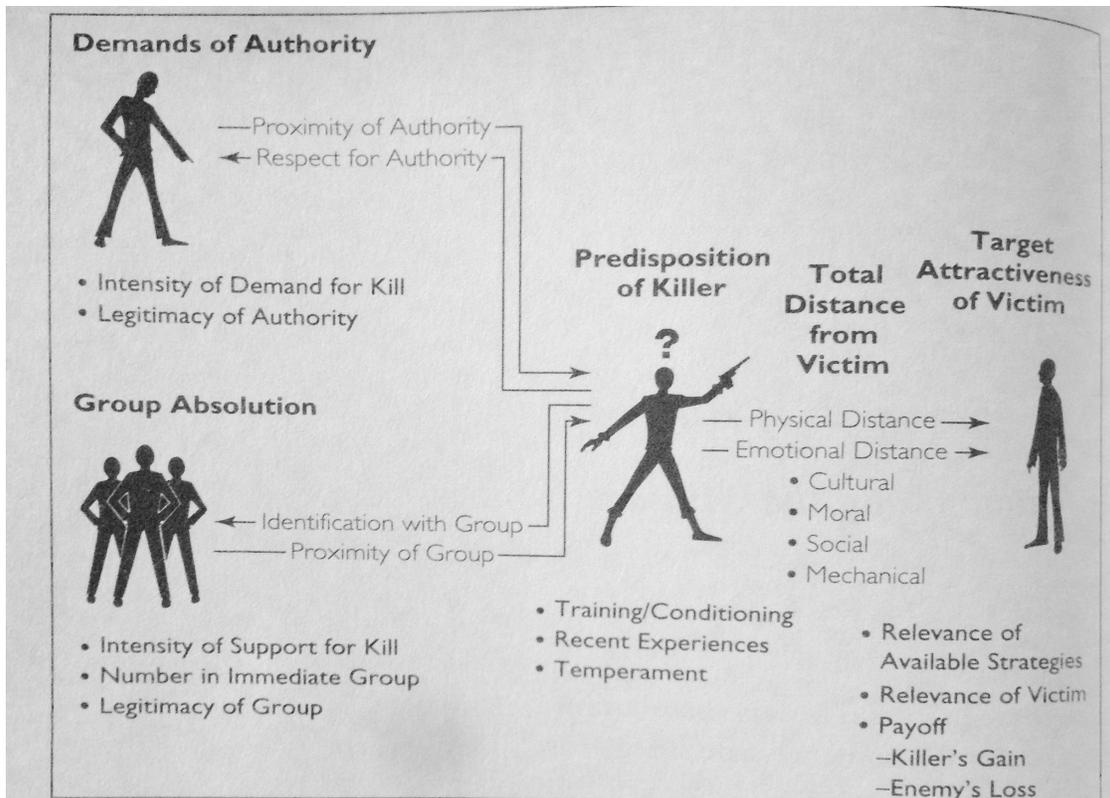
Demands of Authority

- Proximity of Authority
- Respect for Authority
- Intensity of Demand for Kill
- Legitimacy of Authority

Group Absolution

- Identification with Group
- Proximity of Group
- Intensity of Support for Kill
- Number in Immediate Group
- Legitimacy of Group

Predisposition of Killer

?

- Training/Conditioning
- Recent Experiences
- Temperament

Total Distance from Victim

- Physical Distance
- Emotional Distance
  - Cultural
  - Moral
  - Social
  - Mechanical

Target Attractiveness of Victim

- Relevance of Available Strategies
- Relevance of Victim
- Payoff
  - Killer's Gain
  - Enemy's Loss

Figure 1 A: Demands of Authority

Dr. Stanley Milgram's famous study on obedience and aggression found that on average, "more than 65 percent of his subjects could be readily manipulated into inflicting a (seemingly) lethal electrical charge on a total stranger" (Milgrams 1963). The flow chart above shows one's need to obey and follow authority based on the demands of the authority figure, group absolutism, predisposition of killer, the total distance one is from the victim, and the attractiveness of the victim (Grossman 1995, 142). Before drone technology, the orders to fire while on the battlefield came from a leader who was located in the same war zone fairly close to the soldier. Milgram's says that the "innate need to listen and follow orders given by an authority figure is so ingrained in someone that they will stop at nothing once they start" (Grossman 1995, 372). However,

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this study was done by hearing the victim's screams rather than seeing what is happening to the victim.
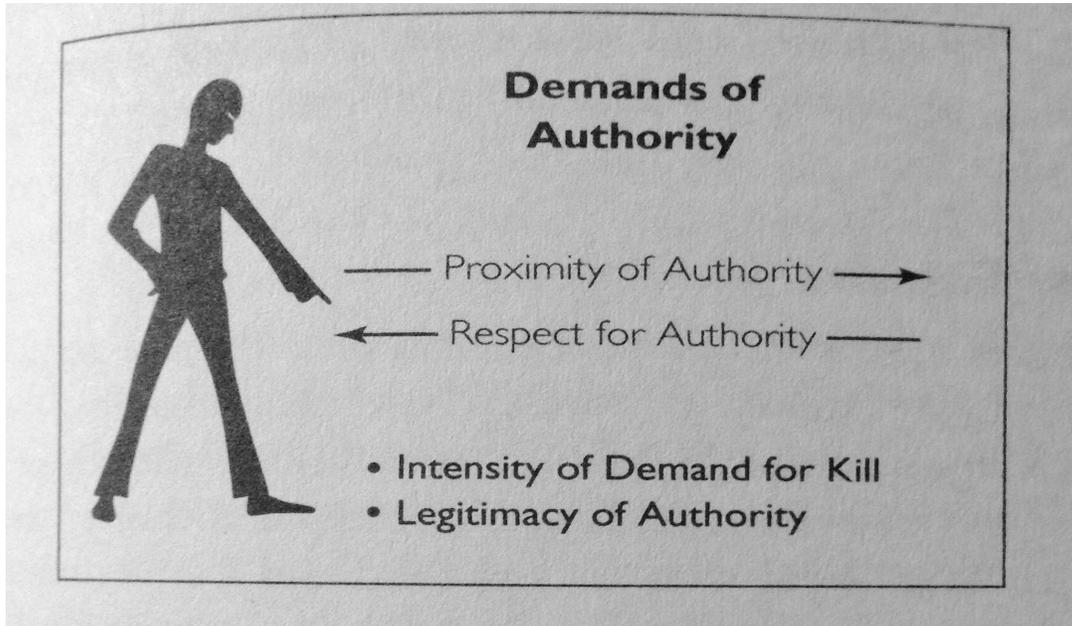

Figure 1 B: Demands of Authority

The participants in this study could continue with the electrical shocks because they could not see their actions, but now that RPA operators can see what they are doing and have the ability to interpret what is happening below the drone, their ability to not follow orders is somewhat greater than the findings in Milgram's experiment. The distance that is now between the drone commander giving the order and the operator receiving it, coupled with the close visual proximity that operators now endure, creates an environment for the operator to reject the killing order. Remotely piloted aircrafts have evolved as the modern group weapon because it is designed to distance the operators so they can track and kill the target more easily. On the contrary, the distance might be the reason why operators have a harder task today with carrying out their duty

than those that were inserted within the former bomber view because the target is re-humanized and made visible once again with this new advanced weapon.

Killing by Remote Control: Removing Distance

When it comes to drone technology, however, it is not just physical distance that needs to be understood. Today's drone technology compresses one geographic location of the target into the same location of the drone operating crew, and this is possible due to the high-optic resolutions that the weapon allows the operator to see with more precise visibility. This image creates a reality as if time and space are folded into one area instead of two. Gregory (2014) calls this 'drone geographies' in other words 'the ability to see everything from nowhere'. Gregory quotes Karl Marx in his writing on drone geographies indicating that Marx was correct when he said, "eventually we will have the ability to annihilate space with time" (Gregory 2014*)*. The various ways that space affects the drone war, whether it is the operators' physical space they are immersed in, or the spaces that the US is not currently at war with, or the cyber spaces that drone operators consume themselves in daily; are all controversial topics in the drone debate. However, space and distance seem to be at the heart of the discussion whether drones are moral, effective, and legal weapons to use.

The emotional impacts of the use of drone technologies are connected to the compression of physical distance. Kaplan (2006) notes, 'Inside those trailers you leave North America, which falls under Northern Command, and enter the Middle East, the domain of Central Command. So much for tyranny of

geography' (81). One trailer could be flying a mission in Afghanistan while the one next to it in Yemen. Therefore, killing by remote control does not mean the operator physically goes to war, but rather mentally goes there for the day or night, and then commutes in rush hour traffic back to his or her house. A former RPA operator Matt Martin touches on his experience of the disconnect he felt living at home while fighting a world away.

He says, "I experienced the psychological disconnect of being "at war" for eight hours or so, shooting weapons at enemy targets, directing hits against the other side, and then I got in my car, drove home, and, that evening, had steak with my wife in Las Vegas" (Martin & Sasser 2010, 47). Operators like Matt Martin have reiterated his concern of the split reality that operators work in. Operators who are physically removed but psychologically present for their shifts could have a hard time drawing the lines of what is considered a 'war zone' in the US and what is considered 'civilian life'. Space and time are folded with drone technology and the line between war zone and civilian life is not as clear as it once was with previous warfare technologies.

Having a job of surveilling and killing in a very hostile visual working environment—one that has never been designated to soldiers outside of a military war zone—creates the perfect environment for operators to lose sense of their current reality. The dynamic of being in one location while killing in another location has been affecting piloted aircraft operators more frequently, and can be seen with the increasing diagnoses of PTSD found in several studies

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on soldiers who operate drones. The study done by Chappelle et al. (2011) on the impact of RPA operations on the pilot and sensor operators found that 'the main source of stress was operational (i.e., long hours, low manning, shift work, human-machine interface difficulties, geographical location of work, concerns regarding career profession and incentives)' (63), indicating that being physically located somewhere other than the place of operation (RPA operations) can cause PTSD.

The debate over whether drones are right or wrong often miss the mental impacts of drones on the operators and focus mostly on impacts to civilians and those being targeted. Coeckelbergh (2013) is critical of the drone program, and is one researcher in the debate who does argue that, "drone fighting, like other long-range fighting creates epistemic and moral distance in so far as 'screenfighting' implies the disappearance of the vulnerable face and body of the opponent and thus removes moral-psychological barriers to killing (87). However, the statements and accounts made by former drone operators indicate that RPAs do the exact opposite of what Coeckelbergh says, and actually allows the operator to see the target before the weapon is fired, during the blast, and after the kill has followed through. As former drone operator Brandon Bryant recounted, "After a strike had happened, I was tasked with lingering over a site for several haunting hours, conducting surveillance", he goes on to say that the surveillance aspects of drone missions are what really connected him to understanding what was happening below. "Watching people gather up the

remains of those killed and carry them to the local cemetery or scrub the scene by
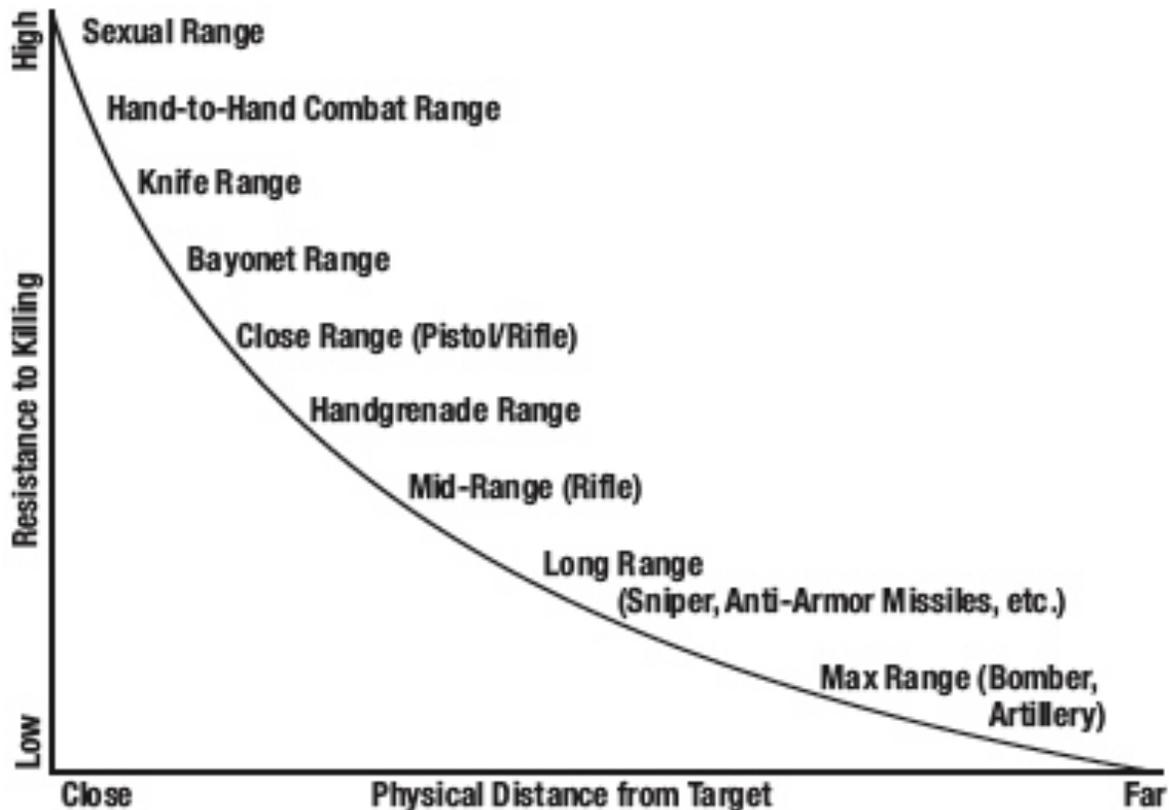
dumping weapons into a river" (Power 2013).

Figure 2: Physical Distance from Target

Dave Grossman uses this diagram to show the relationship between the

'resistances to killing' in relation to the physical distance one is from the target.

Grossman says that as someone gets further away from the target using

distancing weapons they move further towards the right of the diagram

(Grossman 1995, 98). Grossman did not include drone technology in his analysis

but as he indicates in his description of distancing technologies, one could

speculate that drones would continue this linear curve off to the far right. At this

distance the operator should be able to deny the target's humanity completely

according to Grossman's historical analysis. One study done by *The New York*

Times on a dozen pilots, sensor operators and supporting intelligence analysts interviewed from three American military bases found that, 'None of the operators acknowledged the kind of personal feelings for Afghanistan targets that would keep them awake at night after seeing the bloodshed left by missiles and bombs', however the study goes on to say that, 'All spoke of a certain intimacy with Afghanistan family life because of the surveillance that traditional pilots never see from 20,000 feet, and most ground troops seldom experience' (Bumiller 2012).

This study shows that not all RPA pilots and sensor operators are affected by the images they see on the job, but there are still a substantial amount of operators who have indicated that they have been affected by the conflict on the screens in front of them. Predator and Reaper RPAs are the most radical form of weaponry to date that physically distances someone. However, as some RPA operators indicate, their view of the battlefield is eye to screen. They see these images up close in real time and at this range, I would argue, drones fall closer to hand-to-hand combat located on the far left of Grossman's diagram.

Grossman accounts for physical distance in his historical study but fails to make note of the visual and mental distances that one may have of a target once they can see the target at this new distance. The clear visibility of the target with this weapon is what makes the physical proximity argument outdated. Previous researchers who used the physical distance argument to criticize distancing weapons did not know visibility would be added to weaponry in the near future,

therefore, when contemporary critics compare RPAs to previous distancing weapons that did not have the visibility, it makes their criticisms void. Previously, physical distance was always coupled with the ability to see, and now RPA's leave out the physical and bridge the gap with visual proximity. I would argue that killing another individual is easier once physical distance is increased between the target and the soldier with former long-range weapons, but not including remotely piloted aircrafts. RPAs do not eliminate a person's face or body, but rather it makes them reappear on screen and allows for their humanity to re-surface. No longer does physical distance eliminate visibility, and once increased distance and visibility are coupled together, it could make killing the target much harder than it has been with previous long-range weaponry.

Visual Objects vs. Subjects

One of the US military goals with weapons development has been to try and make the target, or subject into an object in order to dehumanize military operations and make killing easier for soldiers (Coeckelbergh 2013). In order to do this, the military previously made weapons that had limited visual proximity as well as increased physical distance between the soldier and the target. RPAs have added the visual optics back to the weapon in order to increase one's ability to see the target, however this added feature could make it harder for the operator to pull the trigger when it comes time to kill the target. Thus, the issue here is whether the operator (subject) affects the target (object) or the target affects the operator. Medea Benjamin (2013) writes about the 'god-trick' as

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human beings able to act like god and kill people from the skies. Benjamin (2013) says,

> "Man has never experienced this before--watching someone from above for so long without them knowing it, almost in a God-like way. Then one day the decision comes down that you've got to take them out. You hit the button and kill them. But you know these people in a way, so it can become quite personal" (90).

Essentially, remotely piloted aircrafts were designed to 'enhance objectivity instead of undermining it' (Lynch 2000, 26). The structure of drone weapons was intended to allow the operator to be more objective essentially drawing from the knowledge and information gathered about the target with no external personal interpretations. RPA's were created to distance the operator from the target by removing the operators' physical presence and replacing it with the ability to visually see the target once again. Ultimately, the operator is humanized in the process of viewing the target. But, what has been noted through the experiences of drone operators is that, instead of the operator taking on machine-like qualities, he or she is actually re-humanized in the process of visualizing the target. Thus, the targeting process is reflexive—creating a circular cause and effect relationship for both the operator and the target.

The drone's elevated visual distance allows the operator to have a line of sight into humanity and the people below, giving the operator the intelligence to view the target as a person instead of another coordinate on the screen. Grayson (2012) talks about the new scopic regime stating that,

> "It operates under the assumption that vision--through technological enhancement--can become an infallible sense which captures *the* physical

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world that exists independently of any subjective perceptions that we may have of it. The disembodied, ahistorical and objective observation that helps to define the vision referred to as the 'god trick of seeing everything from nowhere" (123).

The idea that humans can act on information alone, with no feeling of remorse for their actions if technology is enhanced, seems to come up short with RPA systems. Former drone pilot Matt Martin states, 'Technology changed how men fought and died, might even minimize dying-but it could never change the reality of death' (Martin & Sasser 2010, 219).

Some drone operators have talked about the connection they feel to the soldiers they support on the ground that fight in the areas they hover over. Being able to see the soldiers that the operators are helping brings the battlefield even closer to home, as operator Dan recounts,

> 'When you see combat, when you hear the guy you are supporting who is under fire, you hear the stress in his voice, you hear the emotions being passed over the radio, you see the tracers and rounds being fired, and when you are called upon to fire a missile or drop a bomb, you witness the effects of that firepower' (Bowden 2013).

Understanding that there are real soldiers on the ground that the drone operator is supporting, allows the operator to draw more of a connection to the battlefield than they could with previous weapons, and ultimately see the people below as humans instead of targets. Recently the military has been building more advanced prototype drones that will ultimately remove the operator from the system completely (Singer 2009). This will make it so that the RPA can act objectively with decision making since there will no longer be a person

controlling the operations. Instead it will relay on preprogrammed algorithmic equations.

Once the operator is removed, the drones will function exactly like other distancing weapons. No longer will living human beings target other human beings, but rather humans will be targeted and killed by robots using mere spatial and tactical coordinates. Understanding how current drone operators function on the job is very important to this research because once the operator is removed from the cockpit, robots will be making the decisions of which humans live and which humans die (Singer 2009). The U.S. National Research Council advised the United States to 'aggressively exploit the considerable war fighting benefits offered by fully autonomous vehicles that were cheap to manufacture and require less personnel' (Sullins 2010, 264). This shift towards more autonomous weapons could be occurring because the observer behind the drone is also affected in the process of viewing the target, which could cause the operator to re-evaluate if they should kill the person below.

The military set a goal to have 'one-third of all ground combat vehicles unmanned by 2015' (Martin & Sasser 2010, 217) meaning that autonomous weapons will be in full action in less than a year from now. These futuristic drones will be able to deny humanity and one's subjectivity. The current RPAs that require a human to operate every step is a limitation at times but, 'it is also its strength and the reason why the system is successful. Predators and Reapers depend on the tactical and technical competence of the crew that fly them'

(Martin & Sasser 2010, 218). A human has the ability to think on its own whereas a robot does not.

Today, operators are aware of their actions while they survey and kill. If robots were preprogrammed to do this then emotionless robots would be targeting and killing humans with zero accountability for its actions. Also, mishaps would occur more often than they do now and there would be no way to correct these malfunctions without having someone in the unmanned cockpit to fix them.

IV. Surveillance & the Post-Panopticon

Collecting Intelligence

Surveillance is a very important part of the drone program because it is supposed to tell the military which individuals are threats and which are not threats. David Lyon defines surveillance as 'any collection and processing of personal data, whether identifiable or not, for the purposes of influencing or managing those whose data have been gathered' (Lyon 2006). RPAs are equipped with cameras and visual optics that can survey targets and individual citizens for days, weeks, to months on end. The idea that a flying unmanned robotic machine could be invading one's privacy at any time for any number of reasons is a worrying thought for many citizens (Singer 2009).

Drones can collect intelligence by three primary packages of data: "Straight visual; infrared (via a heat-sending camera that can see through darkness and clouds); and what is called SIGINT (signals intelligence), gathered

via electronic eavesdropping devices and other sensors" (Bowden 2013). Data is collected in order to categorize and discriminate between individuals within a population, and to tease out other people who are in contact with the target. In order to find and track the target(s) and their accomplices, the military's Joint Special Operations Command (JSOC) uses electronic surveillance rather than human intelligence for the lethal drone strikes (Scahill & Greenwald 2014). Often, the NSA works with JSOC in order to geo-locate the suspected terrorists cellphone, and as one JSOC drone operator who asked to remain anonymous states,

> "That the technology has been responsible for taking out terrorists and networks of people facilitating improvised explosive device attacks against US forces in Afghanistan. But he also states that innocent people have "absolutely" been killed as a result of the NSA's increasing reliance on the surveillance tactic alone" (Scahill & Greenwald 2014).

Surveillance data collecting that relies solely on technology is severely flawed and could have many other mishaps such as: a miscommunication within the chat room, losing satellite signal with the RPA, and losing live video image resulting in a rogue RPA. Drone operators have been granted the ability to see without being seen, to be invisible to the people below, and render everything else below them vulnerable to their watchful eyes. This is asymmetric warfare and the surveillance aspects of the weapon have put an end to mutual engagement altogether. Drone warfare combines hunter and killer into a single platform giving the operator power over everyone he or she targets below. Hunter and killer drone warfare is eliminating the threat with the click of a

button. The intent is to get rid of all individuals that are a threat today and may be a threat tomorrow. The military categorizes the threat by analyzing 'information based on activity' (Chamayou 2013) from surveillance data that has been tracked and filed on a particular target over a period of time. Trying to predict a targets next action is problematic because prior actions do not always predict future actions. Essentially, surveillance analyzes the data that social life produces and through what the Air Force has termed as the 'Gorgon stare' (Bauman & Lyon 2013), which is being able to watch a whole city at one time due to added video cameras that record live video streams from multiple angles back to a bank of computer screens for further analysis by operators.

Modern surveillance by remote control is almost like stalking an individual because they are watched in public and in private. Chamayou (2013) writes about the drone stare and describes it as, 'A hi-tech form of voodoo violence, like sticking pins into a wax doll, in which bringing someone into view-'pinning' the target in the viewfinder--transports them into the killing space'. Stalking a suspected individual for hours on end has been a crime in the past, and now, in the new digital age where information is instantaneous, it is seen as the most valuable information for the government to obtain. Everyone is now a suspect in our risk-transferred society and surveillance is seen as a security for those deemed non-terrorists (Gregory 2014).

In the movie *5,000 Feet is the Best,* Fast interviews a sensor operator (most concerned with the surveilling targeted individuals) named Brandon Bryant, and

Bryant compares the surveilling to be similar to the inverse of archery, 'because paradoxically the more distant the operator is—mediated by multiple screens, platforms, etc.—the more proximate the sense of killing seems to be'. He goes on to say that, 'the technology involved can be seen as virtual extensions of the operator's body, much like a prosthetic or cyborg' (Fast 2011). Brandon Bryant details his experience of collecting data as if he was located right above the target and looking down through a camera because the drone is a part of him. When he reacts to a visual threat the robot reacts to the visual threat, which could create an illusion for the operator to feel as if he was located in the same geographic vicinity as the target. Overall, collecting intelligence is used to see someone's current actions in order to tell the viewer what his or her future actions are going to be. Predicting an individual's next move cannot be analyzed solely on watching and surveilling. Milling through endless amounts of data that is connected to the target is also a major part of the intelligence field. This makes the observer/data analyst very familiar with the surveilled and thus more aware of their humanity.

Predicting the Future

The process of trying to predict one's future actions before they ever occur is called data mining. Oscar Gandy writes about this and says it is a method in which,

> "Special statistical techniques and computer software are able to detect underlying behavioral and demographic patterns in disparate data sources about citizens an consumers to enable marketers and other

decision-makers to predict future behaviors of their subjects" (Zureik 2007, 114).

The intelligence aspects of surveillance are treating drones as if they were crystal balls. Operators cannot predict if every individual will commit a terrorist attack, they may be able to speculate based on the information. This is the reality of our surveillance society that has developed after September 11th. The targets beneath the eye of the drone have no idea that their actions are being picked apart by another individual in order to decide if their daily routine is suspicious to the watchful eye. The intimate lives of individuals that operators peer into has been compared to social media users who willingly post their daily activities in order to portray who they are and what they are doing to anyone that has Internet access (Lyon & Bauman 2013).

Being a part of various social media sites means willingly giving over one's privacy for the wonders offered in exchange of everyone seeing that you are a person in the world. As Descartes was famous for stating, 'I am seen, therefore I am' (Lyon & Bauman 2013, 130), people who enter into the social media world want to be seen, to know that they are apart of something bigger than themselves and their current reality. Nonetheless, these sites make their terms and agreements known to the users, ultimately stating that the information that they post on the site is that site's information and not the users'. Lyon and Bauman (2013) contrast social media and drones saying that,

> "One way or another, however, we are offered, at least nominally, a choice, as well as at least a semblance of a two-way contract, and at least a

formal right to protest and sue in the event it is breached: something never granted in the case of drones" (22).

RPAs have no agreement between the viewer and the viewed. The target under review is not one that wants to be seen or monitored by another person they do not know. This dynamic is one in which the viewer has all the power and the viewed has none.

The US military has devised this relationship in order to secure control over individuals that are considered to be a threat to the US and to its citizens. Surveillance is the device that is now being used for US security, and with that is the need to control the enemy at all costs. Our society is now post-panoptical. Where before, in a panoptical society, the government would discipline those who acted out against the norms and then punish them with the pursuit of re-assimilating them back into society. Now, in a post-panoptical society, the government does not discipline but rather punishes by launching a missile at the person whose activities deviate from the norm.

Michel Foucault's panopticon is the arch-metaphor of modern power. In the initial panopticon model, power was fixed and rigid, as Lyon and Bauman call it 'solid surveillance' (Lyon & Bauman 2013) that is in one location at one current time. The prisoner knew that they were being watched but had no way of knowing where at the moment the watcher was. Today, the post-panoptic surveillance is free flowing and everywhere, or is 'liquid' surveillance (Lyon & Bauman 2013) meaning that people's lives are open for viewing pleasure by any one in the world that has the technology to do so. Privacy is no longer viewed as

a necessity in our surveillance risk-transferred society because the private is made public more so than ever before by individuals who give out their personal information to the digital data world. The authors write that, "If then it could be assumed that the panopticon inspector was present (somewhere), in today's power relations those holding the levers of power 'can at any moment escape beyond reach—into sheer inaccessibility" (Lyon & Bauman 2013, 11).

Power now moves with the speed of the electronic signal and this technological advancement has been cast into the current drone technology. This is the military's way of perfecting asymmetric warfare because the enemy and opponent are not equal in this scenario, even if the one who holds the power does have some sense of their opponent's reality below. The visual optics make life and the opponent viewable again--which has been told by the operators to allow them to see the effects of their weapons again--but this hands over all of the action and re-action to the operator and none to the opponent. Liquid post-panopticism is a prison without borders or signed agreements, and also instantaneous information that categorizes humans into threats and non-threats.

Power (2013) describes how the electronic drone takes away from those who do the observing as well as those who are observed. "The very idea of drones unsettles. They're too easy a placeholder or aviator for all of our technological anxieties—the creeping sense that screens and cameras have taken some piece of our souls that we've slipped into a dystopia of disconnection"(Power 2013, 1). Drone operators gather electronic data by

watching an individual or a network of individuals' daily movements, and then

send this data to a hub of computers. Those computers then take all of this

information and can,

> "Instantly draw maps showing patterns of movement: where the target
> went, when there were visitors or deliveries to his or her home. If you
> were watched in this way over a period of time, the data could not just
> draw a portrait of your daily routine, but identify everyone with whom
> you associate. Add to this cellphone, text, an e-mail intercepts, and you
> can see how special-ops units in Iraq and Afghanistan can round up entire
> networks" (Bowden 2013).

RPAs work within many different facets of the newly digitized technological age.

In this way, the military has created a controlled post-panoptic atmosphere that

can regulate the people below. Liquid surveillance becomes here a noticeable

intrusive form of discipline, and relies on observation, analysis and assessment

on matters of daily movements and routine.

Now that fully autonomous drone robots are being developed, it won't be

long before the human is completely out of the loop on both sides of this newly

implemented asymmetric warfare. Once the human is removed from the

operating side of the drone stare, there will not be anyone to hold accountable for

the targets death because we cannot hold a robot accountable for doing what it

was programmed to do (Singer 2009). Yes, robots can function for endless hours

and are objective when assessing data, but they cannot react quickly on their feet

and fix a mistake like a human could. The robot does eliminate human error but

it also eliminates the ability for mishaps to be corrected while they are still

hovering above the target. Essentially, the military has mastered the ability to

make the targets humanness reappear on the screen while at the same time developing technology that allows the operator to be re-humanized and re-embodied in the process.

Conclusion

Moving forward with future research there needs to be a focus on the meaning of observing and watching amongst drone operators. I suspect that future weapons will continue to advance similar to drones: physically distancing the operator while exposing his or her human vulnerabilities. The visibility of the target has created these new vulnerabilities that were once eliminated with distancing weapons. Previous weapons had the soldiers and operators physically located in the war region, but current and future weapons will continue to experience war differently due to the split between one's physical and visual presence. Soldiers and operators located in the US have a lack of separation between war and everyday life and this divide will continue to affect operators and soldiers with the introduction of each new weapons technology.

Most of the current research that I have come across looks at how those who are targeted by the operator are affected and not as much research on the operator's perspectives. There needs to be more ethnographic research done on operators in order to ensure better policies around the current drone program and for future weapons programs. I suggest more interviews need to be done with current and former operators in order to broaden the drone policies that could develop from the knowledge and information that these operators have to

contribute on their experiences. Overall, there is a lack of information about what occurs during the surveilling and targeting and how these tasks affect the operators who are watching. It would also be interesting to get an interview with an operator before and after they operate the drone in order to fully grasp what the operator is viewing before and after the conflict occurs.

This analysis has been organized in order to address one question: does distance make killing easier or harder with drone technology? My research has problematized the notion of physical and spatial distance and introduces different conceptions of emotional, mental, and visual distances. Specifically how the notion of physical distance is associated with safety and security from the opponent and has now changed into one of surveilling distance, which leads to an intimate compressing of distance. Drones are unlike any previous weapon produced because they introduce a completely new way to fight wars at a distance, and I argue that this weaponry falls into its own distinct category. This weapon is in its own group because it allows the operator to be physically removed while also being visually present to one's own actions.

Previous distancing weapons have been defined as removing one's visual capability of the target below but this new contemporary weapon is one that re-visualizes the humanness of the target. This complicates the physical distance by introducing visual proximity (reducing distance) and reconnecting operators to those who are observed. The military has continued developing weapons with the idea that if the soldier is distanced from his or her target then they will be

able to carry-out their duty to kill much easier than if they were close to them. All of these weapons have been designed in order to hinder the observer and the observed from having to watch each other die. The difference with previous weapons and the current drone weapon is that the military prizes accuracy of the laser guided missile (RPA) over the removal of one's visibility of the opponent (previous weapons), and now with RPAs the enemy is re-faced and re-embodied.

The camera resolutions and optics that are attached to this weapon have made killing more difficult—based on the claims made by former drone operators (Power 2013; Bumiller 2012)—because not only does the operator see the target up-close (from eye to screen) while they live and while they die, but they also are receiving the order to kill from greater digitized distances than they did with former weapons. The commander is usually located in another geographic location watching the same drone view as the operator and then interprets the data, and gives an order to kill the target. The fact that the commander is not present to pressure the operator(s) to follow orders and fire his or her weapon, could also contribute to the operator's inability to pull the trigger. Added long hours of surveilling that is apart of RPA duties could also decrease one's ability to be able to kill the target once the order is given. The operator may draw connections between one's own life and the life below the weapon, essentially seeing the target as a person instead of another object.

Geographic separation between the operator's location of firing the weapon (home) and the missiles detonation (battlefield) could also make it

harder for the operator to kill the opponent because they are physically

separated halfway around the world. This separation causes them to be

disconnected to the war, and almost as if they are living in two separate worlds

at once. The study by Chappelle et al. (2011) details how more and more drone

operators are developing PTSD due to the remote split and stressors from the

daily job duties. Having to live in two separate realities could diminish one's

ability to function efficiently in a highly stressful work environment. Overall,

modernized technological weapons are affecting operators psychologically.

The surveillance missions have been said (by operators) to mentally affect

them more than the actual action of killing. The continuous watching has been

compared to watching in a way equivalent to a stalker. The operating crew

watches individuals in their public and private lives for days and months

without the individual ever knowing that they are being watched. The

individual(s) are forcefully being put under the Gorgon stare and then are looked

at through a lens in order to gather data about their daily routines and

movements. The view is supposed to predict one's future actions based on their

current actions, basically telling the operator and others that are watching if this

person is a threat to US interests.

Our society has entered into a post-panoptic era of control. Panopticism

used to be a structure of discipline and punish, but now with the new

modernized drone technology it is complete control of an individual. I would

argue this is the only factor that does make killing easier for the operator because

in our post-panoptic society war is now fought from one side. Post-panoptic

drone warfare has brought about an end to mutual engagement between enemy

and foe. Today, drone wars are fought in a complete asymmetric manner and

nobody in the world is safe from the drone view. War by remote control may

allow the operator to see the effects of his or her weapon in real time but it does

not give one the ability to fight against another person.

Even though the watching is one-sided, the operator is affected by the

surveilling and killing. The reduction in visual distance has made the target

reappear to the operator on screen and in turn has also re-humanized the

operator. Thus, a post-panoptic world of liquid surveillance is not just about

technological advancements and mass surveillance but that this mass

surveillance changes those watching as well.

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Appendix

Standardized Questions Used for SME operator interviews (PTSD)

- Describe the qualities of enlisted airmen who have performance related problems in training?
- Describe the qualities of enlisted airmen who succeed in training and adapt to the operational demands of their duties?
- What sorts of cognitive aptitudes are necessary for successful training and adequately adapting to operational demands?
- What sort of cognitive aptitude problems distinguish training failures of those who have difficultly adapting to the operational demands?
- What sort of personality traits and characteristics are necessary for successful training and adequately adapting to operational demands?
- What sort of personality traits and characteristics distinguish those who do well performing their operational tasks from those who struggle and have chronic difficulties?
- What sort of interpersonal traits and characteristics are necessary to successful performance of SO duties and adaptation to the RPA platform?
- What sort of interpersonal traits and characteristics distinguish training failures or those with performance problems?
- What sort of tasks and demands of the RPA platform are distinct from the tasks and demands of SO duties in a manned aircraft {i.e., AWACS, JSTARS, AC-130, MC-130)?
- What differences in attributes affecting performance are there between airmen coming from different accession sources?