Autonomous weapons systems (AWS) are surfacing as key technologies of future warfare. First, AWS may be a force multiplier. That is, fewer warfighters are needed for a given mission and the efficacy of each warfighter is greater. Next, AWS expand the battlefield, allowing combat to reach into areas previously inaccessible. Finally, AWS can reduce casualties by removing human warfighters from dangerous missions.[1] For Bode and Huelss, professors of international politics at the Centers for War Studies at the University of Denmark and University of Southern Denmark, respectively, AWS are a critical area of study because “first, the political debate on AWS has produced insufficient results…. Second, the issue of AWS is of increasing public interest but comprehensive and accessible knowledge about them is rare. Third, the book contributes to the academic consideration of AWS across disciplines such as law, philosophy, science technologies, or sociology” (p. 7).

The core of the book is Bode and Huelss’s analysis of “the emergence of so-called autonomous weapons systems (AWS) and the consequences of this development for International Relations. Weapons Systems with an increasing number of automated and autonomous features are emerging as game-changing technologies of future warfare.” They continue that the book examines “how AWS can change our understanding of what appropriate use of force is: chiefly, when, how and if the use of force by weapons systems with autonomous features is appropriate” (p. 3). In addition, the long-term budgetary savings that can be achieved through fielding an army of military robots have been clearly identified. In a 2013 article published in the Fiscal Times, David Francis cites Department of Defense figures showing that “each soldier in Afghanistan costs the Pentagon roughly $850,000 per year.”[2]

For Bode and Huelss, the advent of AWS is a continuation of how the twentieth century’s “story of modern industrial-scale warfare undertaken by highly developed states revolved around increasing the physical distance between soldiers and their enemies or targets from air campaigns in
World War II to the development of cruise missiles during the Cold War” (p. 16). This is, in essence, the conduct of warfare at a distance. In assessing the authors’ statement, the reader should consider it from the viewpoint of the United States Army, Navy and Air Army Forces (USAAF). From the Army perspective, there is no question that industrial-scale warfare increased the distance between soldiers and their enemies or targets during the twentieth century. Starting with trench warfare in World War I—where adversaries were in close proximity—one should take into account the subsequent rapid development of highly mobile warfare such as the blitzkrieg. From the Navy point of view the picture is less clear. For the USN submarine force, there was relatively little difference between the First and Second World Wars in the physical distance between sailors and their enemies. For the surface (“blue water”) navy, industrial-scale warfare introduced much greater distances between sailors and their enemies—especially in Pacific naval operations. In the case of the USAAF there was clearly a vast expansion in the distance over the century, particularly in counter-force operations. As international relations scholar Peter Singer summarized in the context of drone operations, “Going to war has meant the same thing for 5,000 years. Now going to war means sitting in front of a computer screen for 12 hours. In fact, direct human involvement has been reducing in modern warfare over time” (p. 16).

The authors point out that contributors to the debate on AWS—be they states, institutions, or defense manufacturers—invariably have a stake in defining autonomy in ways that advance their interests. They continue that defense companies often play up the sophistication and autonomy of their products in marketing and downplay them when scrutinized by organizations such as the UN on grounds of ethical use. Additionally, they make the important statement that the principle of proportionality allows civilians to be killed if their death is not deliberate or is justified by a proportionate response involving military necessity, that is, “the military effects outweigh the unintended consequences on non-combatants” (p. 45). AWS might even be ethically superior, as their use “would be ethically imperative if it contributed to protecting own combatants.... Armed drones are a prime example of a weapons system that has reduced the role of personnel on the battlefield” (p. 52).

In particular, the book examines the how the use of AWS has shaped and been shaped in normative terms by the experience (of both those deploying and receiving the effects) of the last two decades’ COIN in Iraq and Afghanistan. “The promise of ‘surgical’ strikes and the protection of US troops has turned drones into the most appropriate security instrument to counter terrorism abroad. AWS are considered especially suitable for casualty-averse risk-transfer war. This points to the important role AWS may play in democratic systems because they make the use of force appear more legitimate” (p. 53).

This outlook, one of casualty-averse “risk-transfer war,” appears to be a major element of the new way of war.[3] Outlined by international relations and politics professor Martin Shaw, the major features are that the principal risks of being killed (as a direct consequence of military action) are applied to enemy armed forces rather than civilians. In a historical sense, this is the transfer of risk from enemy civilians back toward the enemy military and appears to reverse (at least for Western campaigns) the long twentieth-century trend toward overwhelmingly civilian casualties. This is clearly of great significance for arguments about the legitimacy of war. Additionally, it uses local allies to take the risks and carry out actual fighting on the ground. This lack of direct control may lead to small “accidental” civilian massacres that require Western media management to uphold the legitimacy of the war in Western societies.

AWS, like all new technology, provoke changes beyond their existence as hardware, as the authors explain: “The emergence of new weapons
has always shaped the conduct of warfare and repeatedly given one party the edge over an adversary, most often in rather asymmetrical and limited campaigns. While introducing a new rifle model seemed a rather small step in the context of military innovation, particularly from the twenty-first century perspective, the political implications of the wars mentioned above were far-reaching, as they transformed the political landscape of alliances and borders, with new states emerging and others vanishing (p. 60). Perhaps one of the most consequential examples of this was the Manhattan Project, “motivated by the fear that Nazi Germany could develop a workable nuclear weapon and use it against its adversaries.” This commendable statement is based on the letter Albert Einstein sent to President Franklin Roosevelt (August 2, 1939) in which he warned that Nazi Germany was already at work on a nuclear weapon—a relatively little-known point in World War II historiography (p. 81). This process becomes even more unpredictable because new weapons are used “at the micro level by individuals, such as submarine commanders or military leaders and personnel in the First and Second World Wars” (p. 97). And on page 98 the authors go on, “In the case of submarine warfare, practices even had an impact on the implementation of international law, as the Dönitz trial [at Nuremberg] shows. This means that the micro level fed back into the macro level of law and policymaking.”

The authors present a comprehensive analytical study of AWS and its context in an innovative, pathbreaking academic work of exemplary quality that displays outstanding knowledge of military operations and their political implications. As noted earlier, the authors point out that AWS are surfacing as key technologies of future warfare. They deal extensively with AWS in the context of norms, values, philosophy, psychology, human-machine interaction, and public knowledge. Bode and Huelss address the general public (to enhance understanding of AWS), international relations scholars, and the academic community across a wide range of disciplines. With extensive useful footnotes, the book is amply sourced from both mainstream Western media like The Atlantic, The Guardian, and Der Spiegel, as well as international academic and scientific literature and official political records and policy statements.

On page 216 the authors present their coda: “We close our analysis by looking towards the future—not only in terms of changing academic conceptualizations of norms and norm emergence, but also by identifying practical insights that this scholarly analysis can contribute to the [domestic] political debate on AWS, norms and meaningful human control.”

Notes


