

# Drone Warfare and the Paradox of Choice

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## Abstract:

**T**HIS ARTICLE EMPLOYS GERALD DWORKIN'S ANALYSIS IN "IS MORE CHOICE Better Than Less" (1982) in order to understand the challenges and consequences of having enlarged the scope of military options to include precision guided munitions (PGM) and unmanned aerial vehicle (UAV) capabilities.<sup>1</sup> Following Dworkin, we argue that having more strategic choices are not always better than less for a number of specific reasons. Unlike many philosophical discussions of the use of these military technologies, ours is an account of the prudential challenges and consequences of having widened military options, and the analysis self-consciously avoids making moral or legal claims concerning their use. It is simply an examination of the claim that widening the range of tactical options, to include these new weapon systems, is *necessarily* better. We will follow the outline of Dworkin's argument in describing the current politico-military affairs. Our intent is to expose the practical costs associated with having tactical choices that include the use of these technologies.

To be clear, the argument does not bear directly on the use of these technologies, but rather on the challenges associated with merely *having the choice* to use these weapon systems. Faced with the challenges associated with the option of having PGM or UAV capabilities, it may be judicious for countries to freely limit the military choices that they have at their disposal. This is not self-evident since the weapon technologies in question are not the sort that poses a clear and present danger to a large number of citizens, as was the case with nuclear weapons limited in the Strategic Arms Limitation Talks (SALT) of the 1970s or 1980s. Therefore a more detailed philosophical argument is warranted. A final caveat needs to be stated: The argument is to be taken as a whole since no single aspect of Dworkin's analysis is definitive in regard to the question of whether more choice is indeed better than less. Each aspect does, however, contribute to a deeper understanding of what enlarging the set of tactical means for modern militaries.

Keywords: Gerald Dworkin, Drones, Military Ethics, Choice, Asymmetric Warfare

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### Introduction—Weapons of Choice

SEEMINGLY SIMPLE QUESTIONS ARE OFTEN THE MOST DIFFICULT TO ANSWER. IS MORE choice always better than less? It depends on whom you are asking. A logician would respond that having access to a wider array of choices would make it more likely that our needs and desires could be satisfied by these options. Psychologists such as Barry Schwartz, however, argue that, “with limitless choice, we produce better results with our decisions than we would in a more limited world, but we feel worse about them.”<sup>2</sup> This is what Schwartz terms the paradox of choice. Philosophers are even more pessimistic. And their paradoxes are even more profound. Søren Kierkegaard argued that not only do we feel worse about the decisions that we make, but that, confronted with limitless possibilities, we are able (and perhaps liable) to err in a limitless number of ways.<sup>3</sup> The reasons that support Kierkegaard’s claim are numerous and were articulated thirty years ago by Gerald Dworkin in an article entitled “Is More Choice Better Than Less?” This was a very famous philosophy article and, like most very famous philosophy articles, it was read by a very small number of people. We will argue that Dworkin’s analysis deserves a second hearing not on the basis of its theoretical merits (although it has no shortage of these) but on its practical value in understanding a pressing issue in the contemporary sphere of public affairs.

At no point in the history of warfare have modern militaries had so many strategic options at their disposal. The revolution in military affairs that began in the United States in the 1970s was meant to leverage technology in order to secure the widest number of tactical choices for strategists and policy-makers. This proliferation of weapon systems has included, and been defined by, the advent of precision guided munitions (PGM) and unmanned aerial vehicles (UAV).<sup>4</sup> Dworkin’s analysis of choice, in which he concludes that more choice is not always better, provides a useful lens through which to view this unique moment in military ethics.

This is not, primarily, an argument against the use of precision guided munitions or drone warfare. Elsewhere, we have made arguments that add to growing literature on the moral and legal justification of the use of unmanned combat vehicles.<sup>5</sup> The advent of these military technologies has prompted deep and sustained debate in a variety of scholarly communities concerning the moral legitimacy of modern asymmetric conflict.<sup>6</sup> This article departs from typical treatments of the subject by providing a definitional or prudential account instead of an explicitly moral one. It employs Dworkin’s analysis in order to understand the prudential challenges and consequences of having enlarged the scope of military options in order to include PGM and UAV capabilities. We will follow the outline of Dworkin’s argument in describing the current politico-military affairs. Our intent is to expose the challenges associated with having tactical choices that include the use of these technologies. In most cases, these are prudential challenges rather than moral pitfalls.

To be clear, the argument does not bear directly on the use of these technologies, but rather on the challenges associated with *having the choice* to use these weapon systems. Faced with these challenges associated with the option of having PGM or UAV capabilities, it may be judicious for countries to freely limit the military choices that they have at their disposal. This is not self-evident

since the weapon technologies in question are not the sort that pose a clear and present danger to a large number of citizens, as was the case in the Strategic Arms Limitation Talks (SALT) of the 1970s or 1980s.<sup>7</sup> Therefore a more detailed philosophical argument is warranted. A final caveat needs to be stated: The argument is to be taken as a whole since no single aspect of Dworkin's analysis is definitive in regard to the question of whether more choice is indeed better than less. Each aspect does, however, contribute to a deeper understanding of what enlarging the set of tactical means for modern militaries.

### **The Costs of Informed Decisions—Intelligence Gathering and Space Technologies**

UNMANNED AERIAL VEHICLES ARE OFTEN HERALDED AS COST EFFECTIVE WAYS OF WAGING asymmetric warfare. This is true in a certain respect.<sup>8</sup> The cost of assembling these aircrafts is a fraction of the cost of comparable manned vehicles; the unmanned Reaper costs approximately 20 million dollars to produce while the fifth generation stealth fighter, the manned F-22 Raptor, costs nearly 360 million dollars to assemble. The Raven is an even smaller and cheaper UAV, weighing in at 4.2 lbs and costs only 35,000 USD to construct. The cost of flying drones versus manned aircraft is similarly skewed in the favor of using UAVs. There is, however, a very real cost in simply having UAVs as a weapon of choice. Dworkin observes that "the making of choices is not a costless activity, and the assessment of whether one's welfare is improved by having a wider range of choices (that in this case includes the choice of using UAVs) is often dependent upon an assessment of the costs involved in having to make these choices."<sup>9</sup> This is the principle of a transaction cost in modern economic theory—there is a price associated with the act of transacting a decision.

For example, when only a single choice is available, there is little need to spend time and resources to determine the right choice to make. When only one treatment for a particular disease is available to doctors, there is no need to do extensive diagnostic testing in order to obtain which course of treatment will be the most effective. Instead, an initial diagnosis needs to be made, relatively quickly, and the single treatment administered. In Dworkin's words, "One of the most obvious costs is that of acquiring the information required to make reasonable choices."<sup>10</sup> This is certainly true in the case of the decision to use drones and precision guided munitions. The effectiveness of these weapon systems depend on exact intelligence in order to ensure that surgical strike capabilities are used in responsible and just ways. Indeed, a majority of drone sorties are used in surveillance that then yields the necessary intelligence to conduct effective military operations. The hidden cost of UAV and PGM technologies is the demand they place on the intelligence community, a community that is charged with the onerous task of providing information in order to make responsible military choices.<sup>11</sup> These costs are rarely mentioned in the discussions of developing technologies that expand the strategic choices of modern militaries.

This is not to suggest that these burdens are necessarily too high, but that they represent real costs of having new strike capabilities at our disposal. It is also to suggest that there is a direct correlation between the size of the decision space of military planners and the amount of information necessary to negotiate

this space in a well-informed manner. Acquiring this information comes at a cost, or more accurately, acquiring this information forces one to incur a variety of different costs. This point could be summarized quickly: The wider the array of military choices, the greater the difficulty in negotiating these choices, the higher the transaction costs. One type of expense associated with this process of decision-making could be calculated in economic terms, as a type of transaction cost that parties have to incur in deciding between tactical options. In this case, the costs would be the resources required to fly the many surveillance missions that are carried out by the U.S. Armed Forces and NATO on a regular basis in a number of different theatres. Many would argue that this economic cost is worth incurring if it means that modern militaries can make judicious decisions about when to use surgical strike capabilities.

While the production of these vehicles is a fraction of the cost of manned aircraft, the technological infrastructure that is required to support them is expansive and expensive. The U.S. historian, Francis Fukuyama, recently built a remote controlled surveillance helicopter, but he would actually need a satellite in order to fly his drone effectively (a slightly more costly do-it-yourself project).<sup>12</sup> It is rarely acknowledged that the effective use of drones depends almost exclusively on the satellite links that connect them to off-site pilots. Establishing, maintaining, and protecting these satellites is a task that only a few countries in the world can effectively shoulder. Attacks on these devices could come in a variety of forms. First, these satellites, most of which operate in low Earth orbit, are potential targets for missile attacks, a fact underscored by China's targeting of one of its own communications satellites on January 11, 2007.<sup>13</sup> Anti-satellite measures were first developed by the United States nearly half a century ago.<sup>14</sup> The seemingly newfound interest in the U.S. space program and the monies spent on this initiative should be understood in terms of the strategic possibilities that combat drones afford. In the long-term, however, the greatest threat to spy and drone-linked satellites will not be physical attack. After all, the space debris created in these attacks would render large swaths of outer space unusable for many years.<sup>15</sup> Instead, the greatest threat will come in the form of cyber attacks in which state or non-state actors hack into a drone satellite's communications in order to disrupt the flight pattern or military objective. Therefore, the drone technologies used to combat asymmetric threats entails ever-greater sophistication in the technologies that control outer space and to create a defensive posture against cyber warfare.<sup>16</sup>

In addition to economic transaction costs, there are moral compromises that may have to be made in collecting the necessary information to make well-informed decisions. The attempt to make judicious decisions, choices that align with the principles of Just War for example, may force militaries to face significant moral hazards in the shouldering of transaction costs. The difficulty of making responsible strategic decisions when confronted with ever-wider spheres of military options may force intelligence officers to make morally or legally problematic decisions in gathering intelligence. One way for these officers to gain valuable intelligence might be to compromise the civil liberties of civilians at home or abroad. Perhaps another way is to use harsh interrogation techniques on suspected enemy combatants or to adjust the standards of prisoner detention.<sup>17</sup> These interrogations techniques have been the subject of debate for

the last decade, but rarely is the relationship between these intelligence-gathering methods and the technologies used in counterinsurgency considered in any thorough way.<sup>18</sup> These last points are not meant as moralistic jabs against tactics of modern counterinsurgency. Instead, they are merely intended to shed light on two significant relationships. First, they highlight the relationship between the widening of strategic possibilities through PGM and UAV technologies and the correlated difficulty of negotiating these possibilities. Second, they suggest that this difficulty might force the hand of policy makers in allocating resources to fund surveillance programs or the hand of intelligence officials who would otherwise be reticent to compromise moral and legal guidelines. Given the choice of using PGM and UAV technologies, military forces are placed in the double-bind that confronts any party that is given a wide array of choices. Either the party makes dubious choices on the basis of poor information, or the party uses valuable resources and takes great risks in order to secure better information.

### Drone Technologies and the Cost of Responsibility

"GREAT POWER INVOLVES GREAT RESPONSIBILITY."<sup>19</sup> PRESIDENT FRANKLIN DELANO Roosevelt's comment is not a case of ethical finger-wagging that maintains that the powerful *should* be responsible. Rather he, like many philosophers before him, was stating a sort of ethical truism: Only those who have power, who have certain latitude and freedom of choice, can be deemed truly good or blameworthy. A similar comment is made by Aristotle in his *Eudemian Ethics*, that virtue and vice apply only to those actions that are under our control.<sup>20</sup> Dworkin extends this point in outlining the costs associated with choice. Responsibility, according to Dworkin, is one such cost.

The most culpable people, the people to whom we can assign genuine moral responsibility, are those people who have the agency to make the widest range of decisions, free from danger and hindrance. Never have the array of strategic choices been so expansive for modern militaries; never have modern militaries faced the question of ethics in such a pointed way. Along these lines, Dworkin writes that, "At the most fundamental level, responsibility arises when one acts to bring about changes in the world as opposed to letting fate or chance or the decision of other actors determine the future."<sup>21</sup> In short, only when one has a choice does one's failure to choose count against them. The wider the array of choices at the actor's disposal, the greater the responsibility and culpability which can be attributed to said actor vis-à-vis the negotiation of these choices.

The case that Dworkin uses to demonstrate this point is quite effective. To return to the example of advances in medical practice used in the previous section, it is only in the last two centuries have doctors had the ability to select treatments that were consistently effective in fighting infectious disease.<sup>22</sup> The broadening of these choices available to doctors coincided with understanding these doctors as being genuinely responsible for the care of their patients, and genuinely culpable if proper treatment was not administered. While its origins can be traced to Hippocrates, medical ethics only became a rigorous and detailed discipline when medical practitioners had viable choices in treatment. Dworkin elaborates on this point, suggesting that the responsibility associated with more choices represents a cost that needs to be taken into account: "It may be that the

willingness to accept responsibility for one's acts is a sign of moral maturity, but this is consistent with the burdensome quality of accepting such responsibility."<sup>23</sup> The discourse surrounding PGM and UAV technologies, which often centers around the way that they expedite the hard decisions of warfare, belie an important fact, namely that having these technologies makes strategist's decisions more difficult rather than less. They are, for the first time, truly responsible for the decisions they make due to the fact that technology has, for the first time, made these decisions available. This fact can be seen rather easily if we briefly juxtapose the use of PGM and UAV technologies with the use of military technologies in the not-so-distant past.

When weapons were blunt instruments that were thrown with the force of a single arm, they were only as accurate as the thrower him/herself, which is to say, not usually very accurate at all. More specifically, accuracy depended on the aerodynamics of the projectile and the skill of firing/throwing this projectile. When the aerodynamics of the object and the skill in using the object were very limited, the unintended misuse of a weapon was rarely regarded as a moral offense. In this case, the soldier was only partially responsible if the projectile hit an unintended target. He/She would be obviously responsible for collateral damage *if* there were other options available to him/her that would limit this collateral damage.<sup>24</sup> In the past, there were no such options. In the advent of surgical strike technologies, we have been given these options and are therefore responsible for their use.

A similar point about responsibility can be made by comparing the decision spaces of nuclear warfare and of asymmetric warfare fought with PGM and UAV technologies. In the case of pre-modern warfare, the choices available to militaries were significantly limited due to the lack of technical capabilities (it was impossible for a catapult to accurately target a head of state). The development of nuclear weapons in the 1940s significantly expanded the decision space of military planners. Expanding the military options *for potential adversaries*, like the United States and the former Soviet Union, however, had an interesting effect: it ultimately limited the number of viable choices that either party could take.<sup>25</sup> This interesting consequence was seen most clearly in the doctrine of mutually assured destruction (MAD) that served as the informal policy of military strategists through the Carter administration. In MAD, the decision procedure was simple and could be done without extensive deliberation: We would not bomb someone who could bomb us back. The danger was simply too great to be aggressive. This sort of restraint, however, is not *responsible* in any meaningful sense of the word. Responsibility rests, most obviously, on those who are not compelled to act in a particular manner.<sup>26</sup> Would we praise the moral decision-making of two barroom bruisers who, after sizing each other up, decide that it is safer for both of them to go their separate ways? Were they acting in responsible ways? This calculus is, undoubtedly, a type of effective decision making, but would we call it responsible moral decision making? We don't think so. Similarly, individuals who are placed under great stress or who are forced to make decisions under duress are generally regarded as less culpable than those who are not. In the case of MAD, the parties involved were both placed in enormous danger, and they made instrumental calculations in order to obviate this danger. In the end, very



little ethical reflection (the stuff of genuine responsibility) had to be done in order to ensure the peace that President Truman and others sought during the Cold War. It was a time of clear and present danger when cost benefit analysis stood in rather nicely for moral deliberation.

For better and for worse, that time is over. The stand-off capabilities of drone technologies (the ability to fight wars at a distance) have granted strategists and soldiers the ability to reflect on their actions and to have the freedom to make responsible choices about the operations they conduct. The concept of Just War has been around for centuries, but warfare, up until this point, had resembled rather nasty brawls or barroom stand-offs that rarely afforded strategists or soldiers the time to reflect on this concept without endangering their troops. Thanks to the technological advantage of precision guided munitions and UAVs, that moment of calm reflection, that moment that defines the business of responsible decision-making, is upon us. This is a very mixed blessing since, as Dworkin notes, the cost of responsibility is born in "one's own mind" but also "there arises the possibility of being held responsible" by others.<sup>27</sup>

### **The Pressure to Conform—When Weapons of Choice Become the Only Choice**

#### *Enlarged Options Reduce the Willingness to Choose*

IN 2009, THE CIA DIRECTOR LEON PANETTA STATED THAT DRONES WERE "THE ONLY GAME in town in terms of confronting and trying to disrupt the al Qaeda leadership."<sup>28</sup> Panetta's statement could be interpreted to mean that drones were the most effective way of dealing with particular threats, but it also might suggest that opening the field of possible military choices in order to include drone technologies might actually create pressures that make these "weapons of choice" the *only* choice in military theatres in the future. This is what Dworkin refers to as the "pressure to conform."<sup>29</sup> He writes that, "The fact that one has new possibilities for choice opens the possibility of social and legal sanctions being brought to bear on the maker of choice."<sup>30</sup> These social sanctions could encourage actors to choose these newly realized possibilities, and only these newly realized possibilities. In effect, increasing possibilities make an actor unwilling to choose previously held options.

An example that Dworkin gives in passing is instructive in illustrating this point. He suggests that the practice of dueling, that had its precedents in the medieval code of chivalry, and was extended in the 18th and 19th century, demonstrates the way that gaining more choices actually constrains the decision space of actors by reducing the likelihood that previously available options would be acted upon.<sup>31</sup> He argues that when this practice was legal (when the option was available) there was social pressure placed on men of the upper classes to duel instead of resolving conflict in other ways. The motivation to duel was based not in the hope of harming ones adversary, but in the hope of "getting satisfaction," restoring honor that had been lost in a prior altercation. This satisfaction was secured publicly through a demonstration of bravery in a duel. In a time when dueling was socially sanctioned, in Dworkin's words, "individuals might be forced to make manifest their courage and integrity in ways that they would wish to avoid."<sup>32</sup> Once certain socially sanctioned practices are made available

as options, an individual has incentives to forego other choices that *ceteris paribus* they might wish to pursue.

The costs of this type of conformity can be understood in the case of UAV and PGM technologies. The use of these technologies has greatly reduced the number of U.S. troop casualties since the first Iraq War. Drones and precision-guided munitions often accomplish tasks that used to be reserved for ground troops.<sup>33</sup> These surgical strike tactics limit the loss of “blood and treasure” while appearing to accomplish the objectives of a comparable military mission. This is usually regarded as an unadulterated good on the U.S. home front. We would suggest, however, that this is an adulterated good. Following Dworkin’s analysis, as these new military options are made available, there arises social and political pressure that will encourage military planners to adopt PGM and UAV strategies with greater frequency. Such supposedly “easy” strategies will be chosen over more dangerous ones (like putting ground troops into the field) or less direct ones (like undertaking the project of diplomacy). This will be the case even when more dangerous or less direct options might be effective in advancing counterinsurgency efforts. This will be the case even when more dangerous or less direct options might be the ethically or legally permissible choices. Prior to the advent of PGM or UAV technologies, military planners and politicians had the ability to consider a variety of factors—including morality, legality and ultimate effectiveness—without the pressure and expectation to wage a bloodless war.<sup>34</sup> Now, they stand to be blamed by the media and citizenry, and blamed with increasing severity, if troop casualties occur, given that the possibility of using UAVs are meant to limit these losses. The willingness to exercise other military choices is substantially reduced with the advent of UAV technologies.

### Enlarging Options Eventually Limits Original Choices

THIS SOCIAL AND POLITICAL PRESSURE TO CONFORM IS COMPOUNDED BY ECONOMIC pressures that are beginning to build in the case of UAV technologies. Dworkin observes that “there are, of course, situations in which it is not the willingness to exercise choices that is reduced, but the choice themselves.”<sup>35</sup> Initially, the development of UAV technologies greatly expanded the options open to modern militaries, but as the U.S. and NATO structure their strategic planning around these technologies, resources are beginning to be unevenly allocated for their research and development. This means that other military options are being defunded and are likely to become obsolete due to this diversion of funds for UAV and PGM advancement. Put in another way, the choices of using unmanned aerial vehicles significantly reduced the original choices available to military planners. If this seems highly speculative, an analogous case, according to Dworkin, makes this possibility more concrete. Dworkin writes:

Consider the development of the use of the automobile and its effect of mass transportation. At first the purchase of an automobile greatly expanded the options open to individuals. They could take the bus to work or their car. They were not restricted to the particular schedule of mass transit. But as more and more people began to take advantage of the enlargement of options, funds were diverted from maintenance and improvement of mass transit to the construction of more and better highways. Powerful lobbies developed which encouraged



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the development of this process so that eventually many inhabitants of cities found themselves increasingly in the position of having to buy a car in order to get to work.<sup>36</sup> (54)

A similar situation is occurring in the development of UAV technologies, which, in the early 1970s, found organizational support in the National Association of Remotely Piloted Vehicles (NARPV). In light of the growing market (both military and civilian) for these unmanned devices, this NARPV rebranded itself as the Association for Unmanned Vehicle Systems International (AUVSI) in 1996.<sup>37</sup> Seven years later, this organization initiated the International Opportunities Program that was a lobbying strategy to encourage public awareness and use of these technologies around the world. To this end, it has organized conferences, trade shows, student competitions, and fund raising programs to promote these technologies. The International Opportunities Program, according to Dworkin's analysis, is a somewhat ironic title; while it is meant to provide additional opportunities to UAV devices, it is meant to create a comparative advantage over traditional military technologies and therefore restrict the possibility of these "old-fashioned" weapons coming to market. The number of drones used by the CIA and U.S. military has grown exponentially since 2001; today, the number edges toward 8000 and constitutes one-third of all aircraft in service.<sup>38</sup> Once again, this is not an argument to retain the status quo or to eschew novelty, rather it is simply the argument that adding certain tools to the strategic repertoire of modern militaries will eventually limit the range of choices that any branch of the armed forces has access to. As the case of increasing automobile use, the previously held options of traveling by train or bus were made obsolete despite arguments that these options had particular virtues that automobile use did not.<sup>39</sup> Only in hindsight have we come to understand the strength of these arguments that turned on the issues of the public good, environmental resource management, and environmental protection. There may be analogous virtues in "old fashioned" strategic options that are eliminated with the pressure to adopt PGM or UAV technologies. These virtues, however, like the virtues of public transit, may only be recognized after PGM and UAV technologies have saturated the market

While the focus of this paper is on the prudential implications of asymmetric warfare, the reduction in previously held strategic choices points toward a crucial moral issue that should be briefly addressed. One of the primary means of fighting wars in the past was with ground troops and, in light of our analysis it seems quite likely that the choices provided by PGM and UAV technologies might reduce either the likelihood of choosing or, even having, this option. At first, one might argue that any action taken to reduce the likelihood of death to one's soldiers is, almost by definition, a morally correct choice. Indeed, who could refute that choosing an act with the intention of saving lives could be morally suspect? For one, Just War theorist Michael Walzer. Even if a mission has an inarguably just intention, Walzer argues that should the likelihood of civilian casualties increase by resorting to PGMSs as opposed to, say, a SEAL team to conduct a military action, this choice represents a morally reprehensible and unjust decision. Though the traditional doctrine of double effect might allow such actions, Walzer argues that an action is just only if all measures have been taken, even at greater personal risk, to reduce collateral damage. In David Luban's

treatment of Walzer's argument:

Walzer argues that merely *not intending* civilian harm isn't good enough: soldiers must *intend* not to harm civilians. The former seemingly allows soldiers to purchase blamelessness on the cheap, simply by narrowing their intentions. Knowing that an attack will hit both military and civilian objects, the soldier must take care to intend only to hit the military target, not the civilians.<sup>40</sup>

That is, if a SEAL team could have executed the mission in a manner that reduced the probability of generating civilian casualties more than PGMs—and if the PGM strike was deemed outside the scope of proportionality—then only sending in the SEAL team could be considered just. This poses an extremely difficult question to military planners: Should troops be risked on the basis of waging a Just War, or will they be spared on the basis of public opinion (no citizenry likes the idea of troop casualties) and military expediency?<sup>41</sup>

### **Morality and Choice—Forming Coalitions on the Basis of Restricted Choice**

IN THE LAST FIVE YEARS, MANY ARTICLES HAVE BEEN PUBLISHED ON THE QUESTIONABLE ethical status of using precision guided munitions and drones in asymmetric conflict; they often draw on arguments similar to the one just expressed concerning Walzer's interpretation of Just War. They have argued, on the basis of international legal precedent and Just War Theory, that the use of these weapon systems should be constrained by moral and juridical considerations. In this discussion of morality and the use of combat drones, however, very little has been said about what the limitation of strategic military choices would mean for the solidarity of the international community. Along these lines, Dworkin wrote nearly thirty years ago that, "An important consideration, to which little attention has been paid, is the role of restricting choices in symbolizing or expressing moral relationships."<sup>42</sup> This consideration is still overlooked in the discussions of the choices that UAV and PGM technologies make available.

The international community is quickly being cordoned off by the use of drone technologies—in the "haves" and "have-nots." First, there is a division between those nation states that have the strategic choices that PGM and drone technologies afford and those nation states that do not. This second group of "have-nots" is further divided into those nations who are potential targets of PGM attacks and those that are not. For example, there is a tacit understanding that the United States will not target citizens or government officials in allied European nations. There is a similar understanding that NATO allies will not target each other with drone technologies (in either combat or surveillance capacities). This has become a matter of practical significance since the U.S. agreed in February, 2012 to sell UAV systems to NATO countries and to train European specialists in operating these unmanned vehicles. This willing suspension of strategic choice (now incentivized through the threat of potential retaliation) is a way of solidifying moral communities and representing a willingness to cooperate in solving a variety of collective action problems.

In analyzing the logic of such agreements, Dworkin provides the instructive example of marriage in which each partner pledges to be faithful to one another. In this pledge, each party freely restricts his or her possibilities in

forming extramarital relationships. In this case, the pledge of choosing one another is at once the pledge to forego choosing anyone else, regardless of the rewards that one might garner through this act of defection or cheating. Sacrificing these possibilities is a signal that cooperation, or in this case, love, can be relied upon through better and for worse, for richer and for poorer. As game theorists began to document in the 1970s, a cooperative signal is reliable precisely to the extent that the sacrifice involved in the signal is costly. This is known as the “handicap effect.” The Zahavis explain that in creating cooperative relationships players often willingly disadvantage themselves in creating cooperative signals.<sup>43</sup> These signals basically express the following sentiment: “I am willing to cooperate with you and will incur costs in order to show you that I am serious about my willingness.” The “sunk costs” are real and therefore the signals are reliable. Such costly signals are reliable and adaptive when they solidify longstanding cooperation in which players garner benefits that outweigh the cost of signaling. In the case of marriage, the partners do not want to enlarge their strategic choices for the sake of temporary rewards because doing so would risk jeopardizing the union that has more lasting effects. International relations and marital relations are, admittedly, rather different. That being said, the point made by the example of marriage holds in thinking about forming broader community allegiances: enlarging the field possibility for any given member of this collective can endanger cooperative activities that the community on the whole is willing to undertake.<sup>44</sup>

The strategic arms reduction negotiations that occurred in the 1970s between the United States, the former Soviet Union, and China worked in a variety of ways to establish cooperative international relationships. First, these talks set the goal of reducing the risks of nuclear conflict between these parties. Second, the talks encouraged these nations to willfully limit the strategic options at their disposal for the sake of this long-term objective. It was in the elimination of strategic military choices that cooperation—not just in the military sphere—could be realized. There was at least a small cost that these countries incurred in expressing a cooperative signal; their strategic repertoires were limited in significant ways that made them, in certain respects, less able to respond to military threats. This was a cost that was worth paying, however, since it was the insurance against a breach in relations between these countries. This became clear when certain countries failed to make this sacrifice. Violating the arms agreement by reintroducing military options, for example, the mere appropriation of certain prohibited nuclear technologies, was seen not only as an act of military aggression, but the grounds to cease cooperating in a variety of other fields (political, cultural, economic, etc.).<sup>45</sup> As countries acquire combat drone technologies and come to understand their use as a viable military option, it is very likely that merely having this choice will dramatically alter the incentive structures that currently support international diplomacy and cooperation.<sup>46</sup> The relative ease of conducting clandestine PGM and UAV strikes breeds a sense of distrust between the countries who have these technologies and those that do not. This distrust will grow more pronounced as the cost and likelihood of drone strikes increase, as is stipulated in the previous section. In short, enlarging military choices may jeopardize diplomacy and cooperative enterprises not just because these are far easier to choose than the difficult project of diplomacy, but also because these

strategic choices make “have-not” countries less willing to engage in diplomacy. Distressingly, it is precisely these countries who do not possess PGM or UAV technologies (most recently Pakistan and Afghanistan) that are routinely called on by the United States and NATO to police their borders and counteract international terrorism. Along the lines of this analysis concerning the constraining of choice, it is little wonder why such countries are loathe to cooperate with nation states that threaten their citizens with PGM or UAV technologies.

### Linked Choices and the “Gift” of Pandora’s Box

“BEFORE THE WAR, PREDATOR HAD SKEPTICS, BECAUSE IT DID NOT FIT THE OLD WAYS. NOW it is clear the military does not have enough unmanned vehicles. We’re entering an era in which unmanned vehicles of all kinds will take on greater importance.”

President George W. Bush, 2001<sup>47</sup>

The myth of Pandora’s Box is well known. Pandora opens the box and out flies the evils of the world. What is usually overlooked, however, is the curious fact that Pandora was first regarded as a gift from the gods (Pandora means “all-giving”). Indeed, it is her apparently magnanimous character that allows Pandora to gain access to the realm of human beings and to cause the wide-spread havoc that she has come to be known for. A similar situation obtains in the case of the development of surgical strike technologies. At first, due to their selective use by only a few developed countries, they are regarded as a great boon, but Dworkin suggests that the appearance of this military “gift” will inevitably bring about a very dangerous situation. It is the situation in which the choices embodied in UAV and PGM are distributed equally to a wider range of nation states.<sup>48</sup>

The powers, and correlated moral dangers, of these advanced military capabilities are only now beginning to get out of the box. For the most part, the United States still shoulders the sole burden of choice that such technology presents. It is very likely that, for reasons discussed above, the United States will be unable to shut the lid of its Pandora’s Box. Regardless of this fact, it seems wise to at least understand the way that exercising particular choices increases the likelihood that other actors will also gain this choice, an eventuality that may substantially decrease welfare. Dworkin’s analysis of linked choices serves as a useful lens to this end. This is a different sort of argument than could be developed on normative grounds since the considerations of Just War Theory and other moral doctrines are outside the scope of this paper. We merely intend to show that the very act of opening the “box” of drone capabilities, and creating a particular type of choice, is detrimental to the extent that it becomes linked to the future possibilities of exercising said choice.

The United States is currently able to exploit its monopoly over such advanced technology to spy largely at will on state and non-state actors. To use a game theoretical model, the monopoly the United States enjoys over technology allows it to exploit a dominant strategy while the rest of the world, which lacks such technological capabilities, is forced to play the dominated strategy. In layman’s terms, the United States possesses a massive strategic military advantage. Unlike in the Cold War, where the potential for MAD forced both the United States and the Soviet Union to play reliable and predictable game theoretical strategies

with no clear-cut benefiter, the United States can now play the preferable dominant strategy without fear of retaliation; it can use drone technology at its discretion without worrying about the repercussions of other nations following suit. Indeed, due to the asymmetric nature of the conflict, the vast gulf in technological and material resources available to other combatants, the technological and strategic liberty granted by the development of drones can exclusively benefit developed, modern militaries. Dworkin's argument suggests that this will not always be the case. He claims that though one 'player' might enjoy the exclusive ability to play the dominant strategy for a while, one must remember that, "as is the case for many kinds of social interaction, one often cannot remain exceptional."<sup>49</sup> Thus, though the United States freely exercises its technological power over both amorphous, ill-defined groups of transnational extremists and belligerent states alike *at present*, one cannot forever assume that this total asymmetry will persist. Dworkin writes that, "choices come linked rather than separate, so that the question of whether the individual is to have more choices becomes the same as whether some larger group is to have these choices as well."<sup>50</sup> This is to suggest that the evils of Pandora's box *will* eventually sweep over the entire world. While the United States might currently represent Dworkin's 'individual' and its research and use of drone technology might *currently* grant it the exclusive choice to utilize such capabilities, this choice will not forever remain exclusive. Indeed, when Dworkin speaks of "linked choices" he means to describe a process of increasing egalitarianism in choice that is triggered by one individual's decision to exercise this choice initially. To speak in concrete terms, the United States, by exercising its choice to utilize drone technology, has potentially opened up this choice to other parties, including potentially hostile state or non-state actors. We find again, therefore, that more choice does necessarily entail ultimate increase in welfare. By having, and using, the choice to exercise drone technologies the United States and its allies have potentially created a world in which a nation could one day exploit these technologies in ways that could jeopardize U.S. or NATO security.

A world in which other countries possess drone technologies is quickly being created. On December 4th, 2011 Iran reported that it had captured a largely intact RQ-170 sentinel drone, technology once exclusive to the United States' armed forces. An ultra-advanced UAV that has seen extensive use both in Afghanistan and Iran, the RQ-170 is most famous for providing the intelligence that led to the location of Osama Bin Laden's compound. In the case of captured drone, however, operations proceeded less routinely. The CIA, which had been employing the drone to perform reconnaissance of Iran's nuclear facilities, lost contact with the RQ-170 early into its mission and reported it missing soon after. Though details are unclear regarding the nature of this failure—Iran claims to have targeted the drone through an "electronic attack" while the U.S. maintains that the drone simply malfunctioned—by December 8th, Iran was broadcasting grainy footage showing what indeed appeared to be the missing RQ-170.<sup>51</sup>

The implications of the Iran-RQ-170 affair demonstrate Dworkin's notion of the necessary broadening of overall choice. "The flights from Moscow and Beijing to Tehran were probably quite full the last few days,"<sup>52</sup> said P.W. Singer, a specialist in military robotics. Indeed, Russia and China did not hide their interest in inspecting the drone, most likely with hopes of pirating parts and reverse

engineering its technology. The loss of the RQ-170 potentially compromises the monopoly that the U.S. has upon this technology, and thus jeopardizes the strategic dominance that it affords. That is, if reverse engineering is possible, or someday becomes possible, the U.S. will then find a world in which the choice of drone technology is open to all. A dominant strategy that the U.S. could once play in Dworkin's game-theory analogy, the choice to use drones for intelligence-gathering and other military pursuits, will have become the dominated, necessary choice for all. Current defense journalist and former Navy counter-electronic specialist Robert Densmore sums the situation up nicely: "We've always relied on [drones] as a force multiplier, a technological edge that we've had, [but] we've always known it wouldn't be a permanent advantage."<sup>53</sup>

### Paternalism and Choice

WITHOUT TURNING TO THE EXPLICITLY NORMATIVE ARGUMENTS CONCERNING THE USE OF PGM and UAV technologies, it is possible to make an observation concerning the relationship between the availability of choice and the moral and legal regimes that have sought to constrain the scope of action in the domestic and international spheres. The positive laws of a nation, a workplace code of conduct, the unwritten provisions of social decorum—each of these measures serves to limit certain choices that might otherwise be exercised. Indeed, the most common example of choice restriction, the juridical system of the State, exists at its most fundamental level to dictate what paths can and cannot be undertaken. Or, to take a broader, more historical perspective, the notion of citizens submitting unconditionally to the ordinances of a social contract has dominated social philosophy since Hobbes and Locke proposed variations of the idea centuries ago. Laws serve to prevent choices that, in addition to simply being available, might even prove profitable or preferable to someone, at least at the time the choice is encountered. Laws against robbery, rape or murder thus ban choices that, while possibly benefitting the perpetrator, stand to jeopardize the longstanding stability of a social system. The legitimacy of most of these restrictions rests on Mill's "harm principle" which states that the only legitimate state intervention on people's pursuit of the good life is when those projects harm other people.

In other cases, the justification for forgoing freedoms or choices is based on "paternalism," what Dworkin describes as "the rejection of making certain choices on the grounds that that if the choices were available (individuals) would be tempted to make them and (these individuals) recognize, in advance, that making such choices would be harmful in terms of their long term interests."<sup>54</sup> In contrast to the "harm principle," these instances of restricted choice are justified in cases when the actor him/herself is likely to be harmed in the action that he/she undertakes. In "Paternalism" (1972), Dworkin moves away from the strict contractarian rationale for restricting liberties, asserting that there are unique instances when restricting freedom would be justified in more ambiguous cases—when one chooses the restriction of choice, lacks will to restrain from decisions, is under extreme sociological or psychological pressure to make certain choices, or does not fully comprehend the danger of the choice in question.<sup>55</sup> The long-term welfare of the actor is what is ultimately at issue in the question of paternalism. Paternalistic restriction of choice is only justifiable in cases when an actor is unable



or highly unlikely to pursue his/her self-interest. Dworkin provides a number of helpful legal examples to illustrate paternalistic constraint:

- 1) Drug laws that regulate the use of substances that may harm the user but that do not lead to antisocial behavior
- 2) Social Security regulations that require individuals to set aside a certain percent of their income
- 3) Seat belt laws that make it illegal to not wear a seatbelt while driving.<sup>56</sup>

Notably, such cases represent fairly obvious examples of choice restriction on the basis of paternalism in which the upside of preventing certain actions incontestably trumps the act of restricting choice. One must remember, therefore, that instances of mandated choice reduction are not always so black and white. In the case of limiting the use of UAVs and PGMs in modern warfare, for example, the cost-benefit analysis grows hazier, especially when such technology offers a number of benefits for military strategy; safety and speed that have already been discussed throughout this paper. Nonetheless, Dworkin cautions us about such scenarios in which possessing choice at first appears beneficial, warning that we must remember that there exist “cases where it is rational for individuals to reject the possibility of making certain choices” on the basis that this possibility tempts us to violate institutions and regimes that were expressly established for the sake of our long-term interests. Indeed, we argue that the choice to utilize drone technology represents one of these cases; UAVs and PGMs might indeed prove harmful to long-range interests to the parties that use them and thus restricting these choices might be a justifiable form of paternalism. Though one might find it difficult to recognize the wisdom of these restrictions today, Dworkin reminds us that, at least in many cases of restricted choice, the forced limitation is at the time considered detrimental, even if in retrospect this limitation represented the best decision. To take a common example, a heroin addict might indeed derive more pleasure by indulging in his addiction than by going cold turkey, but the law nevertheless deems his actions illegal, largely on the grounds that such behavior is ultimately harmful to the drug addict himself. At the end of the paternalism section, Dworkin writes: “I would not want to have a bomb connected to a number I could dial on my phone, because I might dial it by mistake.” The mere introduction of certain choices creates a moral hazard that violates certain well established norms. Conversely, the elimination of certain choices can be a way of protecting institutions that have been agreed upon as ways of ensuring greater welfare. As the actual bombs of PGM and UAV technologies become readily available, the mere option of their use jeopardizes a variety of international legal norms such as the prohibition against assassination. Along these lines, the stipulations of Just War Theory, for example, grow more complicated when UAVs and PGMs come to dominate modern warfare. Though our intention is not to make an argument on behalf of Just War Theory or similar ethical models, it is nonetheless important to realize that, regardless of the validity of these ethical guidelines, the mere choice of using drone technology necessarily complicates any appraisal of ethical warfare. The notion of *jus ad bellum*, justice in going to war, grows more difficult when a single surgical strike might rebuff an act of enemy aggression that previously would have required a more traditional counterforce.

Does such a contained action even constitute an act of war? Does it exist according to the rules of the war doctrine of Just War Theory? Likewise, when a nation possesses the capabilities to quickly and forcibly neutralize an isolated target, do diplomatic measures necessarily still represent the first course of action, as they do according to Just War Theory?

Again, we do not aim to advance a normative argument. We are not, for example, arguing that the use of PGM and UAV technologies constitute a violation of Just War theory. We wish to expose the complications and difficulties that can potentially arise when the choice of drone technology remains unrestricted. We are indicating, following Dworkin's example, if institutions such as Just War Theory are to be acknowledged and respected, one way of doing so would be to eliminate or limiting the mere choice of exercising certain technologies. We could, according to Dworkin eliminate strategic options that would make violating legal institutions easy. Just as Dworkin finds that paternalism can prevent a bomb exploding at the dial of a wrong number, so too must we therefore understand that limiting the choice to use UAVs and PGMs can prevent an erosion of the institutions and policies that underlay our most basic moral reasoning about warfare.

### Cautions—The Radical Nature of a Modest Claim

DWORKIN IS CAREFUL TO REMIND HIS READER THAT HIS CONCERN IS NOT TO SHOW THAT certain choices should be prohibited but rather to explore whether more choice is *always* better than less. In this sense, his argument is against the prevailing sense that, in all cases, one is better off by maximizing the number of choices that she/he has at their disposal. Dworkin's is, therefore, both a modest and radical position—modest in the sense that it only has to show that there are certain costs associated with choice, radical because it degrades one of the unspoken presuppositions of the modern “free” world. Our argument concerning drone warfare and precision guided munitions is similar in character. Its focus is to merely outline the possible costs that might be incurred in the widening of strategic military choices. At the same time, by outlining these costs, it seeks to undermine the general sense that possessing drones and precision guided munitions are *necessarily* and *in all cases* strategic and moral goods which come at no cost.

This being said, we follow Dworkin in observing that, “it does not follow that although individuals might (under certain conditions) prefer not to have had a certain choice, that having such a choice they would (or should) refrain from exercising it.”<sup>57</sup> Similarly, in presenting this argument, we are in no way committed to suggesting that the choice of using combat drones, once this choice is realized, should not be exercised in certain circumstances. As Dworkin writes, “It could be rational to exercise the choice for a number of different reasons. It might be dangerous not to.”<sup>58</sup> This point seems particularly appropriate in our consideration of drone technologies. Perhaps it is the case that it would be dangerous not to use these technologies in countering the plans of non-state actors who are in the midst of planning attacks on the United States and its allies. Dworkin explains that one might only wish to go 55 miles per hour on a busy highway, but if the other cars are going substantially faster on this road, then there is a good reason, namely safety, to also drive faster, in other words, to expand the range of speeds that can be chosen. There appear to be a number of similar risk factors that have driven

the CIA and U.S. militaries to expand the scope of weapon systems to include drones. The proliferation of weapons of mass destruction, and the corresponding likelihood that non-state actors could acquire these weapons, might be regarded as the precipitating force behind PGM and UAV development. Only through the use of surgical military strikes, as Panetta indicated, can such threats be counteracted.<sup>59</sup> In one sense, this is correct, but in another, it misses the point of Dworkin's example. The example of traffic flow presents a situation in which a cautious driver is forced to drive more hazardously than she might like. Speeding up or getting off the road are the only options that will protect this driver from even greater risk.<sup>60</sup> The context in which we should understand UAV or PGM development is slightly different. First, for the time being, the U.S. and its NATO allies are the only cars on the road when it comes to choice of these technologies. When there is only one car on the road, there is the ability to go as fast or as slow as one would like without the pressure from competitors to keep pace. Slowing down the development of PGM or UAV technologies *now* might create risks (like the increased likelihood of a terrorist attack) but these risks will be different, and possibly less grave, than those that the U.S. would have to face if other nations states enter the freeway of PGM and UAV production and development. They are currently on the on-ramp: China, Russia, Pakistan, France, and variety of other nations are in the process of undermining the United States' drone monopoly. In the coming five to ten years, a variety of nations will acquire extensive drone capabilities, and, at that point, the U.S. and NATO will face much greater risks if they should want to opt out of the UAV market. Second, unlike the case of the cautious driver, there are still a variety of options available to U.S. and NATO strategists other than accelerating the production of UAV or PGM technologies. These options—such as deploying ground troops or engaging in sustained diplomatic efforts—could be just as effective in combating international terrorism as the development and eventual deployment of surgical strike technologies. Additionally, such alternatives do not create the precedent or international norm of using UAV or PGM technologies, a norm that stands to eventually make the international community a much more dangerous place.

In the last decade, legal scholars, philosophers, and political scientists have made a number of convincing arguments against the use of unmanned aerial vehicles and precision-guided munitions. Most of these arguments are made on moral and legal grounds, citing the tradition of Just War theory, international law, deontology, utilitarianism, or virtue ethics. In most cases, these arguments have concluded that the use of surgical strike technologies violates international legal precedent or the ethical statutes of Just War. The inability of these arguments to gain traction in politico-military strategy, to effect the way that modern militaries conduct their business, reflects an unsettling but unsurprising fact, namely that moral arguments very rarely figure in the practical affairs of policy. It is for this reason that another type of argument needs to be constructed and voiced in the public sphere. It is one that trades on the type of reasoning that *does* hold sway in the sphere foreign policy. For better or for worse, that type of reasoning is prudential rather than moral in character. The preceding analysis has cleared the way for such a prudential argument to be made. It suggests that there might be many cases in which limiting their own tactical military choices might benefit

modern militaries that currently possess surgical strike capabilities. Eliminating or foreclosing the possibility of using these technologies would reduce certain costs that are rarely considered in the decision to exercise these capabilities.

### Notes

<sup>1</sup> Gerald Dworkin, "Is More Choice Better than Less?" in *Midwest Studies of Philosophy* 7 (1982): 47–61.

<sup>2</sup> Barry Schwartz, *The Paradox of Choice* (New York: Harper Collins, 2004) 201.

<sup>3</sup> Cited by Dworkin in Gerald Dworkin, "Is More Choice Better than Less?" 47.

<sup>4</sup> P.W. Singer, *Wired for War* (New York: Penguin, 2009)

<sup>5</sup> Sarah Kreps and John Kaag, "The Use of Unmanned Aerial Vehicles in Asymmetric Contemporary Conflict." *Polity* (2012) Polity advance online publication, February 13, 2012; doi:10.1057/pol.2012.2. John Kaag and Whitley Kaufman, "Military Frameworks: Technological Know-How and the Legitimization of Modern Warfare." *Cambridge Review of International Affairs* 22. (December 2009): 585–606. One treatment of this issue is given in John Kaag. "Another Question Concerning Technology: The Ethical Implications of Homeland Defense and Security Technologies." *Homeland Security Affairs* 4; For more detailed analyses of this moral and legal repercussions of asymmetric war see *Targeted Killing: Law and Morality in an Asymmetrical World* ed. C. Finklestein et al. (New York: Oxford University Press, 2012). See also Robert Sparrow, "Robotic Weapons and the Future of War." In *New Wars and New Soldiers: Military Ethics in the Contemporary World*. Ed. P. Tripodi and J. Wolfendale. (Burlington: Ashgate Press, 2011) 117–133.

<sup>6</sup> Jeff McMahan, "The Just Distribution of Harm Between Combatants and Noncombatants" *Philosophy and Public Affairs* 38. (2010) 342–379; Jeff McMahan

"The Ethics of Killing in War," *Ethics* 114, (2004) 693–733; Barry Posen. "The Struggle against Terrorism: Grand Strategy, Strategy, and Tactics." *International Security* 26 (2001) 39–55.

<sup>7</sup> Haslam, Jonathan and Theresa Osborne, *SALT I: The Limitations of Arms Negotiations. U.S.-Soviet Talks Leading to the Interim Agreement on the Limitation of Strategic Offensive Arms, 1969–1972*, Pew Case Studies in International Affairs, Institute for the Study of Diplomacy, Georgetown University, Washington, D.C., 1987; Garthoff, Raymond L., "Negotiating SALT," *Wilson Quarterly* 1. (Autumn 1977): 76–85; Also Joseph S. Nye, Jr., "The Superpowers and the Non-Proliferation Treaty," in *Super-power Arms. Control: Setting the Record Straight*, ed. by Albert Carnesale and Richard N. Haas (Cambridge, MA: Ballinger, 1987): 188; Lloyd Jensen, "Soviet-American Bargaining Behavior in the Post-War Disarmament Negotiations," *Journal of Conflict Resolution* 7. (Sept. 1963): 522–41; Lloyd Jensen, "Approach-Avoidance Bargaining in the Test Ban Negotiations," *International Studies Quarterly* 12. (June 1968): 152–60; and Lloyd Jensen, "Negotiating Strategic Arms Control, 1969–1979," *Journal of Conflict Resolution* 28. (Sept. 1984): 535–59.

<sup>8</sup> Armin Krishnan, *Killer Robots: Legality and Ethicality of Autonomous Weapons*. (Burlington, VT: Ashgate, 2009) 64.

<sup>9</sup> Gerald Dworkin, "Is More Choice Better than Less?" 50.

<sup>10</sup> *Ibid.*

<sup>11</sup> A similar point is made by Martin Cook and Mark Conversino, "Asymmetrical Air War: Ethical Implications." In *The Moral Dimensions of Asymmetrical War*. Ed. Th.S. van Baarda and D. Verweij. (Boston: Nijhoff, 2009) 54.

<sup>12</sup> Francis Fukuyama, "Why we all need a drone of our own." *Financial Times*. (February 24, 2012).

<sup>13</sup> On the issue of Chinese Anisatellite technologies see Stefan A. Kaiser, "Viewpoint: Chinese Anti-Satellite Weapons: New Power Geometry and New Legal Policy," *Astropolitics* 6, no. 3 (Fall 2008): 313–23.

<sup>14</sup> Paul Stares. *Space and National Security*. (Washington, D.C.: Brookings Institution, 1987) 2–8.

<sup>15</sup> On the impractical and self-defeating nature of physical attack on satellite technologies see Donald J. Kessler, "Sources of Orbital Debris and the Projected Environment for Future Spacecraft," AIAA International Meeting and Technology Display, AIAA-80-0855 (1980). Stefan A. Kaiser, "Viewpoint: Chinese Anti-Satellite Weapons: New Power Geometry and New Legal

Policy," *Astropolitics* 6, no. 3 (Fall 2008): 313–23; Andrew Brearley, "Faster than a Speeding Bullet: Orbital Debris," *Astropolitics* 3, no. 1 (Spring 2005): 1–34.

<sup>16</sup> Kim Zetter, "Hackers Targeted U.S. Government Satellites," *Wired*, 27 October 2011, Available at <http://www.wired.com/threatlevel/2011/10/hackers-attack-satellites/>.

<sup>17</sup> D. Rejali, *Torture and Democracy* (Princeton, NJ: Princeton University Press, 2007); Henry Shue, "Torture in Dreamland," *Case Western Reserve Journal of International Law* 27, 2–4.

<sup>18</sup> One treatment of this issue is given in John Kaag, "Another Question Concerning Technology: The Ethical Implications of Homeland Defense and Security Technologies," *Homeland Security Affairs* 4, 8–10.

<sup>19</sup> "Franklin Delano Roosevelt: Great Power Involves Great Responsibility." In *American Issues in the 20th Century*. Ed. F. Freidel and N. Pollack. (New York: Rand McNally, 1966) 267.

<sup>20</sup> Aristotle, *Eudemean Ethics*. (New York: Oxford University Press, 2011) 1223a5–10.

<sup>21</sup> Gerald Dworkin, "Is More Choice Better than Less?" 50.

<sup>22</sup> *Ibid.* 51.

<sup>23</sup> *Ibid.*

<sup>24</sup> This issue of responsibility in using the means of war is discussed at length in the Just War Theory literature. Michael Walzer, "War's Means and the Importance of Fighting Well." In *Just and Unjust Wars*. 4th ed. (New York: Basic Books, 2006) 127–137.

<sup>25</sup> Charles Glaser, *Analyzing Strategic Nuclear Policy*. (Princeton, NJ: Princeton University Press, 1990); For a non-technical treatment of this point see Robert Dodge, *Schelling's Game Theory*. (New York: Oxford University Press, 2012) 39;

<sup>26</sup> The literature on the relationship between freedom compulsion and responsibility is immense, but it is sufficient to note that we hold that responsibility, for our purposes, is analytically inseparable from being culpable, being the appropriate subject of praise or blame. There has been a very active debate in moral theory in the last three decades concerning the position that only those that are free are truly responsible. Here, we qualify this claim by stating that increasing the latitude of one's choices increases the degree to which one can be regarded as blameworthy. This is Dworkin's point. For the position that a lack of freedom *does not* vitiate moral responsibility see Robert Audi, "Moral Responsibility, Freedom, and Compulsion," *American Philosophical Quarterly* 11. (1974) 1–14. See also Immanuel Kant, *Foundations of the Metaphysics of Morals*. trans. by Lewis

White Beck (New York, 1959) 80; C. A. Campbell, "Is 'Freewill' a Pseudo-Problem?," *Mind*, 60 (1951), reprinted in Bernard Berofsky (ed.), *Free Will and Determinism* (New York, 1966) 129; S. I. Benn and R. S. Peters, *The Principles of Political Thought* (London, 1959), 122 and 241; Harry G. Frankfurt, "Freedom of the Will and the Concept of a Person," *The Journal of Philosophy*, vol. 68 (1971); and Moritz Schlick, "When Is a Man Responsible?" *The Problems of Ethics* (New York, 1939). These resources are engaged in a meaningful way in Audi's analysis.

<sup>27</sup> Gerald Dworkin, "Is More Choice Better than Less?" 51.

<sup>28</sup> Leon Panetta, "AFPAK Drone Strikes Are Only Game in Town" *New Perspectives Quarterly* 26. (2009) 33–39.

<sup>29</sup> Gerald Dworkin, "Is More Choice Better than Less?" 51.

<sup>30</sup> *Ibid.* 52.

<sup>31</sup> Martin Cook and Mark Conversino, "Asymmetrical Air War: Ethical Implications." In *The Moral Dimensions of Asymmetrical War*. Ed. Th.S. van Baarda and D. Verweij. (Boston: Nijhoff, 2009) 50

<sup>32</sup> Gerald Dworkin, "Is More Choice Better than Less?" 52.

<sup>33</sup> Stephen D. Biddle, "Allies, Airpower, and Modern Warfare: The Afghan Model in Afghanistan and Iraq," *International Security* 30 (2005) 161–176.

<sup>34</sup> For a discussion of how precision bombing has grown increasingly ineffective throughout War on Terror due to development of counter-strategies see Stephen D. Biddle, "Allies, Airpower, and Modern Warfare: The Afghan Model in Afghanistan and Iraq," *International Security* 30 (2005) 161–176; For an elaboration of this point and how use of precision guided technologies might mask the effectiveness of boots on the ground see Thomas E. Griffith et al. "Winning with Allies: The Strategic Value of the Afghan Model," *International Security* 30, (2005) 124–160.

<sup>35</sup> Gerald Dworkin, "Is More Choice Better than Less?" 54.



<sup>36</sup> Ibid.

<sup>37</sup> K. Dalamagkidis et al. *On Integrating Unmanned Aerial Aircraft Systems into the National Airspace System*. (New York: Springer Press, 2009) 75.

<sup>38</sup> Jennifer Rizzo, "Drones Soar in U.S. Plans For Aircraft Purchases." CNN (June 2011) available at [http://articles.cnn.com/2011-06-10/us/pentagon.drones\\_1\\_drone-strikes-unmanned-aircraft-global-hawk?\\_s=PM:US](http://articles.cnn.com/2011-06-10/us/pentagon.drones_1_drone-strikes-unmanned-aircraft-global-hawk?_s=PM:US).

<sup>39</sup> Gerald Dworkin, "Is More Choice Better than Less?" 54.

<sup>40</sup> David Luban, "Risk Taking and Force Protection." *Georgetown Public Law and Legal Theory Research Paper* No. 11–72. (2011) 2.

<sup>41</sup> For a description of this reluctance to suffer casualties in asymmetric conflict see Barry Posen. "The Struggle against Terrorism: Grand Strategy, Strategy, and Tactics." *International Security* 26, (2001) 39–55.

<sup>42</sup> Gerald Dworkin, "Is More Choice Better than Less?" 56.

<sup>43</sup> Amoz Zahavi, "Altruism as a Handicap: The Limitations of Kin Selection and Reciprocity" *Journal of Avian Biology* 26, (1995) 1–3; Amotz and Avishag Zahavi, *The Handicap Principle: A Missing Piece of Darwin's Puzzle*. (New York: Oxford University Press, 1997) 23.

<sup>44</sup> For a more recent description of strategic sacrifices being used to insure long term welfare see P. Vanderschraaf. "Game Theory, Evolution, and Justice." *Philosophy & Public Affairs* 28 (1999) 325–358.

<sup>45</sup> Strobe Talbott, "Buildup and Breakdown." *Foreign Affairs* 62, America and the World (1983), 587–615.

<sup>46</sup> Scott Shane, "Coming Soon: The Drone Arms Race." *New York Times*. (Oct. 9, 2011) SR 5.

<sup>47</sup> "President Speaks On War Effort To Citadel Cadets." *Whitehouse.gov*, Remarks by the President, December 2001.

<sup>48</sup> The debate surrounding drones has become so heated that philosophers who have had the nerve to participate have been regularly mischaracterized. Strawser's position in the seminal "Moral Predators" (*Journal of Military Ethics*, 2010) was twisted by the *Guardian* in 2012. Similarly, Marco Roth's "The Drone Philosopher" (n+1, 2013) made a similar mistake when spoofing Kaag's arguments from the *New York Times*.

<sup>49</sup> Gerald Dworkin, "Is More Choice Better than Less?" 58.

<sup>50</sup> Ibid. 59.

<sup>51</sup> Brad Knickerbocker, "US considered missions to destroy RQ-170 Sentinel drone lost in Iran" *Christian Science Monitor*. (December 7, 2011). Available at <http://www.csmonitor.com/USA/Military/2011/1207/US-considered-missions-to-destroy-RQ-170-Sentinel-drone-lost-in-Iran>.

<sup>52</sup> Kristina Wong, "U.S. Drone a Tech Challenge for Iran." *Washington Times*. (January 12, 2012) available at <http://www.washingtontimes.com/news/2012/jan/12/us-drone-a-tech-challenge-for-iran/print/>.

<sup>53</sup> Scott Peterson. "Downed U.S. Drone: How Iran Caught the Beast." *Christian Science Monitor*. (December 9, 2011) available at <http://www.csmonitor.com/World/Middle-East/2011/1209/Downed-US-drone-How-Iran-caught-the-beast>.

<sup>54</sup> Gerald Dworkin, "Is More Choice Better than Less?" 60.

<sup>55</sup> Gerald Dworkin, "Paternalism" in *Contemporary Moral Problems*. Ed. James White. (New York: Cengage, 2006) 330; See also Gerald Dworkin, "Moral Paternalism." *Law and Philosophy* 24. (2005): 305–319.

<sup>56</sup> Ibid. 333.

<sup>57</sup> Gerald Dworkin, "Is More Choice Better than Less?" 61.

<sup>58</sup> Ibid

<sup>59</sup> Leon Panetta, "AFPAK Drone Strikes Are Only Game in Town" *New Perspectives Quarterly* 26. (2009) 33–39.

<sup>60</sup> Gerald D