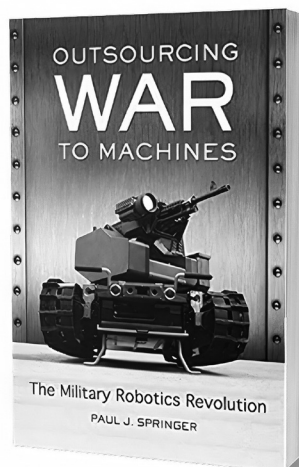


Outsourcing War to Machines: The Military Robotics Revolution

By Paul J. Springer

Reviewed by
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EXECUTIVE SUMMARY

Professor Paul J. Springer’s book *Outsourcing War to Machines: The Military Robotics Revolution* “seeks to provide context to the rise and deployment of military robotics. It raises issues with the legality and morality of using these advanced systems and critiques the ways in which they have been used in recent conflicts” (3). This includes, but is not limited to: discussion regarding some of the very first machines deserving the title of “robot,” case studies on robotic applications in the last few decades, speculation surrounding the role of military robotics in the future, and analysis of moral and ethical arguments concerning the use of lethal force by an autonomous system. In all, Springer leaves absolutely nothing out within these pages and provides an extremely thorough overview on the entire history of military robotics.

One minor issue with Springer’s book, however, is that the details and information are a little overbearing at times. As a reader interested in the robotics, I do not need several pages dedicated to crossbows and gunpowder, for example. They certainly supported the argument at hand but mentions such as those could very easily be shortened without any loss of understanding. Regardless, Springer’s superb historical insight provides an excellent foundation for higher-level discussion.

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REVIEW

Springer begins his discussion by defining key terms such as “robot,” “drone,” “autonomy,” “artificial intelligence,” etc., to reduce the likelihood of misconceptions or misinterpretations which is very help helpful, especially for readers who may not be familiar with such terms. The remainder of the first chapter involves a concise background of the war on terror—by far the most relevant conflict to military robotics. In all, the introduction is set up very nicely and effectively prepares the reader for the rest of the book.

In the following chapter, Springer introduces the concept of revolutions in military affairs (RMAs) which refer to any “fundamental transformation in the means or methods of conducting warfare” (24). For example, innovations such as the phalanx, gunpowder, and the atomic bomb all completely changed the battlefield in their own respective eras. Springer then argues that robots are quickly becoming the next great RMA and that those who fail to embrace it will fall short of those that do, brilliantly citing several historical examples to support his argument.

This second chapter is a perfect example of Springer exercising his incredible wealth of knowledge, while losing focus on the application of military robotics: the chapter itself is very well written with copious amount of information, but spends a little too much time on examples that date back to ancient Greek warfare. While this approach may be interesting to some readers, it may be distracting to those who are solely interested in learning about modern robotics.



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Structured in a very similar manner, Chapter Three provides an abundant amount of information dedicated to Ancient Egypt, Leonardo da Vinci, Nikola Tesla, and the Wright brothers. Albeit excellent historical summarization, the examples are once again a little excessive and not necessarily aligned with the purpose of the book as laid out in the introduction. The rest of the book, however, is very applicable to military robotics and covers topics ranging from morality and ethics to autonomous weapon systems employed today. Of particular note, Chapters Five and Seven discuss legal loopholes and malicious viruses, respectively, which were very informative and entertaining to read. Springer does warn that, as long as robotics are unregulated, certain individuals will hold an incredible amount of power. For example, the President of the United States can order the CIA to conduct drone strikes in the Middle East because the CIA is not bound by the Uniform Code of Military Justice nor do drones fall under the War Powers Resolution. In other words, technology appears to be advancing at a pace faster than the regulations surrounding it. This is just one of the many subtopics Springer covers in the book.

Stylistically, the author follows a very consistent organizational structure throughout *Outsourcing War to Machines*. This involves splitting chapters up into many subsections each with their own argument or topic sentence which he states directly. Then, the rest of each subsection contains a tremendous number of examples that ensures the reader understands the key point the author is claiming or the context of the situation. Finally, he restates the argument or topic sentence and moves on to the next subsection. At the end of each chapter, Springer ties everything back to the current state of military robotics. In all, the structure is very easy to follow and helps the reader digest the material.

CONCLUSION

Outsourcing War to Machines effectively summarizes the context and rise of military robotics all the way from ancient civilization to modern warfare. Even someone well-versed in this subject area can learn a lot from Springer's work. There is no doubt he conducted a lot of research to provide the most accurate information possible. The historical examples may be a redundant or excessive to some readers, but the book is very well organized and provides readers an excellent background to this latest revolution in military affairs. 🛡️

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