



THE ETHICS OF DRONE STRIKES: DOES REDUCING THE COST OF CONFLICT ENCOURAGE WAR?

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**THE ETHICS OF DRONE STRIKES:
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**James Igoe Walsh
and
Marcus Schulzke**

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FOREWORD

Armed unmanned aerial vehicles—combat drones—have fundamentally altered the ways the United States conducts military operations aimed at countering insurgent and terrorist organizations. Drone technology is on track to becoming an increasingly important part of the country's arsenal, as numerous unmanned systems are in development and will likely enter service in the future. The increasingly frequent use of drones raises profound questions about the nature and morality of warfare involving asymmetrical risks between opposing belligerents. Concerned citizens, academics, journalists, nongovernmental organizations, and policymakers have raised questions about the ethical consequences of drones and issued calls for their military use to be strictly regulated. This level of concern is evidence that the future of drone warfare not only hinges on technical innovations, but also on careful analysis of the moral and political dimensions of war. Regardless of whether drones are effective weapons, it would be difficult to sanction their use if they undermine the legitimacy of U.S. military forces or compromise the foundations of democratic government.

One key ethical challenge drones raise is that removing American soldiers from the battlefield could alter civilians' attitudes toward the use of military force in ways that promote war and undermine democratic accountability. Casualty aversion, the civilian public's discomfort with sustaining military casualties and resistance to costly military operations, is a powerful constraint on when and how wars are waged in democratic societies. Political leaders in such polities, and even some high-ranking commanders within the

military, may feel pressured by public opinion to wage wars in ways that minimize the risk to soldiers, or to avoid fighting entirely when casualties are likely. One of the most popular and plausible arguments against the use of drones is that these weapons subvert the constraints created by casualty aversion in potentially dangerous ways. Drones may allow wars to be waged without risk to human soldiers and therefore without the risk of provoking public backlash. The weakening of this constraint might permit leaders to initiate or escalate conflicts that, absent the availability of drones, might generate domestic political controversy. In what follows, Dr. Marcus Schulzke and Dr. James Walsh discuss the logic of such arguments against drones, and touch upon counterarguments which suggest that drones might permit war to be waged in a more ethical manner than current weapons technologies permit.

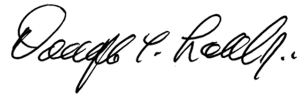
Although the argument that drones will subvert casualty aversion is one of the most common objections raised against these weapons, it has not been subjected to much systematic empirical investigation. It is generally substantiated with inferences drawn from past wars and with theoretical accounts of how drones may promote civic disengagement. The authors assess this argument with a survey experiment. Participants were randomly assigned to read information about fictional conflict scenarios. These scenarios varied the type of attack by U.S. forces, describing it as drone strikes, strikes from manned aircraft, or the use of ground troops. They also systematically altered the strategic goals of the military mission, which included counterterrorism, humanitarian intervention, the restraint of an aggressive foreign power, and support for an ally facing an internal military threat to its hold on power.

Their results show that participants are more willing to support the use of force when it involves drone strikes. Support for attacks increases noticeably when it is described as a drone strike. However, this technology's influence on support for military interventions may not be as profound as critics of drone warfare often argue. Indeed, one important shortcoming of philosophical and ethical reflections on the effects of drones is that they do not produce very precise estimates about how sizable a change in opinion the introduction of this technology will create. An important contribution, then, is to compare how drones alter opinions compared to other factors known from existing research that alter support for the use of force.

For example, gender has an influence on support for war that was comparable to using drones. Existing research suggests that gender has a consistent, but not overwhelming, large effect on attitudes towards military force. While one should use care in generalizing from the results of one experiment, these findings suggest that the possibility of engaging in military action with drones should, in general, increase support for the use of force by a modest amount. The practical consequences of such changes would depend on how closely the public was divided on a proposed military mission.

Many factors are at play when leaders propose to or actually use force. The availability of combat drones may be one such factor, but that alone is unlikely to be decisive in most scenarios. It also indicates that the type of military action matters. Participants were more likely to support wars that posed lower levels of risk to American soldiers, but they were also more likely to support wars in pursuit of important objectives (es-

pecially for counterterrorism) and when they thought that war was generally an effective foreign policy tool. This suggests that critics of drones are correct in calling attention to the risk of drones lowering inhibitions against war, but that this shift in attitudes alone is unlikely to have a strong effect on the incidence of wars.

A handwritten signature in black ink, reading "Douglas C. Lovelace, Jr." in a cursive script.

DOUGLAS C. LOVELACE, JR.
Director
Strategic Studies Institute and
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SUMMARY

One of the most compelling arguments that has been raised against drone weapons is that they may lower inhibitions against going to war by making it possible to fight without sustaining casualties. This monograph assesses this argument by using a survey experiment designed to gauge whether American civilians are more willing to initiate wars using unmanned aerial vehicles (UAVs) than using ground forces or piloted aircraft. The use of UAVs made participants more likely to support initiating a war, and this was consistent across four principal policy objectives that were the cause for war: counterterrorism, humanitarian intervention, foreign policy restraint, and internal political change. However, the increase in support for war caused by UAVs was fairly small, and would probably not be sufficient to tip the balance of public opinion in favor of fighting under most circumstances. Support for war was also heavily influenced by other factors, such as what principal policy objective was being pursued.

THE ETHICS OF DRONE STRIKES: DOES REDUCING THE COST OF CONFLICT ENCOURAGE WAR?

INTRODUCTION AND OVERVIEW

Drones have had a revolutionary influence on U.S. military operations over the past 2 decades. This technology is on track to become an increasingly important part of the country's arsenal as the dozens of unmanned systems currently in development enter service in the future. Drones have also raised profound questions about the nature of warfare and the morality of fighting in ways that create asymmetrical risks between opposing belligerents. Concerned citizens, academics, journalists, nongovernmental organizations, and policymakers have spoken out against drones and called for them to be strictly regulated or even prohibited.¹ This level of public concern is evidence that the future of drone warfare not only hinges on technical innovations, but also on careful analysis of the moral and political dimensions of war. Regardless of whether drones are effective weapons, it would be difficult to sanction their use if they undermine the legitimacy of U.S. military forces or compromise the foundations of democratic government.

One key challenge raised by many critics of unmanned aerial vehicles (UAVs) specifically, and unmanned systems more generally, is that removing American soldiers from the battlefield could disrupt civilian attitudes toward the use of military force in ways that promote war and undermine democratic accountability. Casualty aversion, which we understand to be the civilian public's discomfort with sustaining military casualties and resistance against costly mili-

tary operations, is a powerful constraint on when and how wars are waged in democratic societies. Policy-makers, and even some high-ranking commanders within the military, may feel pressured by public opinion to wage wars in ways that minimize the risk to soldiers or to avoid fighting when casualties are likely. One of the most popular and plausible arguments against the use of drones is that these weapons subvert the constraints created by casualty aversion in dangerous ways. Drones may allow wars to be waged without risk to human soldiers and therefore without the risk of provoking public backlash.

Although the argument that drones will subvert casualty aversion is one of the most common objections raised against these weapons, it has not been subjected to systematic empirical investigation. It is generally substantiated with inferences drawn from past wars and with purely theoretical accounts of how drones may promote civic disengagement. We tested this argument with survey experiments involving over 3,000 participants in the United States recruited from Amazon's Mechanical Turk online labor market. Participants were randomly assigned to read information about fictional conflict scenarios. These scenarios varied the type of attack by U.S. forces, describing it as drone strikes, strikes from manned aircraft, or the use of ground troops. They also systematically altered the strategic goals of the military mission, which included counterterrorism, humanitarian intervention, the restraint of an aggressive foreign power, and foreign policy restraint, and support for an ally facing an internal military threat to its hold on power.

Our results show that participants are more willing to support the use of force when it involves drone strikes. Support for attacks increases noticeably when

it is described as a drone strike. However, this technology's influence on support for military interventions may not be as profound as critics of drone warfare often argue. Indeed, one important shortcoming of philosophical and ethical reflections on the effects of drones is that they do not produce very precise estimates about how sizable a change in opinion the introduction of this technology will create. One important contribution of our results, then, is to compare how drones alter opinions compared to other factors that we know from existing research alter support for the use of force. Casualty aversion is one of several considerations that affect support for war, such as mission type and existing attitudes about war. Demographic characteristics like gender, race, income, and age were also included in our analysis, with gender having an influence on support for war that was comparable to using drones. Thus, participants were more likely to support wars that posed lower levels of risk to American soldiers, but they were also more likely to support wars in pursuit of important objectives (especially for counterterrorism), when they thought that war was generally an effective foreign policy tool, or when they were male. This suggests that critics of drones are correct in calling attention to the risk of drones lowering inhibitions against war, but that this shift in attitudes is unlikely to have a strong effect on the incidence of wars.

Our analysis proceeds in five stages. First, we provide an overview of the research on casualty aversion and explore the reasons why low casualty tolerance may limit wars in both *jus ad bellum* and *jus in bello* senses. Second, we discuss arguments that drones may circumvent casualty aversion in ways that lead to an increased incidence of war and undermine demo-

cratic accountability. We also raise the possibility that lowering inhibitions against war could have beneficial consequences by making it easier to engage in humanitarian interventions. Third, we explain our research design and show how it improves on aggregate polling data when assessing support for military interventions involving drones. Fourth, we present our results and discuss their implications for the debate over the morality of drone warfare. Finally, we conclude by considering some of the policy implications of our research and call attention to the importance of conducting further research on dimensions of this topic that we were not able to test.

LITERATURE REVIEW

Drones have become the subject of intense debate between those who think that the weapons raise serious ethical challenges that justify their prohibition and those who believe they are ethically advantageous. Much of this debate is focused on armed unmanned aerial vehicles (UAVs), such as the Predator and Reaper, and on the permissibility of targeted killing. However, commentators have also made efforts to develop general theories of drone ethics that account for other kinds of unmanned vehicles that may enter service in the near future. Some have even speculated about the ethical implications of autonomous weapons,² though ethical analysis of autonomous weapons is hindered by uncertainty about the meaning of autonomy and whether the military would realistically develop weapons that operate without human control.

Our analysis is primarily directed at the ethical challenges posed by combat UAVs in particular, which is defined as an airframe armed with air-to-ground

weapons that is controlled remotely by a pilot who is located outside of the combat zone. There are several reasons for this. First, because UAVs are already being used and play a central role in American military operations, the ethical issues they raise are more urgent than some of those associated with weapons that are not yet in service or that have not been created. Second, given the uncertainty about what form drones will take in the future and what roles they will perform, it is difficult to develop experiments that will reliably gauge public opinion about them. Finally, our findings about UAVs may be generalizable to other types of aerial drones, as well as to drones operating on land and at sea, that have similar capacities for distancing their controllers from the battlefield and protecting them from being attacked. As discussed later, there is good reason to believe that our findings related to UAVs will hold true for other types of drones.

Despite the broad range of issues taken up in the debate over the ethics of drone warfare and the many different perspectives that have been offered, one question has emerged as a central point of contention: will drones lower inhibitions against using military force in future conflicts? Commentators on both sides of the debate over drone use have reflected on this question and given reasons for thinking that drones may lower civilians' inhibitions against fighting, raise new ones, or fail to significantly alter them in one way or another. With limited empirical data on drone usage available, most commentators have sought to substantiate their answers to this question by theorizing the causal mechanisms that might account for drones altering attitudes about the use of military force. Although the causal mechanisms that have been posited in previous research cannot provide a clear answer to

questions about the consequences of drone use, they do provide a strong starting point for developing the hypotheses that we will test.

Casualty Aversion as a Constraint on War.

By far the most common concern expressed by opponents of drone warfare is that drones may make it easier to use military force by obviating the need for risking human combatants' lives in combat. This line of argument generally starts from the premise that casualty aversion helps to constrain wars *ad bellum* and *in bello*. From a *jus ad bellum* perspective, civilians may anticipate the casualties that could be sustained in a prospective war and oppose the use of military force to avoid the loss of life. Civilian support for an ongoing war might also wane as losses mount, thereby making it difficult to continue fighting in the aftermath of costly actions. From a *jus in bello* perspective, civilians may oppose intensifying wars, extending them geographically, or engaging in certain types of operations when these changes in the conduct of war may result in heavy casualties. Low casualty tolerance may therefore help to limit the occurrence of wars, compel belligerents to seek peace more quickly, and prevent conflict escalation.

There is a great deal of empirical support for the belief that casualty aversion helps to prevent or constrain wars. Multiple studies have found evidence indicating that civilians, especially those who are citizens of liberal democracies, tend to disapprove of wars that result in heavy casualties.³ Other studies have made the complementary discovery that democratic leaders are vulnerable to drops in public support that can be triggered by costly wars.⁴ These findings also hold

a great deal of intuitive appeal because they seem to cohere with changes in public support for American military ventures since World War II. For example, low casualty tolerance explains how civilian opposition to U.S. military involvement in Vietnam and Somalia, following costly combat operations like the Tet Offensive and the Battle of Mogadishu, may have precipitated withdrawals from those countries, even when U.S. forces had a significant military advantage over their opponents.

Some question the power of casualty aversion and contend that there is not simply a linear increase of opposition to war as more soldiers are wounded and killed. Gelpi *et al.*⁵ argue that many considerations affect casualty tolerance, though the prospect of success seems to be the most important:

[W]hen it comes to supporting an ongoing military mission in the face of a mounting human toll, expectations of success matter the most. Many factors—the stakes, the costs (both human and financial), the trustworthiness of the administration, the quality of public consensus on the foreign policy goal in question, and so on—affect the robustness of support. But the public’s expectation of whether the mission will be successful trumps other considerations.⁶

This suggests that casualty aversion may vary considerably, depending on the type of war being fought.

Others question the reality of casualty aversion and contend that this phenomenon is largely based on false perceptions. Eric Larson finds that:

[a]s a result of the Gulf War, the public does not expect—and is unlikely to demand—that all future U.S. military operations be bloodless. Indeed, it is more accurate to say that the public hopes for low-to-no casualty operations but fears a very different outcome.⁷

Similarly, Charles Hyde argues that casualty aversion is a myth and says that “[t]he public has consistently operated within the realm of an ends and means evaluation with significant cues from political leaders who frame the public debate.”⁸ Casualty aversion may be closely linked to media coverage that focuses disproportionately on anti-war sentiments when soldiers are killed, as this kind of coverage may erode public support or create the false appearance of a drop in support even when real attitudes are fairly stable.⁹

Regardless of whether it is constant or variable, real or imagined, casualty tolerance does seem to be a consideration that civilian politicians and military leaders bear in mind when considering how and when to use military force.¹⁰ Even Hyde, who describes casualty aversion as a myth, finds that there is “strong evidence that policymakers and senior military leaders believe the American public is casualty averse and will not tolerate deaths except when vital interests are at stake.”¹¹ Low casualty tolerance may therefore be expected to create *ad bellum* and *in bello* inhibitions that limit the incidence of wars and their intensity either because of direct pressure from the public or because of a perceived risk of public opposition. In either case, the resultant pressure may compel politicians and military leaders to seek nonmilitary strategies of conflict resolution or to at least use the utmost restraint when fighting.

Drones and the Future of Risk-Free War.

To their critics, drones seem to circumvent the restrictions of casualty aversion. They make it safer for armed forces to wage wars without exposing their soldiers to the hazards of the battlefield, thereby mitigat-

ing the possibility that casualty aversion, whether real or perceived, will influence the decisions of politicians and military leaders. Moreover, critics worry that if drones allow the U.S. military to wage wars free of the risk of military casualties, they will further shift the burdens of war onto foreign populations. This may result in more wars, more foreign casualties, more environmental destruction, and more social and political disruption in contested areas, all without provoking much domestic opposition.

John Kaag and Sarah Kreps argue that “drones create a ‘moral hazard’ by shielding US citizens, politicians, and soldiers from the risks associated with targeted killings.”¹² Without risk, civilians and soldiers alike may be unable to understand the consequences of war. This may lead them to see war as a cheap and effective solution to complex political disputes that could be more effectively solved through peaceful means. The ethical principles that inform judgments about war may even lose their power when these are weighed against the compelling practical advantages of using drones. Kaag and Kreps suggest that this freedom from consequences may lower the threshold for initiating wars and make it easier to sustain protracted wars that might otherwise be forced to a conclusion by declines in public support. They are also concerned that drones may make it easier to wage wars in ways that are ethically and legally questionable, as evidenced by the use of UAVs to carry out targeted killings in countries with which the United States is not at war.

By Kaag and Kreps’ estimation, the moral hazard of drones is not merely a possibility, but a likely outcome given the incentive structure that shapes politicians’ decisions. Drones are attractive to politicians

who may see war as a way of achieving their foreign policy goals but whose power is threatened by any shifts in public opinion that a costly war might cause.

The use of drones provides a win-win proposition for the president, who could appear strong on defense without responsibility for body bags coming home, a development that would likely send his political fortunes tumbling.¹³

Kaag and Kreps contend that politicians are likely to increase their reliance on drone weapons over time, since those who fail to do so will be met with public opposition and risk losing office.

Even more seriously, Kaag and Kreps think that the incentive structure drones create could ultimately have deleterious effects on the U.S. Government by making it possible for politicians to wage wars without securing public approval:

Ironically, the pressure from a democratic electorate to protect itself from the harms of warfare will not encourage policy makers to adopt peaceful or democratic methods . . . but rather methods of warfare that leverage technology in order to insulate citizen-soldiers from harm. The irony is this insulation creates the possibility that leaders will no longer, in a prudential sense, have to obtain popular permission to go to war.¹⁴

The threat of de-democratization exacerbates the potential problems associated with drone use and suggests that even Americans who are unconcerned with the effects U.S. military operations have abroad should be alert to the possibility that overcoming casualty aversion could erode democratic governance.

Kaag and Kreps' concern over the loss of democratic accountability builds on a point previously made by P. W. Singer, who describes drones as being part of a larger process of de-democratizing war as armed forces increasingly fight in ways that evade public accountability.

Unmanned systems represent the ultimate break between the public and its military. With no draft, no need for congressional approval (the last formal declaration of war was in 1941), no tax or war bonds, and now the knowledge that the Americans at risk are mainly just American machines, the already lowering bars to war may well hit the ground. A leader needn't carry out the kind of consensus building that is normally needed before a war, and doesn't even need to unite the country behind the effort.¹⁵

Singer goes on to describe a collapse of civic engagement as the low costs of war lead decisions about the use of military force to become routine policy decisions that provoke little serious public deliberation. By his reasoning, drones will reduce war to a spectator activity as "the checks and balances that undergird democracy go by the wayside."¹⁶ Thus, like Kaag and Kreps, Singer sees casualty aversion as a powerful mechanism for limiting war that has implications for reducing aggression and sustaining accountability.

Frank Sauer and Niklas Schörnig¹⁷ contend that drones are attractive weapons for democratic states for procedural and normative reasons. Procedurally, democratic leaders can be punished for waging wars that result in heavy casualties by being removed from office. This compels them to seek the least costly methods of conflict resolution that are available and to avoid war whenever possible. Normatively, democra-

cies place a high value on human life, especially the lives of their own citizens, which provides added incentive to avoid violence. Sauer and Schörnig argue that these concurrent influences usually compel democracies to act peacefully, but that democracies may escape these restrictions when they are able to wage wars either without sustaining casualties or without **appearing** to do so.

Many techniques are available to democracies attempting to minimize the costs of war. They can employ special operations forces or private military contractors that may suffer fewer or less visible casualties. They can also launch guided missiles, which have the advantage of not endangering human combatants on the attacker's side. However, Sauer and Schörnig describe drones as the "preferred solution" to the casualty tolerance problem because drones are relatively cheap, do not put the military personnel operating them at risk, and are militarily effective. Sauer and Schörnig share Kaag and Kreps' concern that drones will make it easier for states to engage in risk-free warfare and to evade accountability. They also contend that this problem is apt to follow a slippery slope. As drones make wars safer for the militaries armed with them, they will become more pervasive and more autonomous, which will, in turn, lead to even lower inhibitions against using force and increased demand for drones.

Daniel Brunstetter and Megan Braun¹⁸ speculate that drones could have the paradoxical effect of simultaneously making major wars less likely and small wars more likely. Their reasoning is that drones alter the considerations affecting the *jus ad bellum* principle of last resort, which requires that states pursue all available peaceful means of conflict resolution before

employing military force. Drones help to prevent large wars by giving states a capacity to carry out small strikes that are less likely to provoke escalations than combat between human soldiers. However, Brunstetter and Braun contend that drones may lead states to deviate from the principle of last resort when power asymmetries make it possible to carry out drone attacks without fear of reprisal. As they explain:

[t]he risk becomes that military leaders will bypass nonlethal alternatives, such as apprehending alleged terrorists and continued surveillance, and move straight to extrajudicial killing as the standard way of dealing with the perceived threat of terrorism.¹⁹

The perception that drones are more discriminate than other weapons exacerbates this problem by making it possible to present drone strikes as a form of controlled violence that is less serious than war.

Many other writers also express concerns about drones' effects on civilians' attitudes about war, though usually without going into as much detail about the exact mechanisms underlying this process. Linda Johansson argues that:

[w]eapons such as UAVs, that are perceived to provide an almost guaranteed upper hand, may also make people believe that the war would be without risk, at least regarding the number of casualties

and concludes that "[t]his might have an impact on domestic opinion, and, in turn, lower the threshold of entering and sustaining a war."²⁰ Christian Enemark²¹ likewise expresses concern over what war may be like in the future as more states and nonstate actors develop unmanned weapons.

The prospect of increased availability of armed drones warrants contemplation of a future in which the resort to force is less constrained by the expectation of loss, and this sits uneasily with ethical principles that have traditionally set a high threshold for going to war.²²

Enemark argues that drones have already demonstrated this capacity for lowering inhibitions against war and that this is evidenced by the U.S. preemptive war against potential terrorist threats.²³

David Dunn²⁴ reflects on the way drones have altered casualty calculations in the War on Terror, with the effect of incentivizing more lethal strategies.

By disembodimenting these weapons platforms, the technology enables their use with domestic political impunity, minimal international response and low political risk and cost. It is now politically and technically easier to kill suspected terrorists than to arrest them.²⁵

Boyle²⁶ raises a similar point by suggesting that superpowers that were once afraid to fight each other for fear of triggering nuclear war might suddenly find it easier to come into conflict using drones. He reasons that drones could cause subtle provocations, such as reconnaissance missions and small attacks, that would risk escalating into more serious confrontations. Finally, Gurcan²⁷ argues that drones may make deterrence more difficult, as aggressors armed with drones may not be easy to intimidate if they can fight without sustaining casualties. This reasoning indirectly relies on assumptions about casualty aversion, since one of the goals of deterrence may be to convince civilian populations that a prospective war will be too costly to be worthwhile.

Can Risk-Free War be Ethically Advantageous?

Many commentators who defend drones agree with critics in thinking that drones may circumvent casualty aversion, yet they draw much different conclusions from this premise. Rather than seeing the decline in military casualties as a mechanism for overcoming inhibitions against the use of military force, defenders of drones tend to think that lower casualty rates will make it easier to promote compliance with the norms of just war. Zach Beauchamp and Julian Savulescu²⁸ give two reasons for thinking that lowering the threshold for initiating wars may be a positive development. First, this may make states more inclined to fight humanitarian conflicts. If states do not have to risk their own forces, they will be free to wage benevolent wars that do not yield strategic benefits without facing public backlash. Second, Beauchamp and Savulescu argue that being freed from the fear of sustaining casualties will allow intervening states to show higher levels of restraint when fighting. This lends additional support to the use of drones in humanitarian wars, as it suggests that drones may be used in ways that coincide with the values of human security and respect for civilian immunity, which help to justify humanitarian missions.

The points raised by Beauchamp and Savulescu, particularly the second, coincide with those made by others who think that drones can be ethically advantageous. Strawser²⁹ argues that armed forces have an obligation, which he calls the Principle of Unnecessary Risk, to prevent their personnel from being exposed to avoidable risks. By this account, it would be unethical for armed forces that have drone technology to fail

to use this technology as a way of protecting soldiers. Moreover, Bradley Strawser and others call attention to the benefits this may have for civilians. Freeing armed forces from the concern over sustaining casualties could allow them to establish much stricter rules of engagement that might help to reduce violence against civilians.³⁰ Drones do not face the same need to act in self-defense as human combatants do. Their operators could be prohibited from using lethal force whenever there is a high risk of inadvertently harming civilians without raising any corresponding danger to military personnel. Drones might therefore be a way of escaping the ethical dilemma of whether to prioritize force protection or civilian protection, which has hitherto presented an insurmountable challenge for just war theorists.³¹

These arguments in defense of drones show that any effect these weapons have on casualty aversion can be read in much different ways, depending on whether casualty aversion is seen as a constraint on war or a way of facilitating the just conduct of wars. This makes it vital for analyses of how drones influence casualty tolerance to account for the different types of wars that drones may be used in, as well as whether drones are used in ways that increase or decrease the risks to civilians. We do this in our experiments by testing support for drone strikes, air strikes, and ground attacks in pursuit of four different principal policy objectives: foreign policy restraint, counterterrorism, humanitarian intervention, and internal political change. Before turning to these experiments, we first discuss how some of the points raised earlier are reflected in public opinion surveys regarding the conflict with the Islamic State armed group in 2014. The debate about American military intervention against

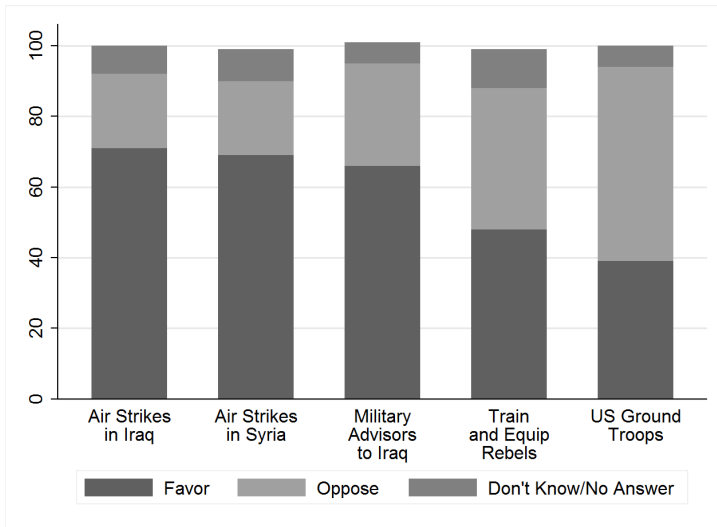
the Islamic State included discussions not only of the wisdom of intervening, but also the merits of different types of military action. It thus provides a contemporary opportunity to assess how the availability of drone technology influences public attitudes.

Public Opinion and the Islamic State.

The United States experienced public debates about the wisdom of American action against Islamic State militants in Iraq and Syria during the summer and fall of 2014. Much of this debate centered on the type of military action, if any, the United States should undertake. A number of public opinion organizations polled representative samples of the American public and asked the degree to which they favored or opposed a range of steps being considered by the United States.

Consider the data in Figure 1, which summarizes responses to questions about favoring or opposing different types of intervention in the conflict. A sizable majority of respondents favored air strikes in Syria and in Iraq, while far fewer supported the introduction of American ground troops. This is consistent with the argument that technologies that reduce the costs of conflict by placing fewer military personnel at risk of harm, such as drones and air power, should lead to increased support for the use of force. Note, however, that the option of sending military advisors to Iraq receives almost as much support as does the use of air power. This is a bit puzzling from this perspective, as military advisors may be in proximity to Iraqi ground troops who engage in combat. Note as well that training and equipping rebels in Syria, which presumably would not risk combat by Americans, receives consid-

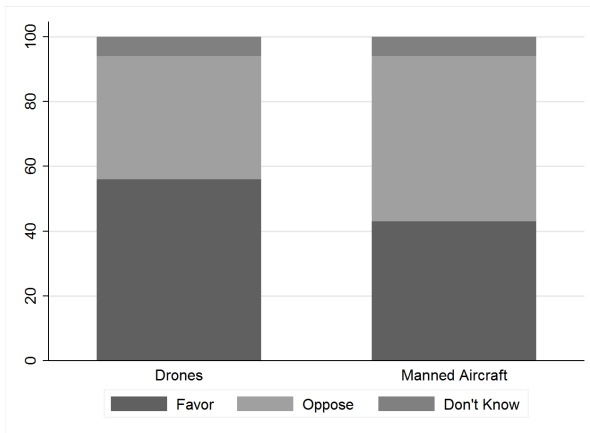
erably less support. Why might this be the case? One explanation might be that the public also incorporates its beliefs about the likelihood that the use of force will succeed in achieving its goals against its human and financial costs. It is possible that respondents recognized that sending military advisors to Iraq would place them in harm's way, but balanced this against the belief that advisors could bolster the effectiveness of Iraqi ground units against the rebels. They may also have concluded that arming Syrian rebels, who had proven incapable of either overthrowing the Assad regime or stopping the rise of the Islamic State, would be an ineffective strategy.



Notes: Data from CBS/*The New York Times* public opinion survey released September 17, 2014. Totals do not equal 100 due to rounding.

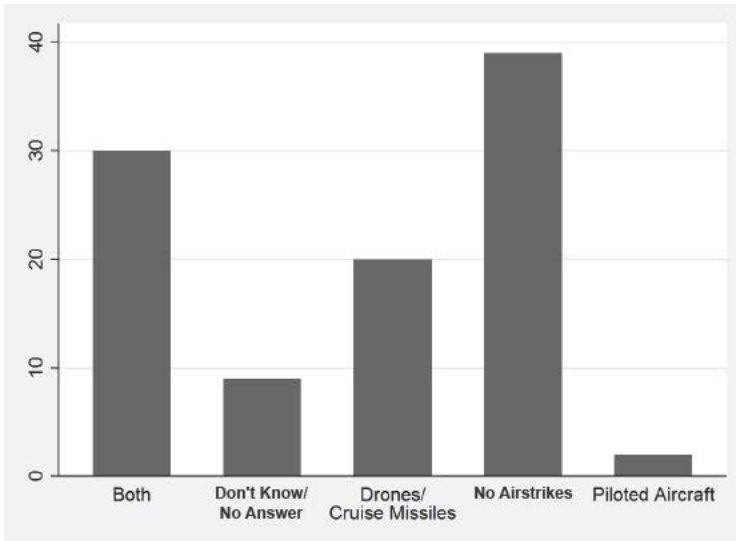
Figure 1. Support for Military Action, September 2014.

Some evidence for this comes from comparing the information in Figures 2 and 3, which summarize responses to questions about preferences for different combinations of air power. Figure 2 depicts responses to questions that asked respondents if they favored the use of drones and manned aircraft in striking the Islamic State. Drone strikes received considerably more support than attacks from manned aircraft, which is consistent with the argument that reducing the costs of war increases support for the use of force. From this perspective, though, the results of a poll conducted at approximately the same time are surprising. As can be seen in Figure 3, a much higher percentage of respondents prefer strikes from platforms that do not risk American lives—drones and cruise missiles—than from piloted aircraft. However, an even larger percentage prefer strikes from **both** types of weapons systems. This might be because such combined strikes are seen as more effective than the use of only one weapons system.



Notes: Data from CBS/*The New York Times* public opinion survey released June 23, 2014.

Figure 2. Preferences for Strikes from Manned Aircraft and Drones, June 2014.



Notes: Data from Quinnipiac public opinion survey released July 3, 2014.

Figure 3. Preferences for Strikes from Manned Aircraft and Drones, June 2014.

This public opinion data, then, does not reveal an obvious pattern in which attacks that reduce the likelihood of an important cost of war—military casualties—receive more public support. It is important to recognize, though, that such polls are not really designed to directly assess specific propositions about how changes in the costs of war influence attitudes. To see why this is the case, return to Figure 1. We suggested that one reason respondents in this survey expressed strong preferences for sending military advisors to Iraq was that they believed that doing so would increase the combat effectiveness of Iraqi units while exposing American military personnel to acceptably

small risks of harm. But other interpretations are plausible; for example, perhaps many respondents believe that advisors would face very small risks roughly equal to those of aircraft crews launching attacks in uncontested air space. The questions in this and most public opinion surveys are intended to measure support for various options, not to assess directly why respondents express the preferences that they do. Yet doing so is important for establishing which of the propositions about how changes in the cost of conflict influence public support for the use of force. In the next section, we argue that an experimental approach is better-suited for this purpose, and summarize results from a series of experiments that are designed to directly test such propositions.

Survey Experiment.

To answer these types of questions, we conducted a survey experiment in early 2015. This experiment recruited participants from Amazon's Mechanical Turk online labor market. Mechanical Turk is an inexpensive and flexible way to enlist participants, and has become a widely used tool among social scientists.³² Respondents were randomly assigned to read a mock news story describing plans by the United States to use military force overseas.³³ Random assignment to these "treatments" is a key part of the experiment. It allows us to assume that the characteristics of individuals assigned to read each news story are not systematically different from each other. This means that we can expect that any differences in the attitudes that people assigned to different treatments are due to the content of the news stories.³⁴

The news stories varied two elements (see the Appendix for the complete wording of each treatment as well as the questions that comprise the survey instrument). The first was the type of military action. This could take one of three forms: a drone strike, an air strike from a piloted aircraft, or the use of ground troops. Consistent with the casualty aversion idea discussed earlier, the news stories had different information about the risk that American military personnel would face. The drone treatments stated that “the use of unmanned drones means that no American military personnel would be placed at risk.” The air strike treatments, in contrast, included information that the target of the strikes were believed to lack weapons capable of attacking aircraft, suggesting a low possibility of military casualties. The ground troops news stories did not mention if these troops faced any danger or not.

The second element that varied across the treatments was the purpose or goal of the use of force. Here, we follow in the footsteps of important work on public opinion and foreign policy which finds that preferences differ in important ways depending on the “principle policy objective” of the use of force.³⁵ The treatments in our news story vary four such objectives. The first is **counterterrorism**, in which attacks are planned on militants who have in the past attacked the United States. The second is **foreign policy restraint**, where the United States seeks to punish a foreign state for threatening a key interest, in this case the shipment of petroleum from the Persian Gulf to world markets. The third is **humanitarian intervention**, in which American military force has the objective of stopping mass killings in a foreign country. The final objective is **internal political change**, aimed at

preventing the violent overthrow of a foreign government by its internal opponents. Our mock news stories are modeled closely on those of Gelpi, Feaver, and Reifler³⁶ and use the country of Yemen as the location of the use of force.

Combining these two elements – type and objective of military force – produces a total of 12 treatments. Roughly 300 participants were randomly assigned to read each of these stories. They then answered questions about their reactions to the planned use of force, including the degree to which they supported the attack; their estimates of the number of military casualties that would result if the attack were carried out; general attitudes regarding the wisdom of the use of force; and demographic questions such as party identification, age, gender, and so on.

To this point, we have argued that military casualties are a very important cost of conflict that influences attitudes regarding the wisdom of using force. Our experiment is designed to alter systematically the likelihood of such casualties. We expect that participants in the experiment will expect the lowest number of military casualties from a drone strike, since these news stories make explicit the fact that military personnel will face no risk of physical harm. Treatments involving air strikes should lead to higher expectations of military casualties. Even though these treatments state that the target of the attack is not believed to have weapons capable of threatening military aircraft, participants might still expect that the chance of military casualties could be higher since such aircraft do place military personnel in a battle zone. Participants might worry that the target has, unknown to the United States, acquired anti-aircraft weapons, or that casualties could result if the aircraft were to malfunction.

tion over enemy territory. Participants' expectations of military casualties should be highest in the treatments that describe the attack as being carried out by ground troops. Although these news stories make no mention of the risks that military personnel face in such situations, it should be straightforward for participants to infer such risks from the information they read.

To assess how assignment to different treatments influenced estimates of military casualties, participants were asked if they expected no casualties, between 1 and 10 casualties, or between 11 and 100 casualties. The black dots in Figure 4 display the average responses to these questions for each treatment; the lines connected to each dot indicate the 95 percent confidence interval surrounding these averages. We see a pattern, consistent with our expectations, in which participants assigned to the drone strike treatments expected the fewest casualties, followed by those assigned to air strike treatments and then the ground troop treatments. Differences across treatments for the same mission objective are sizable and statistically significant. Furthermore, differences across treatments for the same type of attack are not statistically different from each other. This suggests that the information in the treatments influenced participants' expectations of the costs of conflict in terms of military casualties.

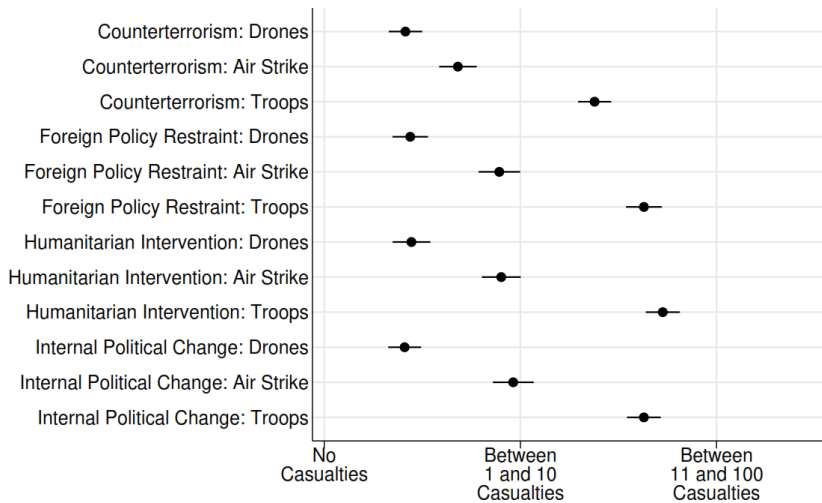


Figure 4. Expectation of Military Casualties.

But do such differences matter for support for the use of force? To answer this question, we asked participants to indicate the degree to which they supported the military action described in the news story they read. Participants could strongly disapprove, somewhat disapprove, somewhat approve, or strongly approve of the attack. The average responses (and confidence intervals) for this question are depicted in Figure 5. Drones lower inhibitions against initiating armed conflicts, as many critics of this technology have predicted. Respondents were consistently more likely to favor the use of UAVs over ground forces in each of the experiments, regardless of the objectives being pursued. They were also more willing to initiate conflicts using drones than piloted aircraft, except in humanitarian interventions. Furthermore, the consistent preference for air strikes over attacks involving

ground forces provides evidence that support for a prospective operation generally increases as the likelihood of sustaining military casualties decreases. This indicates that American civilians are more inclined to support using weapons that reduce the risk of military casualties, regardless of whether UAVs are available, and that other weapons that allow U.S. forces to manage risks may produce similar shifts in support for launching an attack.

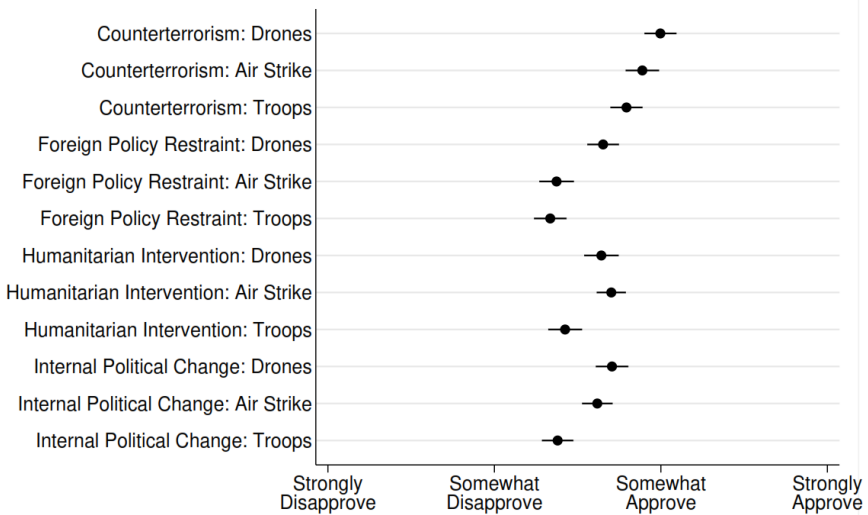


Figure 5. Support for the Use of Force.

Nevertheless, the differences between levels of support for the three tactics are rather small. Respondents were more likely to favor attacks involving UAVs over attacks involving piloted aircraft or ground forces, but on average differences in these treatments reduced the average degree of support from just below “somewhat approve” towards “somewhat disapprove.” These small absolute changes in public support for the three tactics suggests that, although UAVs may be expected

to lower inhibitions against initiating wars by shielding American soldiers from risk, they are unlikely to increase dramatically the incidence of fighting as some critics of drone warfare have suggested. This is evidence that drones do raise legitimate concerns about attitudes toward initiating hostilities, but that these concerns must be stated far more modestly and that greater attention must be given to how support for drone use varies depending on the context.

Choosing to use drones instead of piloted aircraft or ground troops may be expected to provide a small increase in public support for a prospective war. Even a small change could have a decisive influence on the overall level of public support for war if the country is narrowly divided. In other words, deciding to use drones to carry out an attack could tip the balance of a nearly even division between pro-war and anti-war attitudes toward the former position. On the other hand, if opposition to war outweighs support, then it appears that the use of drones to fight without the risk of incurring casualties would be insufficient to sway public opinion to support an attack. The slight influence on attitudes toward the initiation of hostilities suggests that although drones may diffuse concerns about sustaining casualties, they are unlikely to have a significant effect on the incidence of wars. It seems that unpopular wars will remain unpopular even if drones are able to reduce the level of opposition to fighting.

Another way to assess the substantive influence of drones is to compare their effect to other factors that influence support for the use of force. Figures 6 to 9 undertake such comparisons. Each figure reports the coefficients and associated confidence intervals for a regression model using support for the use of force as the dependent variable. The independent variables in

each model include whether or not the participant was assigned to read a story about a drone strike, whether or not the participant read about an air strike, and the party identification, gender, race, income, and age of the participant. All of these variables were rescaled to range from zero to 1. This means that we can compare the coefficients directly to each other. The dots indicate how increasing the independent variable from its minimum to its maximum value influences support for the use of force. For example, the coefficient for drone strike indicates how much support changes when the participant reads about the use of a UAV compared to the use of ground troops, while the coefficient for air strike indicates the change in support when the participant is assigned to a treatment describing such an attack. Similarly, the coefficient for the female variable indicates the change in support when the participant is a woman compared to a male participant. The figure for party identification indicates the difference between participants that self-identify as “strong Democrat” and “strong Republican.”³⁷

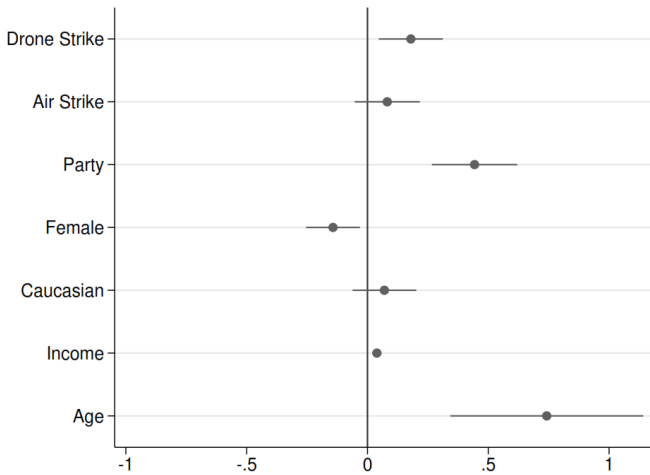


Figure 6. Coefficients for Counterterrorism Treatments.

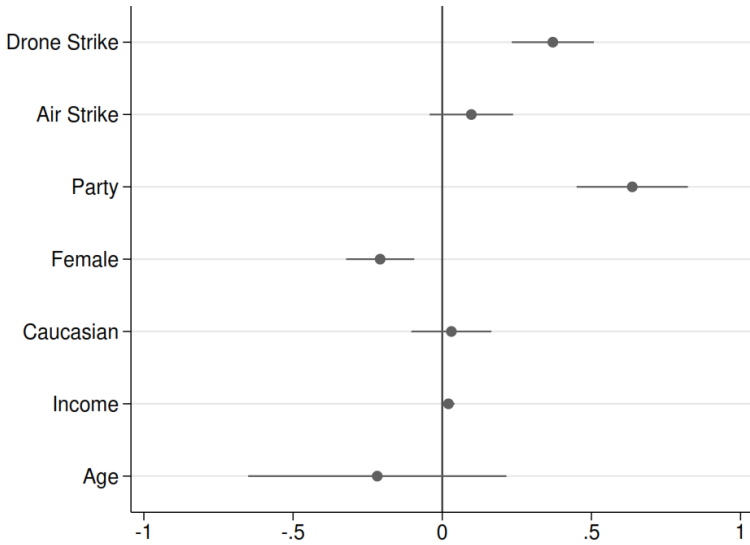


Figure 7. Coefficients for Foreign Policy Restraint Treatments.

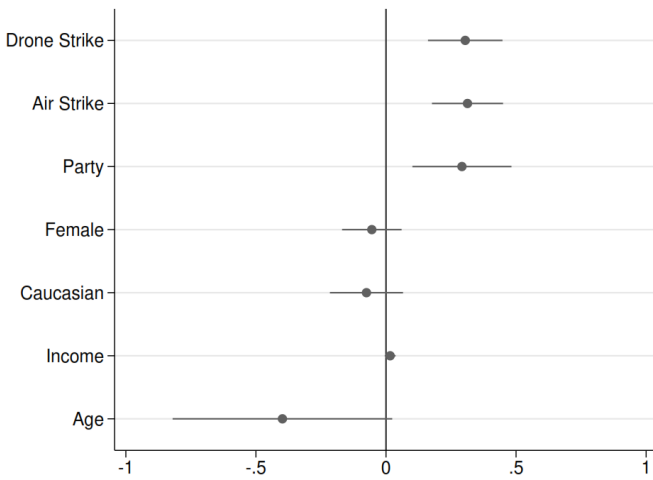


Figure 8. Coefficients for Humanitarian Intervention Treatments.

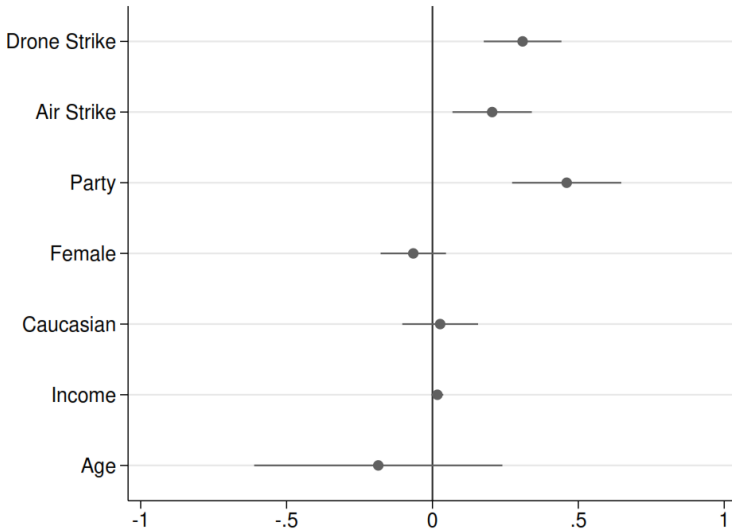


Figure 9. Coefficients for Internal Political Change Treatments.

We see that the effect of describing an attack as a drone strike is roughly similar in magnitude to the effect of gender, and smaller or about the same size as party identification. Both of these factors have well-established influences on support for the use of force and attitudes towards public policy more generally. Pamela Conover and Virginia Sapiro³⁸ find that gender is one of the most consistent and powerful influences on attitudes regarding military action.³⁹ Similarly, a large number of studies have concluded that party identification has been shown to have a large effect on attitudes towards many types of public policy.⁴⁰ The fact that the substantive influence of drone strikes, compared to ground troops, is of a similar size to the effects of gender and party identification indicates that this weapon could have an effect on attitudes that matters at the margin.

In practice, the effects of the slight shifts in public opinion that may be produced by using ground forces, piloted aircraft, or drones may not directly affect whether a particular war is waged. Decisions about initiating wars are not made directly by the American public but rather by elected officials whose decisions may be insulated from citizens' attitudes or unresponsive to them. Thus, public opinion will matter to the extent that changes in it can influence policymakers and alter their decisions. Voters may decide to punish policymakers who wage unpopular wars by removing them from office.⁴¹ However, it seems unlikely that the shifts in public opinion that may be caused by using UAVs instead of ground forces or piloted aircraft will always have great influence on policymakers' decisions if they are determined to go to war. An increase in opposition may not greatly influence a policymaker's election prospects, especially when it is weighed against other decisions that person has made and that will also influence voter preferences.

The effect UAVs have on support for war is likely to make them attractive weapons for politicians who are concerned with maintaining their approval ratings during conflicts. The shift in public support that drones produce may not be enormous and may not be sufficient to cause a decisive change in the balance of public opinion about a war, yet it is nevertheless just one of the many advantages that make drones attractive weapons. As Sauer and Schörnig correctly point out, there are multiple reasons for preferring drones over other weapons and tactics, such as their ability to loiter over targets and their comparatively low cost.⁴² Nevertheless, based on our experiment, it appears that the predictions Singer⁴³ and Kaag and Kreps⁴⁴ make about drones undermining democratic accountabil-

ity are probably too strong. Because drones produce moderate increases in support for war, greater reliance on them will probably be unable to silence anti-war voices. At least some politicians will continue to have strong incentives to pursue peaceful strategies of conflict resolution in an effort to satisfy those citizens who are unwilling to support military operations even if they exact a low human cost.

The pattern that is evident in the levels of support for using drones, piloted aircraft, and ground forces shows that there is a continuum of support for military force that extends across the range of weapons and tactics that may be employed. One possibility for future research is to include a more diverse assessment of the weapons and tactics used by the U.S. military to see the extent to which this pattern is sustained. There may be gradations of support between the three types of attacks we explore. For example, support for the use of special operations forces could fall somewhere between support for an attack involving conventional ground forces and an air strike. Alternatively, it is possible that support for war could further diminish or increase as other weapons and tactics are introduced. The deployment of large numbers of soldiers to directly engage in combat could be less popular than the deployment of smaller numbers of soldiers serving in advisory roles.

Nevertheless, it seems that our study has reached a limit when it comes to how drones may increase support for war by circumventing casualty aversion. The UAVs that were discussed in our experiments provide their pilots with complete protection against harm, as the pilots are removed from the battlefield and cannot be injured by any attacks on their aircraft. Other types of drones, such as semi-autonomous and

autonomous drones, may reduce human involvement in attacks and alter public support for war, yet they will not do this by influencing casualty calculations. After all, more advanced drones will not be able to offer additional protection for American personnel who are already far away from the battlefield. This indicates that other types of drones may produce slight change in public support for using military force that are comparable to the shifts produced by UAVs.

THE IMPORTANCE OF CONFLICT TYPE

The principal policy objective was an important predictor of participants' willingness to conduct military operations. Participants were most likely to support the use of ground troops, piloted aircraft, or drones in counterterrorism operations, a finding consistent with earlier research.⁴⁵ The willingness to support the use of force against terrorists seems to reflect the perceived threat that terrorism poses to national security, as well as the sense that the United States is actively engaged in a War on Terror, in which terrorists are legitimate military targets. Higher support for using drones against terrorists demonstrates the importance of distinguishing between objections to how UAVs are used to conduct targeted killings against terrorists and how they are used in other contexts. The higher levels of support for all three tactics in counterterrorism strikes is also evidence that many of the trends in U.S. military operations that critics have cited as being byproducts of drone use may be more accurately described as being byproducts of the War on Terror that may change if the U.S. military's objectives change.

The other three principal policy objectives involved attacks on less immediate threats against enemies that the United States was not actively fighting when the experiments were conducted. In these instances, fewer respondents were willing to support a war, even if it could be waged with minimal risk to American soldiers. This supports previous research by Bruce Jentleson,⁴⁶ who found that Americans were more likely to support attacks when an “adversary had gone beyond simply posing a standing threat and initiated aggressive actions against American interests or citizens” and that the public was not likely to support military operations that were directed at preventing future threats or remaking foreign governments.

The effect of conflict type on support for war suggests that the perceived necessity and morality of war matter to the American public, with more serious threats lowering inhibitions against using any type of force even as considerations about the expected number of American military casualties help to determine how an attack should be carried out. The implication here is that the use of drones is more likely to contribute to the case for initiating war when policymakers can connect drone strikes to plausible enemy threats. The framing of attacks will therefore help to determine whether drones will contribute to a greater incidence of wars.

The varying levels of support for attacking under differing circumstances provide additional evidence that the effects of circumventing casualty aversion with weapons that reduce the likelihood of casualties will be fairly modest. Avoiding American military casualties is just one of the considerations that go into deciding whether to fight, and it may not even be the most salient one. It is also important to note that,

despite the differing levels of support for each type of conflict, participants' attitudes toward the use of military force were generally moderate. The average responses consistently fell between the "somewhat approve" and "somewhat disapprove" evaluations. The participants' general lack of strong attitudes for or against war indicates that participants took a pragmatic attitude toward use of force decisions, according to which attacks are supported or opposed as considerations relating to their necessity, prospective costs, and ethicality change.

Perhaps the most surprising discovery was that support for air strikes in humanitarian interventions surpassed support for UAV strikes. This was the one instance in which the results deviated from the pattern of decreasing levels of support as military personnel were at a higher risk of being killed or injured. It is difficult to determine why this anomaly exists given the available information, especially since this pattern deviates so clearly from the results relating to other principal policy objectives. Because the pattern was present in experiments involving participants with high and low military assertiveness, this preference does not appear to be affected by militaristic attitudes. The different pattern here may be an indication that respondents were evaluating humanitarian interventions according to different criteria than those they applied to other principal policy objectives.

What is clear is that the greater support for air strikes, rather than drones, in humanitarian interventions conflicts with Beauchamp and Savulescu's⁴⁷ contention that drones might lower casualty aversion in morally advantageous ways. They argue that drones could promote support for humanitarian interventions by reducing the costs those operations may have

on armed forces that conduct them for benevolent motives and without any expectation of compensation. Because support for humanitarian intervention is highest when piloted aircraft are used, it appears that these would be the optimal weapons to employ when intervening and that drones' effects on casualty aversion may only be significant when the only alternative is the more costly use of ground forces. Of course, this may not be true for the many other countries that are developing drone weapons and that may use them in humanitarian missions. It is therefore important to withhold judgment on whether Beauchamp and Savulescu's argument is accurate in general and to continue testing it in future research.

CONCLUSION

Our experiment has important implications for members of the military and policymakers. Although the American military plays only an advisory role in decisions to initiate wars, it unavoidably affects policymakers' calculations about the use of military force and is, in turn, affected by the choices made by policymakers and the American public. Policymakers may have the ultimate control over when wars are declared, but political calculations are affected by the military's decisions to develop certain offensive capacities, as well as its ability to realize those capacities in practice. Members of the military have a large stake in decisions about the resort to war, as they will be the ones who bear the greatest burdens during a conflict. Our results show that drones are unlikely to dramatically change calculations about initiating war in ways that would increase the incidence of fighting, yet the noticeable shifts in public opinion when using drones

compared to other weapons reveals that the possibility of drones contributing to the overall case for military interventions cannot be disregarded.

The U.S. military has responsibilities to its soldiers, civilian policymakers, and the American public that could potentially come into conflict when using drone weapons. In a sense, the concern that drones could lower inhibitions against the use of force is a concern that politicians or members of the military may violate public trust by waging unnecessary or aggressive wars. The military could inadvertently fail in its responsibility to protect the American public if it develops weapons that ultimately increase the prevalence of war, especially if wars are economically costly or increase the likelihood of future attacks against the United States. At the same time, the military has an obligation to protect its personnel from the dangers of the battlefield to the greatest extent possible, which will inevitably provide grounds for making greater use of drones and other remote weapons.

Our results demonstrate that these obligations are not perfectly aligned; there is some tension between responsibilities toward American civilians and responsibilities toward American soldiers. Relying on drones to help protect soldiers from harm generally increases support for war in ways that could influence on the decision to use military force when public opinion is narrowly divided and politicians are highly sensitive to it. Although this is a fairly remote possibility given the complex assortment of motives that affect civilians' attitudes and policymakers' insulation from public pressure when initiating wars, it is an important possibility for members of the military to bear in mind. Decisions to expand the U.S. military's drone force and to employ this technology in a greater range

of combat roles should be made with some sense of how developing certain technical capacities might alter future decisions to initiate wars.

Although our experiment focused on the UAVs that are currently used by the U.S. Air Force and Central Intelligence Agency, the results speak to concerns that will affect the Army as it develops new unmanned weapon systems and prepares to deploy them in future conflicts. The Army has consistently worked towards improving its ethical standards since the Vietnam War, as evidenced by its continual reevaluations of ethics education, its efforts to promote core values, and the Center for the Army Profession and Ethics' work developing more effective ethical training tools.⁴⁸ As the Army strives to protect its values and promote ethical conduct in the future, it will be important for it to remain aware of the importance of ensuring that its efforts to improve force protection do not create new ethical challenges. Most of all, it must ensure that it protects American soldiers to the highest degree possible and improves its offensive capacities without inadvertently creating technologies that conflict with its other responsibilities.

To a large extent, this will be a matter of effective public diplomacy. The Army is sensitive to the demands of engaging with civilian audiences and shaping their attitudes about the Army and its mission.⁴⁹ A central part of this public diplomacy is the display of new weapons technologies and efforts to attract recruits who can operate them. The risk of inadvertently lowering barriers against war is not only linked to drones themselves but also to how drones are perceived. That is to say, the risk critics of drone warfare call attention to is the danger that a lack of American casualties will be confused with a sanitization of war

even as wars continue to inflict terrible human suffering. The Army has an important role to play in presenting information about drones and informing the public about their associated risks and benefits. In particular, the Army should help to ensure that the American public does not lose sight of the fact that, despite the benefits drones bring in terms of force protection and offensive power, wars remain extremely destructive activities that must be waged for the right reasons and only as a last resort.

Policymakers face a different set of ethical challenges when it comes to developing and using drones. Although drones are unlikely to produce the kind of profound civic disengagement in military decisions that critics of drone warfare fear, these weapons nevertheless exert some influence on support for war, which could help policymakers build the case for war and escape a public backlash against costly military operations. Drones will be particularly important when they are used in conjunction with other strategies for justifying a war—for example, if a prospective military venture can be framed as a counterterrorism operation. This should not be considered a purely good or bad outcome. In some instances, war may be warranted and helping politicians make the case for war will be morally advantageous. At other times, a war may fail to pass *jus ad bellum* standards and any effect drones have in lowering inhibitions against fighting will be morally harmful.

Decisions about whether a war should be waged must be made on a case-by-case basis, which makes it impossible to pass final judgment on drones as being purely good or bad weapons. However, our results suggest that drones make other *jus ad bellum* considerations more important than ever. Differences in the

principal policy objectives in our experiment showed that the perceived legitimacy and urgency of military intervention affected support for initiating hostilities. Unlike drones, which can lower inhibitions against fighting in just or unjust wars, principal policy objectives are central to determining whether war is justified. This makes it vital for policymakers to formulate just principal policy objectives and to state openly the principal policy objectives they are pursuing so these can be evaluated by the American public. It is critical to note that drawing out the implications of our findings for the military and policymakers will also depend on further research about how drones affect public opinion. The concern over drones evading the restrictive effects of casualty aversion can be extended to foreign civilians. Foreign civilian casualties may erode support for war just as military casualties do.⁵⁰ Members of the public may lose interest in wars that appear to be misdirected at innocent people or that inflict disproportionate civilian “collateral damage.” This could give states an incentive to fight in ways that minimize the risk to foreign civilians just as they have an incentive to minimize military casualties. However, in this context the concern expressed by critics of drone warfare is not that drones will actually lower civilian casualty rates, as they may for military personnel, but that drones will give the appearance of reducing civilian victimization even as the increased incidence of war and new methods of fighting put civilians at greater risk than ever.

Kaag and Kreps⁵¹ raise this challenge by suggesting that drones’ impressive technical capacities may give the misleading impression that wars are being waged with greater attention to the *jus in bello* principles of proportionality and discrimination. This could,

in turn, affect citizens' judgments relating to *jus ad bellum*. After all, if drones appear to improve compliance with the *in bello* rules of war, then they could also make the decision to wage war seem less morally significant. Drones might even give the appearance that the only casualties of war are enemy combatants. Closely related to this is the suspicion that the U.S. Government may already be underreporting the civilian casualties inflicted by drone strikes in an effort to make these strikes appear to be an attractive alternative to other types of military operations.⁵² By this account, drones may be ethically objectionable because they facilitate dissimulation more than other weapons.

Several studies found that public opinion does not seem to be strongly affected by the suffering of foreign civilian populations.⁵³ There is evidence to show that democracies can inflict heavy foreign civilian casualties, and even target civilians, without sustaining any serious crises of public confidence.⁵⁴ This research would suggest that drones' capacities for creating the appearance of minimal civilian harm are relatively unimportant. After all, if public opinion is not sensitive to civilian casualties, then there is little reason to think that drones may reduce inhibitions against fighting by hiding those casualties.

Research that is focused specifically on drone strikes that harm civilians suggest that the apparent insensitivity to foreign civilian casualties has been overstated. Kreps⁵⁵ argues that the extent to which civilian casualties undermine support for drone strikes has been underestimated in polls and that it is stronger than the available data would suggest. She substantiates this with experiments that show how different ways of framing polling questions may elicit greater sensitivity to civilian casualties. Walsh⁵⁶ finds that the

anticipated number of civilian casualties has a powerful influence on attitudes toward drone strikes – even exceeding the intolerance for sustaining military casualties – and that sensitivity to civilian casualties appears to be higher when they are inflicted using precision weapons. This is evidence that the use of drones and other precision weapons may prime people to expect lower civilian casualty rates and cause them to adjust their willingness to condone them.

ENDNOTES

1. Medea Benjamin, *Drone Warfare: Killing by Remote Control*, New York: OR Books, 2012; Sarah Kreps and John Kaag, "The Use of Unmanned Aerial Vehicles in Asymmetric Conflict: Legal and Moral Implications," *Polity*, Vol. 44, No. 2, 2012, pp. 260-285; John Kaag and Sarah Kreps, *Drone Warfare*, Malden, MA: Polity Press, 2014.

2. Robert Sparrow, "Killer Robots," *Journal of Applied Philosophy*, Vol. 24, No. 1, 2007, pp. 62-77; Ronald C. Arkin, *Governing Lethal Behavior in Autonomous Robots*, Boca Raton, FL: Taylor & Francis Group, 2009; Armin Krishnan, *Killer Robots: Legality and Ethicality of Autonomous Weapons*, Burlington, VT: Ashgate, 2009; Aaron Johnson and M., Sidney Axinn, "The Morality of Autonomous Robots," *Journal of Military Ethics*, Vol. 12, No. 2, 2013, pp. 129-141; Marcus Schulzke, "Autonomous Weapons and Distributed Responsibility," *Philosophy and Technology*, Vol. 26, No. 2, 2013, pp. 203-219.

3. John E. Mueller, *War, Presidents and Public Opinion*, New York: Wiley, 1973; Edward N. Luttwak, "Towards Post-Heroic Warfare." *Foreign Affairs*, Vol. 74, No. 3, 1995, pp. 109-122.

4. Bruce Bueno de Mesquita and Randolph M. Siverson, "War and the Survival of Political Leaders: A Comparative Study of Regime Types and Political Accountability," *The American Political Science Review*, Vol. 89, No. 4, 1995, pp. 841-855. Louis Klarevas, "Trends: The United States Peace Operation in Somalia," *Public Opinion Quarterly*, Vol. 64, No. 4, 2000, pp. 523-540; Louis Klare-

vas, "The 'Essential Domino' of Military Operations: American Public Opinion and the Use of Force," *International Studies Perspectives*, Vol. 3, No. 4, 2002, pp. 417-437; Scott Sigmund Gartner, "The Multiple Effects of Casualties on Public Support for War: An Experimental Approach," *American Political Science Review*, Vol. 102, No. 1, 2008, pp. 95-106; M. A. Baum, and T. Groeling, "Reality Asserts Itself: Public Opinion on Iraq and the Elasticity of Reality," *International Organization*, Vol. 64, 2010, pp. 443-479; Douglas Kriner and Francis Shen, "Responding to War on Capitol Hill: Battlefield Casualties, Congressional Response, and Public Support for the War in Iraq," *American Journal of Political Science*, Vol. 58, No. 1, 2014, pp. 157-174; H. E. Goemans, "Fighting for Survival: The Fate of Leaders and the Duration of War," *The Journal of Conflict Resolution* Vol. 44, No. 5, 2000, pp. 555-579; David L. Rousseau, Trevor Thrall, Marcus Schulzke, and Steve S. Sin, "Democratic Leaders and War: Simultaneously Managing External Conflicts and Domestic Politics," *Australian Journal of International Affairs*, Vol. 66, No. 3, 2012, pp. 349-364.

5. Christopher Gelpi, Peter D. Feaver, and Jason Reifler, "Success Matters: Casualty Sensitivity and the War in Iraq," *International Security*, Vol. 30, No. 3, 2006, pp. 7-46; Christopher Gelpi, Peter D. Feaver, and Jason Reifler, *Paying the Human Costs of War: American Public Opinion & Casualties in Military Conflicts*, Princeton, NJ: Princeton University Press, 2009.

6. Gelpi, Feaver, and Reifler, *Paying the Human Costs of War*, p. 2.

7. Eric V. Larson, *Casualties and Consensus: The Historical Role of Casualties in Domestic Support for U.S. Military Operations*, Santa Monica, CA: RAND, 1996, p. 101.

8. Charles K. Hyde, *Casualty Aversion: Implications for Policy Makers and Senior Military Officers*, Newport, RI: Naval War College, 2000, p. 10.

9. Cori Dauber, "Image as Argument: The Impact of Mogadishu on U.S. Military Intervention," *Armed Forces & Society*, Vol. 27, No. 2, 2001, pp. 205-230; Cori Elizabeth Dauber, "The Shot Seen 'Round the World': The Impact of the Images of Mogadishu on American Military Operations," *Rhetoric & Public Affairs*, Vol. 4, No. 4, 2001, pp. 653-687.

10. Douglas Kriner and Francis Shen, "Responding to War on Capitol Hill: Battlefield Casualties, Congressional Response, and Public Support for the War in Iraq," *American Journal of Political Science*, Vol. 58, No. 1, 2014, pp. 157-174.

11. Charles K. Hyde, *Casualty Aversion: Implications for Policy Makers and Senior Military Officers*, Newport, RI: Naval War College, 2000.

12. Kaag and Kreps, *Drone Warfare*, p. 2.

13. *Ibid.*, p. 65.

14. *Ibid.*, p. 76.

15. P. W. Singer, *Wired for War: The Robotics Revolution and Conflict in the 21st Century*, New York, Penguin Press, 2009, p. 255.

16. *Ibid.*, p. 258.

17. Frank Sauer and Niklas Schörnig "Killer Drones: The 'Silver Bullet' of Democratic Warfare?" *Security Dialogue*, Vol. 43, No. 4, 2012, pp. 363-380.

18. Daniel Brunstetter and Megan Braun, "The Implications of Drones on the Just War Tradition," *Ethics & International Affairs*, Vol. 25, No. 3, 2011, pp. 337-358.

19. *Ibid.*, p. 346.

20. Linda Johansson, "Is It Morally Right to Use Unmanned Aerial Vehicles (UAVs) in War?" *Philosophy & Technology*, Vol. 24, No. 3, 2011, p. 283.

21. Christian Enemark, *Armed Drones and the Ethics of War: Military Virtue in a Post-Heroic Age*, New York: Routledge, 2013.

22. *Ibid.*, p. 23.

23. *Ibid.*; Christian Enemark, "Drones over Pakistan: Secrecy, Ethics, and Counterinsurgency," *Asian Security*, Vol. 7, No. 3, 2011, pp. 218-237.

24. David Hastings Dunn, "Drones: Disembodied Aerial Warfare and the Unarticulated Threat," *International Affairs*, Vol. 89, No. 5, 2013, pp. 1237-1246.

25. *Ibid.*, p. 1238.

26. Michael J. Boyle, "The Costs and Consequences of Drone Warfare," *International Affairs*, Vol. 89, No. 1, 2013, pp. 1-29.

27. Metin Gurcan, "Drone Warfare and Contemporary Strategy Making: Does the Tail Wag the Dog?" *Dynamics of Asymmetric Conflict: Pathways Toward Terrorism and Genocide*, Vol. 6, No. 1-3, 2013, pp. 153-167.

28. Zack Beauchamp and Julian Savulescu, "Robot Guardians: Teleoperated Combat Vehicles in Humanitarian Military Intervention," Bradley Jay Strawser, ed., *Killing by Remote Control: The Ethics of an Unmanned Military*, New York: Oxford University Press, 2013.

29. Bradley Jay Strawser, "Moral Predators: The Duty to Employ Uninhabited Aerial Vehicles," *Journal of Military Ethics*, Vol. 9, No. 4, 2010, pp. 342-368.

30. Ronald C. Arkin, *Governing Lethal Behavior in Autonomous Robots*, Boca Raton, FL: Taylor & Francis Group, 2009; Strawser, "Moral Predators," pp. 342-368; Marcus Schulzke, "Robots as Weapons in Just Wars," *Philosophy and Technology*, Vol. 24, No. 3, 2011, pp. 293-306; Marcus Schulzke, "The Morality of Remote Warfare: Against the Asymmetry Objection to Remote Weaponry," *Political Studies*, 2014; Anton Petrenko, "Between Berserksgang and the Autonomous Weapons Systems," *Public Affairs Quarterly*, Vol. 26, No. 2, 2012, pp. 81-102.

31. Michael Walzer, *Just and Unjust Wars: A Moral Argument with Historical Illustrations*, New York: Basic Books, 1977, pp. 155-157; Jeff McMahan, "The Just Distribution of Harm between Combatants and Noncombatants," *Philosophy & Public Affairs*, Vol. 38, No. 4, 2010, pp. 342-379.

32. Adam J. Berinsky, Gregory A. Huber, and Gabriel S. Lenz, "Evaluating Online Labor Markets for Experimental Research:

Amazon.com's Mechanical Turk," *Political Analysis*, Vol. 20, 2012, pp. 351–368; T. S. Behrend, D. J. Sharek, A. W. Meade, and E. N. Wiebe, "The viability of crowdsourcing for survey research," *Behavior Research Methods*, Vol. 43, No. 3, 2011, pp. 800–813.

33. A total of 3,784 individuals participated in the experiment. Each participant was paid \$40. The survey was conducted in January 2015. The resulting data, and code used to generate the results reported here are available from www.jamesigoewalsh.com.

34. B. J. Gaines, J. H. Kuklinski, and P. J. Quirk, "The Logic of the Survey Experiment Reexamined," *Political Analysis*, Vol. 15 No. 1, 2007, pp. 1–20.

35. Bruce W. Jentleson, "The Pretty Prudent Public: Post Post-Vietnam American Opinion on the Use of Military Force," *International Studies Quarterly*, Vol. 36, pp. 49–74; Gelpi, Feaver, and Reifler, *Paying the Human Costs of War*.

36. Gelpi, Feaver, and Reifler, *Paying the Human Costs of War*.

37. Full results of these models are reported in the online appendix available from www.jamesigoewalsh.com. The estimation technique is ordinary least squares regression. Ordered logistic regression produces substantively similar results. See the online data and code for details. We also included two measures of general attitudes towards the use of force as independent variables – militant assertiveness and isolationism (drawn from Richard K. Herrmann, Philip E. Tetlock, and Penny S. Visser, "Mass Public Decisions on Go to War: A Cognitive-Interactionist Framework," *American Political Science Review*, Vol. 93 No. 3, 1999, pp. 553–573). Including these independent variables did not alter the substantive size or statistical significance of the variables for drone strikes.

38. Pamela Johnston Conover and Virginia Sapiro. "Gender, Feminist Consciousness, and War," *American Journal of Political Science*, Vol. 37, 1993, pp. 1079–1099.

39. Note that in our experiment, gender does not influence attitudes towards the use of force for humanitarian intervention (see Figure 8). This is consistent with earlier works which find

that women are as or more likely to support military action in such cases. See Deborah Jordan Brooks and Benjamin A. Valentino, "A War of One's Own: Understanding the Gender Gap in Support for War," *Public Opinion Quarterly*, Vol. 75, No. 2, 2011, pp. 270-286.

40. E.g., Peter Hays Gries, *The Politics of American Foreign Policy: How Ideology Divides Liberals and Conservatives Over Foreign Affairs*, Stanford, CA: Stanford University Press, 2014; Richard Johnston, "Party Identification: Unmoved Mover or Sum of Preferences?" *Annual Review of Political Science*, Vol. 9, 2006, pp. 329-351.

41. Bueno de Mesquita and Siverson, "War and the Survival of Political Leaders"; Goemans, "Fighting for Survival"; Rousseau, Thrall, Schulzke, and Sin, "Democratic Leaders and War."

42. Sauer and Schörning "Killer Drones: The 'Silver Bullet' of Democratic Warfare?"

43. Singer, *Wired for War*.

44. Kreps and Kaag, "The Use of Unmanned Aerial Vehicles in Asymmetric Conflict"; Kaag and Kreps, *Drone Warfare*.

45. Gelpi, Feaver, and Reifler, *Paying the Human Costs of War*.

46. Jentleson, p. 64.

47. Beauchamp and Savulescu, "Robot Guardians."

48. Paul Robinson, "Ethics Training and Development in the Military," *Parameters*, Spring 2007; Chris Case, Bob Underwood, and Sean T. Hannah, "Owning Our Army Ethic," *Military Review: The Army Ethic*, 2010, pp. 3-10; Jeffrey Wilson, "An Ethics Curriculum for an Evolving Army," Paul Robinson, Nigel De Lee, and Don Carrick, eds., *Ethics Education in the Military*, Burlington, VT: Ashgate Publishing, Ltd, 2008.

49. Michael Pasquarett, ed., *Perspectives on Embedded Media: Selected Papers from the U.S. Army War College*, Carlisle, PA: US Army War College, 2004; Major Edward L. English, *Towards a More Pro-*

ductive Military-Media Relationship, Fort Leavenworth, KS: School of Advanced Military Studies, U.S. Army Command and General Staff College, 2005; Major Chad G. Carroll, "The U.S. Army Public Diplomacy Officer: Military Public Affairs Officers" Roles in the Global Information Environment," *Master's Thesis*, Chapel Hill, NC: University of North Carolina at Chapel Hill, 2007.

50. Richard C. Eichenberg, "Victory Has Many Friends: U.S. Public Opinion and the Use of Force," *International Security*, Vol. 30, No. 1, 2005, pp. 140-177; Sarah Kreps, "Flying under the Radar: A Study of Public Attitudes Towards Unmanned Aerial Vehicles," *Research & Politics* 2014, available from rap.sagepub.com/content/1/1/2053168014536533; James Walsh, "Precision Weapons, Civilian Casualties, and Support for the Use of Force," *Political Psychology*, 2015.

51. Kreps and Kaag, "The Use of Unmanned Aerial Vehicles in Asymmetric Conflict"; Kaag and Kreps, *Drone Warfare*.

52. Trevor McCrisken, "Obama's Drone War," *Survival: Global Politics and Strategy*, Vol. 55, No. 2, 2013, pp. 97-122.

53. John Mueller, "Public Opinion as a Constraint on U.S. Foreign Policy: Assessing the Perceived Value of American and Foreign Lives," National Convention of the International Studies Association, 2000; John Tirman, *The Deaths of Others: The Fate of Civilians in America's Wars*, New York: Oxford University Press, 2011.

54. Alexander B. Downes, "Desperate Times, Desperate Measures: The Causes of Civilian Victimization in War," *International Security*, Vol. 30, No. 4, 2006, pp. 152-195; Alexander B. Downes, "Restraint or Propellant? Democracy and Civilian Fatalities in Interstate Wars," *The Journal of Conflict Resolution*, Vol. 51, No. 6, 2007, pp. 872-904; Alexander B. Downes, *Targeting Civilians in War*, Ithaca, NY: Cornell University Press, 2008.

55. Kreps, "Flying under the Radar."

56. Walsh, "Precision Weapons, Civilian Casualties, and Support for the Use of Force."

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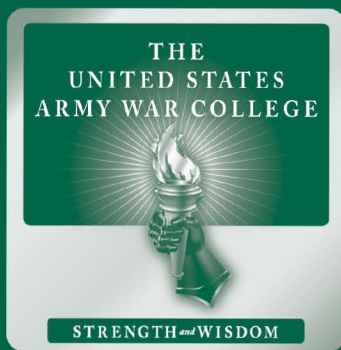
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