

Autonomous Weapons Systems for Policing – A Jewish Ethical Perspective

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Bio

Mois Navon is a computer engineer, a moral philosopher and an orthodox rabbi. Working at the intersection of these fields, Mois lectures on “Ethics in Big Data and AI” at Ben Gurion University and wrote his PhD on “The Moral Status of AI” at Bar Ilan University. He is currently a postdoctoral fellow at the Weisfeld Family Ma'ayan Center for Sustainability, Jewish Philosophy, and Ethics, at the Department of Jewish Philosophy, Bar-Ilan University

Abstract

Autonomous Weapons Systems (AWS) are being developed around the world to improve national security both externally and internally. But allowing machines – incapable of recognizing the inherent worth of a human being – to take the life of human beings is to treat humans as objects and thus violate their dignity. Drawing from Jewish legal sources, this paper contends that, while human dignity is an important value, the values of societal harmony and preservation of life take precedence. Consequently, agencies tasked with safeguarding national security, whether military or police, need not be restrained by concerns over potential indignities AWS may impose.

Keywords: Artificial Intelligence, Autonomous Weapons, Ethics, Police, Human Dignity, Imago Dei

Introduction

“Judges and officers shalt thou make thee in all thy gates ...” (Deuteronomy 16:18).

Long has it been recognized that the harmonious functioning of society demands a robust system of justice together with a strong system of law enforcement. Indeed, without “officers” (i.e., law enforcement), the “judges” (i.e., legislative and judicial branches) are effectively powerless (Midrash Tanhuma, Shoftim 2). This claim finds support in the juxtaposition of the biblical verses: “David executed justice and righteousness unto all his people. And Joab the son of Zeruiah was over the army” (II Samuel 8:15-16). From here the Midrash teaches that “were it not for the fear of Joab, David could not execute justice.” Interestingly, it was the army that assumed responsibility for maintaining the peace, not only externally but internally. And while a separation of powers developed over history, with the police dedicated to civil harmony and the military to national defense (Brodeur and Kelling 2018), modern times have witnessed a role convergence, with police operations taking on military characteristics and military initiatives taking on policing characteristics (Campbell and Campbell 2009). This convergence is evident in, among other things, the deployment of like weapons.

Now, the latest weapons being designed, developed, and deployed by armies around the globe are Autonomous Weapons Systems (AWS) – AI based weapons that, once launched, autonomously choose targets (human or otherwise) and deliver lethal (or non-lethal) force without a human in-the-loop (i.e., to fire) or on-the-loop (i.e., to abort).¹ These systems have captured widespread interest as they promise to improve defense capabilities and reduce human casualties (see, e.g., Arkin 2008, Leveringhaus 2016, Muller 2016). The thinking is that machines, as opposed to human soldiers, will make less mistakes, have better mission accomplishment, never get emotional, never commit war crimes, and ultimately, reduce the human costs of war. Similarly, in law enforcement scenarios (e.g.,

¹ See, e.g., Docherty 2012; “DODD 3000.09: Autonomy in Weapon Systems” 2017. Note: while the vast majority of systems today still have a human in-the-loop or on-the-loop, it is broadly acknowledged (even by opponents of AWS) that the full benefit of their deployment will only be realized when they are capable of making kill decisions without human intervention. Currently, such usage remains controversial (United Nations 2023), with only the Ukraine having deployed them in fully autonomous mode (Hambling 2023). That said, several countries are pushing for fully autonomous deployment (Lipton 2023).

armed gang fights, active shooter incidents, hostage situations) AWS could accurately identify and neutralize armed criminals, allowing for a swift and safe resolution while keeping human police officers out of harm's way.²

Yet, for all the positive benefits that such systems portend, they are not without ethical questions (see, e.g., Lin, Abney, and Bekey 2014; Heyns 2016; Asaro 2020). Of the many issues that ethicists raise in debating the propriety of deploying AWS – be they legal, technical, social, or political – most, if not all, can be answered from a consequentialist approach. That is, will nations war more or less, will law enforcement agencies kill more or less, will armies and police adhere to standards of just conduct more or less.³ To ensure that the consequences of deploying AWS are indeed positive, we will need to bring to bear legal, technical, social, and political solutions.⁴ But, as difficult as it may be to achieve these solutions, none will suffice to resolve the deontological issue (i.e., the inherent violation of a moral value) raised against the deployment of AWS. Peter Asaro, leading opponent of AWS, puts it like this:

While I see the consequentialist side of this argument [i.e., ‘autonomous weapons could be designed to be far better than humans at making targeting decisions and conducting attacks, thus reducing the risks of harm to civilians’], ... I do not see

² “For example, an AWS could conceivably be programmed, based on facial recognition, to release deadly force against a hostage-taker who is exposed for a split second, a situation in which a human sniper could be too slow to react, or in a complex situation where the human mind cannot process all of the information in good time” (Heyns 2016: 358).

³ Standards of conduct exist for international conflicts (e.g., Henckaerts and Doswald-Beck 2009) and for domestic law enforcement (e.g., UN 1979, UN 1990).

⁴ Some argue that it is simply impossible to program a machine to make ethical decisions (e.g., Sparrow 2016: 100). Space does not permit me to properly address the “codifiability thesis” (i.e., is it possible to define a robust code of ethics, and by extension, program a machine to execute it with precision), but let it be said that this is not an insurmountable issue for AWS. For even those who hold the anti-codifiability thesis agree that it is possible to make a machine that operates better than humans (see, e.g., Moor 2011; also Arkin 2008: 124; Arkin 2010; Sullins 2010; Purves, Jenkins, and Strawser 2015: 859; Dunlap 2016; Leveringhaus 2016: 62; Spaulding 2020: 394-5). Worthy of mention here is the claim by Guarini and Bello (2012) that, in theatres densely mixed with innocent civilians (e.g., police scenarios), the AWS needs to be able to perform mental state attribution or read emotions. Yet, for all the difficulty, the authors posit that a machine might be built to do so.

the deontological side of it [i.e., there are inviolable moral duties, what some refer to as sacred values (Dehghani et al. 2011), that are here trampled in the name of utility]. In particular, in order to fulfill our duty to respect the human dignity of others, I believe we are required to recognize them as human and to consider them as such when making the decision that it is justified to kill them or put them at risk of death (Asaro 2020: 217).

Asaro is not alone in his claim, as a great many ethicists argue similarly (see, e.g., Docherty 2012; Sparrow 2016; Sharkey 2018), that the preservation of human dignity demands that every individual, even when killed on the battlefield, be recognized as a subject and not as an object – in the phrase of Martin Buber – as a “Thou” and not as an “it.” Accordingly, this is not an issue that can be resolved legally, socially, politically or even technically (outside of engineering conscious artificial intelligence, which is not in the offing), but only philosophically.

In my essay entitled, “Autonomous Weapons Systems and Battlefield Dignity – a Jewish Perspective” (Navon 2023), I disputed the claims of the secular ethicists by arguing that there is a difference between dignity on the battlefield versus dignity off the battlefield. I explained that, on the one hand, Jewish wartime ethics accord with the same *jus in bello* criteria of “necessity, distinction, and proportionality” that underpin International Humanitarian Law.⁵ On the other hand, Jewish thought maintains wartime ethics to be very different than peacetime ethics.⁶ As a result, I argued that to equate dignity on the battlefield with dignity off the battlefield, as do secular ethicists, is to make a category mistake. In peacetime, respect for human dignity is expressed through exemplary interpersonal consideration – i.e., relating to the other as a “Thou.” In wartime, regard for

⁵ For completeness’ sake: *Necessity* requires that a party to an armed conflict may only resort to those means and methods that are necessary to achieve the legitimate purpose of a conflict (“The Principles of Humanity and Necessity” 2023). *Distinction* requires that the parties to the conflict must at all times distinguish between civilians and combatants (Henckaerts and Doswald-Beck 2009: Rule 1). *Proportionality* requires that the incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof, should not be excessive in relation to the concrete and direct military advantage anticipated. (ibid.: Rule 14).

⁶ R. Naftali Tzvi Berlin (*HaEmek Davar*, Gen. 9:5); Abraham Isaac Hacoen Kook (*Mishpat Cohen* #143); R. Eliezer Waldenberg (*Tzitz Eliezer* 12:57).

human dignity is expressed not in how one treats the enemy (barring war crime abuses),⁷ but in the courage and self-sacrifice one evinces for one's cause. Accordingly, while dignity in death during peacetime is very much bound up with how others treat the dying, dignity in death during wartime bears no such dependencies (again, barring war crime abuses). In war, it is of little consequence whether one is killed by sticks and stones, knives and guns, tomahawk and hellfire missiles, or fully autonomous weapons systems.

Military Versus Police

Accepting my arguments as allowing for the ethical deployment of AWS by armies at war, the question then becomes: what about the police? Colloquially we use terms like “the war on crime,” “the war on drugs,” “the war on terror” – but are these “wars” to the extent that peacetime morality no longer applies? International Humanitarian Law (i.e., the laws of war) recognizes two types of war: International Armed Conflicts – conflicts between two or more countries; and Non-International Armed Conflicts – conflicts that occur within the boundaries of a single country and include non-state actors (i.e., organized armed groups).⁸

International Armed Conflict is, quite simply, what is universally known as “war.” Classifying a conflict as a Non-International Armed Conflict, however, is not so simple. To make the determination, the ICRC established the following criteria:⁹

⁷ By this I mean that once *jus in bello* criteria allow for killing, peacetime considerations of dignity do not apply, and the target may be killed in the manner deemed appropriate – barring war crime abuses. For, at the very least, the demand of “necessity” would prohibit such abuses.

⁸ International Committee of the Red Cross 2008. This dichotomy can also be found in Jewish thought, wherein international armed conflicts are classified as *milhemet reshut* (expansion war) or *milhemet mitzyab* (defensive war) – see, e.g., Mish. Sotah 8:7; Hil. Mel. 5:1; as opposed to non-international conflicts, like the many civil wars documented in the Bible, Talmud, Josephus, et al. (see, e.g., “List of Israelite Civil Conflicts” 2024).

⁹ Note that the first two criteria are from common Article 3 to the Geneva Conventions of 1949 while the third is from Article 1 of Additional Protocol II. For our purposes, the three together help to understand that civilian police work stands outside any definition of Non-International Armed Conflict. See International Committee of the Red Cross 2008.

- The hostilities must reach a minimum level of intensity. This may be the case, for example, when the hostilities are of a collective character or when the government is obliged to use military force against the insurgents, instead of mere police forces.
- Non-governmental groups involved in the conflict must be considered as “parties to the conflict”, meaning that they possess organized armed forces. This means, for example, that these forces have to be under a certain command structure and have the capacity to sustain military operations.
- Non-governmental parties must exercise such territorial control “as to enable them to carry out sustained and concerted military operations...”

Based on these descriptions, it seems clear that terrorist organizations, whether comprised of citizens of the targeted state or not, are essentially waging “war” against the state.¹⁰ Similarly, sophisticated drug cartels meet the ICRC criteria and are considered as engaging in “war” (Redaelli and Arevalo 2023). Mafia organizations and street gangs, however, would not appear to reach the robust demands of the ICRC criteria. And, of course, neither would “everyday” violent criminals who are the target of police activities.¹¹

Accordingly, given that police activity (outside of the war on terror and the war on drugs) cannot be classified as “war,” the ethical deployment of AWS by police cannot be justified by arguing that wartime dignity allows for it. This does not mean, however, that there is no argument to be made – *vis a vis* human dignity – to permit police to deploy AWS.¹² In making moral judgements we are often confronted with a number of conflicting values that demand prioritization. For the case at hand, while human dignity is a great value that must be preserved, we must ask if it is to be preserved at all costs? There are other important values – like the harmonious functioning of society and the preservation of human life itself – that too must be considered. What are we to do when these values come

¹⁰ See Orend 2006: 2. Jewish thinkers concur that modern day terrorists are waging, *halakhically*, war (R. Y. Kaminetzky, R. S. Yisraeli, R. Z. Schachter in Jachter 2008).

¹¹ I use the adjective “violent” because it is specifically violence that I claim justifies deploying AWS in the civil arena. Importantly, a violent criminal, in the sense of this paper, is either one who perpetrates violence oneself or that engenders violence against others through their actions.

¹² Note: As with their use in the military, AWS in law enforcement presents many issues that can ultimately be resolved through technical means, unlike the issue of human dignity, which cannot be so resolved.

into conflict? What if we must decide between the human dignity of a violent criminal versus the life of the civilians that said criminal seeks to threaten? Must we preserve the dignity of an assailant to the detriment of society and the very life of its innocent civilians?

Hierarchy of Values

To respond to these questions, I suggest applying the “law of the pursuer” (*din rodef*) from Jewish jurisprudence. Indeed, it is this law, according to Jewish legal philosophy, that allows for a government (Jewish or non-Jewish) to defend its citizenry in peacetime.¹³ The law is found in the Talmud (San. 73-74), codified by Maimonides (Laws on the Murderer 1:6-14) and brought as living law by R. Yosef Karo (Shulhan Aruch HM 425:1):

One who pursues his fellow in order to kill him, and was warned, and continued in his pursuit: Even if the pursuer was a minor, every Jew¹⁴ is commanded to save the pursued, even at the cost of maiming one of the pursuer’s limbs. If it is impossible to save the pursued without killing the pursuer outright, then the pursuer should indeed be killed, even though he has not yet performed the act.

While this law is generally applied to pursuit with the intent to kill, it also applies to pursuit with the intent to commit rape (for specifics, see *ibid.*:3). Spreading the net even wider, R. Moshe Isserles (*ibid.*) explains that the ruling applies to a thief who is prepared to kill as well as to criminals who, by their nefarious activities (e.g., counterfeiting), mortally endanger their community with the collective punishment of government authorities. Though this last case does not apply in today’s democracies, it teaches that any individual who, even implicitly, exposes another individual or community to mortal danger, even through non-violent actions, is considered a *rodef* (pursuer).

R. J. D. Bleich summarizes the practical implications of the law of the pursuer as follows:

¹³ R. Michael Broyde (2007) notes that this applies to both non-Jewish (*ibid.* [2]) and Jewish governments (*ibid.* [3]).

¹⁴ Regarding non-Jews, R. Bleich (2012) explains that they are either obligated to comply with this law (see sources, fn. 30) or are at liberty to comply with it (see sources, fn. 31). R. Broyde (2007: fn. 30) notes that the consensus appears to be that non-Jews are obligated in this law.

[T]he law of the pursuer reflects a simple principle, viz., society must take whatever measures may be necessary in order to eliminate violence. Whether or not the perpetrator has legal or even moral culpability is completely irrelevant.¹⁵ Violence is violence and members of society are individually and collectively charged with eradicating violence (Bleich 2012: 20).

Police action – including the killing of violent criminals, as well as those who would expose society to mortal danger – is thus mandated by the law of the pursuer.¹⁶ It is a mandate that allows for all means necessary to stop the pursuer, including the use of AWS. Accordingly, this law of the pursuer clearly places the value of societal harmony, not to speak of the life of the intended victims, above the autonomy of a pursuer. Interestingly, this hierarchy of values can also be seen in John’s Stuart Mill’s famous, and wholly secular, “harm principle”: The only purpose for which power can be rightfully exercised over any member of a civilized community, against his will, is to prevent harm to others (Mill [1859] 2011: 17). Mill’s formulation supports the precedence of societal harmony over personal autonomy, emphasizing the value of each individual’s life and well-being over another’s autonomy. In Jewish terms, the life of the pursued is to be preserved at the expense of that of the pursuer.

But what about human dignity? While the concern for societal harmony and individual well-being has support to override the preservation of personal autonomy, where does human dignity fit into the hierarchy of moral values? In liberal secular terms, each individual’s dignity is expressed in their autonomy – i.e., their ability to think, speak and act as they choose (Shultziner 2006: 664). In the extreme, this value overrides even the value to preserve life, as R. Bleich explains:

Western society has, correctly or incorrectly, adopted the notion of human dignity as a paramount value and, at times, as even a greater value than life itself. It is that

¹⁵ That is, “the pursuer may have gone berserk; he may be demented, a mental incompetent or a child having no halakhic or legal capacity and yet he is regarded as a *rodef* [pursuer] against whom the law of the pursuer is fully operative” (Bleich 2012: 18).

¹⁶ See, e.g., Dr. Itamar Warhaftig quoted in Broyde 2007: fn. 94.

hierarchical ranking of values that constitutes the matrix against which many bioethical issues are adjudicated. “Death with dignity” has become a slogan employed not simply for preservation of human dignity even in death – a value that cannot be gainsaid – but for the sacrifice of longevity anticipation, whether brief and ephemeral or otherwise, i.e., the sacrifice of life itself for the sake of preservation of perceived dignity (Bleich 2012: 15).

The “death with dignity” position, however, prioritizes only one’s *own* dignity over one’s *own* life, not over the life and well-being of others. That said, modern secular mores do, in fact, take this next step and ascribe precedence to human dignity even over safeguarding the lives of individuals or society itself. This latter prioritization, notes R. Bleich (*ibid.*), is exemplified in the “Geneva Convention’s unequivocal and blanket ban on torture,” which would prohibit applying torture to a terrorist who could provide information to save a city from destruction (e.g., by divulging the location of a ticking time-bomb).

In stark contrast, Jewish ethics would countenance nothing of the sort, for the Jewish view of human dignity (largely referred to as *kavod habriyot*) differs significantly from that of secular liberalism (see, e.g., Shultziner 2006; Lichtenstein 2016; Rakover 1998). And this because the Jewish view of human dignity is rooted in the belief that all human beings are created in God’s image (*tzelem Elokim*).¹⁷ It is this likeness that confers dignity upon human beings, it is this likeness that defines human dignity. “Human beings have dignity because of an extrinsic entity [i.e., God] that bestowed it upon them, with all moral prescriptions that would follow from this status. This means that dignified and undignified conducts are dictated by God’s commandments rather than by an intrinsic autonomous human trait detached from the divine” (Shultziner 2006: 673).

What this means is that while human dignity is indeed a great principle in Jewish thought (*gadol kavod habriyot*)¹⁸ allowing, even demanding, that other values be overridden, the value itself is not defined by an autonomous will but by the divine will (Shultziner 2006: 674-675). And because it is divine will that bestows human life, so it is divine will that is at liberty to sanctify human life over human dignity. That human dignity is indeed subordinate

¹⁷ See, e.g., Menachem Elon in Shultziner 2006: 669.

¹⁸ Ber. 19b. For an overview, see Ency. Talmudit, entry: *Kavod Habriyot*.

to human life – even to the life of the individual himself – can be seen in the following sources:

- “The individual in his last moments on his deathbed is considered a living human being in every way” (Mishna Semachot 1:1). On this Maimonides writes that one who were to kill such a person would be considered a murderer in every way (Laws on the Murderer 2:7). And a subsequent Mishna (Semachot 1:4) goes on to explain that even hastening such a person’s death is considered murder.¹⁹ So, whereas western thought promotes “death with dignity,” Judaism, barring certain extreme circumstances, does not enter into such value judgements (see, e.g., Bleich 1996).
- “Man was created alone to teach you that whoever destroys a single soul is as if he had destroyed a whole world, and whoever saves a single soul is as if he had saved a whole world” (Mishna San. 4:5).²⁰ R. Bleich writes that this aphorism “is a succinct and eloquent reflection of the value of human life in the hierarchical context of moral values” (Bleich 2012: 14).
- “And you shall live by them [i.e., the commandments]” (Lev. 18:5). Commenting on this verse, the Talmud (Yoma 85b) explains, “And you shall not die by them.” This is perhaps the most powerful testimony of the overriding value of life itself, indeed, teaching that practically all the laws of the Torah are set aside in order to save a life (*“pikuach nefesh doche et hakol”*).²¹

Accordingly, while Jewish ethics places great value on human dignity, it is not greater than the value of life itself. Indeed, as noted in the above small sampling of sources, Jewish thought places the value of life at the top of the value hierarchy.

That said, the value of a harmonious society, which can be viewed as the sum of the individual lives of its members, takes precedence over the value of any one individual.

¹⁹ Similarly, Shul. Aruch (YD 339:1). See also, e.g., Responsa Mayim Haim 3:34.

²⁰ That the correct version is universalistic to all humanity, see Urbach 1971.

²¹ That is, preservation of life overrides the observance of the commandments outside of violating the three cardinal sins: murder, idolatry, sexual immorality, or in times of overt persecution (San. 74a).

Indeed, there is a notion in Jewish thought known as the “dignity of the people” which overrides personal dignity and autonomy (Shultziner 2006:665-674). Yet here it is important to recognize a critical dichotomy. On the one hand, as noted, every individual is seen to be equivalent to “a whole world” (San. 4:5). This is understood to mean that every individual is of infinite value such that we cannot judge the many (e.g., society) to be more valuable than any one individual (Navon 2024: sec. One Against Many). But this only applies in the case of sacrificing innocents for the greater good – i.e., we may not sacrifice an innocent individual to save the many (ibid.). On the other hand, we can and must stop an individual who seeks to kill another, as taught by “law of the pursuer” (*din rodef*). Accordingly, as R. Bleich writes, “elimination of violence constitutes a societal concern of a magnitude even higher than that of preservation of human life” (Bleich 2012: 20).²²

The hierarchy of values according to Jewish thought, then, has at its top societal harmony, followed by human life, followed by human dignity and individual autonomy.²³ With this in mind, we can now return to the question regarding the moral propriety of deploying AWS by a civil police force. To reiterate: while it is largely accepted that police have the mandate to stop violent criminals, including by force of arms, secular ethicists have made the claim that such arms must not be used if they violate the human dignity of the assailant(s). AWS are a case in point in that they are incapable of recognizing a human being as a subject and not as an object – as a “Thou” and not as an “it.” However, based on the hierarchy of values established herein, this claim has been removed, for the need to foster societal harmony and preserve innocent lives roundly trumps the need to preserve the dignity of assailants.²⁴ Police, therefore, in their effort to maintain societal harmony

²² Note: this comment is made in the context of non-Jewish obligations. Here it is important to note that while some obligations of Jewish law may not apply to the non-Jewish world, throughout this essay I have endeavored to use arguments that apply universally.

²³ In a moral system in which the parameters of human dignity are defined by a source outside of the human will, it is trivial to claim that human dignity (so defined) overrides human autonomy (see, e.g., Shultziner 2006: 673).

²⁴ As an important aside, the permit to override human dignity must nevertheless be done on an “as needed” basis, as taught by “law of the pursuer” (and in accord with UN 1979: 3 and UN 1990: 9). That is, while one is permitted to kill a pursuer to stop his nefarious intents, one must nevertheless stop him by lesser means if possible. By the same token, if police can arrest assailants without violating human dignity, they must do so. Furthermore, given that human dignity violations lie on a scale from more to less

and save innocent lives, need not be disarmed by the indignity that AWS may inflict on violent criminals.

Conclusion

To defend the use of AWS by military forces I used an “ethical category” argument in which I demonstrated that wartime ethics is a category distinct from peacetime ethics. I argued that wartime dignity is different than peacetime dignity such that AWS do not violate wartime human dignity. Of course, such claims do not apply to peacetime use of AWS by police, and thus I developed a “hierarchy of values” argument to defend such use. Here I demonstrated that when one derives the value of human dignity from God’s image, it is subordinate to the values of societal harmony and human life. As a result, in their endeavor to maintain societal harmony and preserve human life, police need not desist from the deployment of AWS for fear of offending the human dignity of violent criminals. Importantly, this “hierarchy of values” argument could have been utilized to justify the use of AWS by military forces. I chose not to do so because “hierarchies” suggest that a value infringement (e.g., of dignity) persists, whereas “categories” argue that no infringement occurs, for the very definitions of the value (e.g., of dignity) differ.

To conclude, while human dignity is of great import in ethical decision making, it does not vitiate the moral legitimacy to deploy AWS in the effort to save lives whether on the battlefield or in the marketplace. That said, despite advocating for the legitimacy of bearing arms in the name of peace, internationally and domestically, I pray for the day the prophets envisioned when:

... Nation shall not lift up a sword against nation, neither shall they learn war any more. But they shall sit every man under his vine and under his fig tree; and none shall make them afraid: for the mouth of the Lord of hosts hath spoken it (Michah 4:3-4).²⁵

mortification, police should seek to limit mortification to that which is necessary to attain their legitimate police goals.

²⁵ While clearly verse 3 refers to the end on war, verse 4 is understood to refer to the end of civil strife (Malbim, ad loc.).

Bibliography

- Arkin, Ronald C. 2008. "Governing Lethal Behavior." *Proceedings of the 3rd International Conference on Human Robot Interaction - HRI '08*.
<https://doi.org/10.1145/1349822.1349839>.
- . 2010. "The Case for Ethical Autonomy in Unmanned Systems." *Journal of Military Ethics* 9 (4): 332–41. <https://doi.org/10.1080/15027570.2010.536402>.
- Asaro, Peter. 2020. "Autonomous Weapons and the Ethics of Artificial Intelligence." In *Ethics of Artificial Intelligence*, edited by S. Matthew Liao, 212–36. Oxford: Oxford University Press. <https://doi.org/10.1093/oso/9780190905033.001.0001>.
- Bleich, J. David. 1996. "Treatment of the Terminally Ill." *Tradition: A Journal of Orthodox Jewish Thought* 30 (3): 51–87. <https://www.jstor.org/stable/23261282>.
- . 2012. "Torture and the Ticking Bomb." In *Contemporary Halakhic Problems*. Vol. 6. NY: KTAV.
- Brodeur, Jean-Paul, and George L Kelling. 2018. "Police." In *Encyclopædia Britannica*.
<https://www.britannica.com/topic/police>.
- Broyde, Michael J. 2007. "Just Wars, Just Battles and Just Conduct in Jewish Law." In *War and Peace in the Jewish Tradition*, edited by Lawrence H. Schiffman and Joel B. Wolowelsky. NY: YU Press.
<https://shurim.yutorah.net/2008/1053/726183.pdf>.
- Campbell, Donald J., and Kathleen M. Campbell. 2009. "Soldiers as Police Officers/Police Officers as Soldiers: Role Evolution and Revolution in the United States." *Armed Forces & Society* 36 (2): 327–50.
<https://doi.org/10.1177/0095327x09335945>.
- Dehghani, Morteza, Ken Forbus, Emmett Tomai, and Matthew Klenk. 2011. "An Integrated Reasoning Approach to Moral Decision Making." In *Machine Ethics*, edited by Michael Anderson and Susan Leigh Anderson. NY: Cambridge University Press.
- Docherty, Bonnie. 2012. "Losing Humanity." *Human Rights Watch*.
<https://www.hrw.org/report/2012/11/19/losing-humanity/case-against-killer-robots>.
- "DODD 3000.09: Autonomy in Weapon Systems." 2017. *DoD Directives Division*. Executive Services Directorate.
<https://www.esd.whs.mil/portals/54/documents/dd/issuances/dodd/300009p>.

- [pdf](#).
- Dunlap, Charles. 2016. “Accountability and Autonomous Weapons: Much Ado about Nothing?” *Temple International & Comparative Law Journal* 30 (1): 63–76.
https://scholarship.law.duke.edu/faculty_scholarship/3592.
- Guarini, Marcello, and Paul Bello. 2012. “Robotic Warfare: Some Challenges in Moving from Noncivilian to Civilian Theaters.” In *Robot Ethics: The Ethical and Social Implications of Robotics*, edited by Patrick Lin, Keith Abney, and George Bekey. MIT Press.
- Hambling, David. 2023. “Ukraine’s AI Drones Seek and Attack Russian Forces without Human Oversight.” *Forbes*, October 17, 2023.
<https://www.forbes.com/sites/davidhambling/2023/10/17/ukraines-ai-drones-seek-and-attack-russian-forces-without-human-oversight>.
- Henckaerts, Jean-Marie, and Louise Doswald-Beck. 2009. *Customary International Humanitarian Law. Volume I, Rules*. Cambridge: Cambridge University Press.
<https://www.icrc.org/en/doc/assets/files/other/customary-international-humanitarian-law-i-icrc-eng.pdf>.
- Heyns, Christof. 2016. “Human Rights and the Use of Autonomous Weapons Systems (AWS) during Domestic Law Enforcement.” *Human Rights Quarterly* 38: 350–78.
<http://www.jstor.org/stable/24738054>.
- International Committee of the Red Cross. 2008. “How Is the Term ‘Armed Conflict’ Defined in International Humanitarian Law?” *ICRC*. Geneva: ICRC.
<https://www.icrc.org/en/doc/assets/files/other/opinion-paper-armed-conflict.pdf>.
- Jachter, Chaim. 2008. “Halachic Perspectives on Civilian Casualties: Part 3.” *Kol Torah* (blog). 2008. <https://www.koltorah.org/halachah/halachic-perspectives-on-civilian-casualties-part-three-by-rabbi-chaim-jachter>.
- Leveringhaus, Alex. 2016. *Ethics and Autonomous Weapons*. London: Palgrave Macmillan.
<https://doi.org/10.1057/978-1-137-52361-7>.
- Lichtenstein, Aharon. 2016. “Human Dignity in Halakha.” *VBM*. Gush Etzion: Yeshivat Har Etzion. <https://www.etzion.org.il/en/halakha/studies-halakha/philosophy-halakha/human-dignity-halakha>.
- Lin, Patrick, Keith Abney, and George Bekey. 2014. “Ethics, War, and Robots.” In *Ethics and Emerging Technologies*, edited by Ronald L. Sandler. London: Palgrave Macmillan UK. <https://doi.org/10.1057/9781137349088>.

- Lipton, Eric. 2023. "As A.I.-Controlled Killer Drones Become Reality, Nations Debate Limits." *The New York Times*, November 21, 2023, sec. U.S.
<https://www.nytimes.com/2023/11/21/us/politics/ai-drones-war-law.html>.
- "List of Israelite Civil Conflicts." 2024. In *Wikipedia*.
https://en.wikipedia.org/wiki/List_of_Israelite_civil_conflicts.
- Mill, John Stuart. (1859) 2011. *On Liberty*. Project Gutenberg.
<https://www.gutenberg.org/cache/epub/34901/pg34901-images.html>.
- Moor, James H. 2011. "The Nature, Importance, and Difficulty of Machine Ethics." In *Machine Ethics*, edited by Michael Anderson and Susan Leigh Anderson. NY: Cambridge University Press.
- Muller, Vincent C. 2016. "Autonomous Killer Robots Are Probably Good News." In *Drones and Responsibility*, edited by Ezio Di Nucci and Filippo Santonio de Si, 67–81. London: Ashgate. <https://doi.org/10.4324/9781315578187-4>.
- Navon, Mois. 2023. "Autonomous Weapons Systems and Battlefield Dignity – a Jewish Perspective." In "*Alexa, How Do You Feel about Religion?*" *Technology, Digitization and Artificial Intelligence in the Focus of AI*, edited by Anna Puzio, Hendrik Klinge, and Nicole Kunkel. Darmstadt: WBG.
https://divreinavon.com/pdf/AWS_BattlefieldDignity_aJewishPerspective.pdf.
- . 2024. "The Trolley Problem Just Got Digital - Ethical Dilemmas in Programming Autonomous Vehicles." *B.D.D. - Bekhol Derakbekha Daehu* 38.
http://www.divreinavon.com/pdf/EthicalDilemmasinProgrammingAutonomousVehicles_MoisNavon.pdf.
- Orend, Brian. 2006. *The Morality of War*. Peterborough, Ont.: Broadview Press.
- Purves, Duncan, Ryan Jenkins, and Bradley J. Strawser. 2015. "Autonomous Machines, Moral Judgment, and Acting for the Right Reasons." *Ethical Theory and Moral Practice* 18 (4): 851–72. <https://doi.org/10.1007/s10677-015-9563-y>.
- Rakover, Nachum. 1998. *Human Dignity in Jewish Law*. Jerusalem: Ministry of Justice.
<https://www.daat.ac.il/daat/vl/rakover-gadol/rakover-gadol02.pdf>.
- Redaelli, Chiara, and Cristina Arevalo. 2023. "Targeting Drug Lords: Challenges to IHL between *Lege Lata* and *Lege Ferenda*." *International Review of the Red Cross* 105 (923): 652–73. <https://doi.org/10.1017/s1816383123000024>.
- Sharkey, Amanda. 2018. "Autonomous Weapons Systems, Killer Robots and Human Dignity." *Ethics and Information Technology* 21 (December).
<https://doi.org/10.1007/s10676-018-9494-0>.

- Shultziner, Doron. 2006. "A Jewish Conception of Human Dignity: Philosophy and Its Ethical Implications for Israeli Supreme Court Decisions." *The Journal of Religious Ethics* 34 (4): 663–83. <https://www.jstor.org/stable/40018007>.
- Sparrow, Robert. 2016. "Robots and Respect: Assessing the Case against Autonomous Weapon Systems." *Ethics & International Affairs* 30 (1): 93–116. <https://doi.org/10.1017/s0892679415000647>.
- Spaulding, Norman W. 2020. "Is Human Judgment Necessary? Artificial Intelligence, Algorithmic Governance, and the Law." In *The Oxford Handbook of Ethics of AI*, edited by Markus Dirk Dubber, Frank Pasquale, and Sunit Das. New York: Oxford University Press.
- Sullins, John P. 2010. "RoboWarfare: Can Robots Be More Ethical than Humans on the Battlefield?" *Ethics and Information Technology* 12 (3): 263–75. <https://doi.org/10.1007/s10676-010-9241-7>.
- "The Principles of Humanity and Necessity." 2023. ICRC. Geneva: ICRC. https://www.icrc.org/sites/default/files/wysiwyg/war-and-law/02_humanity_and_necessity-0.pdf.
- United Nations. 1979. "Code of Conduct for Law Enforcement Officials." December 17, 1979. <https://www.ohchr.org/en/instruments-mechanisms/instruments/code-conduct-law-enforcement-officials>.
- . 1990. "Basic Principles on the Use of Force and Firearms by Law Enforcement Officials." September 7, 1990. <https://www.ohchr.org/en/instruments-mechanisms/instruments/basic-principles-use-force-and-firearms-law-enforcement>.
- . 2023. "First Committee Approves New Resolution on Lethal Autonomous Weapons, as Speaker Warns 'an Algorithm Must Not Be in Full Control of Decisions Involving Killing' | UN Press." Meetings Coverage and Press Releases. United Nations. November 1, 2023. <https://press.un.org/en/2023/gadis3731.doc.htm>.
- Urbach, Ephraim E. 1971. "'Kol Ha-Meqayyem Nefesh Ahat...' — Development of the Version, Vicissitudes of Censorship, and Business Manipulations of Printers." *Tarbiz* 3: 268–84. www.jstor.org/stable/23593213.