ADVANCE PRAISE FOR

THREE TWEETS TO MIDNIGHT
Effects of the Global Information Ecosystem on the Risk of Nuclear Conflict

"A gripping story of how social media can result in a nuclear catastrophe, either through a blunder or through the actions of a malignant provocateur. No issue could be timelier or more important, considering the profligate use of tweets today by the president and other government officials, and the need for deliberation in dealing with national security crises."

—**WILLIAM J. PERRY**, 19th US Secretary of Defense

"Highlights new and rising dangers that social media pose to managing any future great power crisis, and in the extreme to avoiding nuclear war. It is a must-read for policy makers, legislators, foreign policy experts, nuclear strategists, and indeed for any serious student of national security."

—**JAMES N. MILLER**, former US Under Secretary of Defense for Policy

"The next nuclear crisis will be tweeted. How decision makers cope with the increasing speed and volume of information during that crisis will weigh heavily on whether the world can avoid nuclear catastrophe. The authors in this volume brilliantly help us understand—and get ahead of—the challenges from today's information ecosystem."

—**KEITH PORTER**, President, the Stanley Center for Peace and Security

"We know that the new media environment has an impact on nuclear crises, but how and when does it matter? This pathbreaking volume assembles an impressive interdisciplinary lineup to explore these questions with new frameworks, new evidence, and new arguments. An important opening contribution to what is clearly a phenomenon that is here to stay."

—**VIPIN NARANG**, Associate Professor of Political Science at MIT and a member of MIT's Security Studies Program

Three Tweets to Midnight:

Effects *of the* Global Information Ecosystem *on the* Risk of Nuclear Conflict

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The Stanley Center for Peace and Security, the Hoover Institution, and the Center for International Security and Cooperation at Stanford are pleased to collaborate in supporting this scholarship and bringing forward our collective understanding of its profound implications for the future of journalism, nuclear weapons policy, and international peace and security.

Three Tweets to Midnight

Effects *of the* Global Information Ecosystem *on the* Risk of Nuclear Conflict

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Acknowledgments

This project began offline. Domestic and global political events in 2016 and 2017 shook loose much complacency about social media and their role in reshaping how the world interacts. While platforms such as Facebook and Twitter were once hailed as liberation technologies, scholars increasingly began to worry about how the rapid changes wrought by social media might also affect international security. An early example of the kinds of interactions made possible by the emerging global information ecosystem was the unprecedented and combative use of social media by the US president to directly talk about North Korea and its nuclear and missile programs. This raised the immediate question of how such communications would be interpreted in Pyongyang and whether direct, instantaneous, globally broadcast, and potentially escalatory rhetoric could make the outbreak of a catastrophic war with North Korea more likely.

Over an informal conversation in mid-2017 at Stanford University's Center for International Security and Cooperation (CISAC), the organizers of this project began to ask if nuclear crises, like the one brewing with the United States and North Korea, might be particularly susceptible to destabilizing effects from information driven through social media. Decisions on the use of nuclear weapons would be made under extreme stress, with imperfect information, potentially in just minutes, by a small group of advisers or a single decision maker. No decision would be more fraught, with millions of lives in the balance. Yet the psychology of it would be prone to leading decision makers to engage in heuristic thinking, leaving them vulnerable to emotional responses and misinterpretation.

How would 280-character missives be read during a nuclear crisis? How might the new information ecosystem, as reshaped by social media, affect leaders and publics before and during crises? And how might digital misinformation and disinformation affect the likelihood of international conflict?

This volume, and the two multidisciplinary workshops that informed it, were the product of a partnership between the Stanley Center for Peace and Security, the Hoover Institution at Stanford University, and CISAC.

The Stanley Center for Peace and Security hosted an exploratory workshop at its Strategy for Peace Conference in October 2017, the observations from which were then summarized in a briefing paper titled "Three Tweets to Midnight: Nuclear Crisis Stability and the Information Ecosystem."[1] For more in-depth study of the arguments surfaced at that workshop, the organizers commissioned a set of working papers and hosted a second workshop at the Hoover Institution in September 2018. This volume is the culmination of the two events and features the contributions of authors for the 2018 workshop.

Participants in those workshops provided invaluable insights that shaped the trajectory of this project. For their contributions and thoughtful arguments, the editors thank James Acton, Jeffrey Berejikian, Malfrid Braut-Hegghammer, Paul Edwards, Jennifer Erickson, Henry Farrell, Anya Fink, Matt Fuhrmann, Tom Glaisyer, Deborah Gordon, Robert Gorwa, Andy Grotto, Rosanna Guadagno, Brian Hanson, Peter Hayes, Colin Kahl, Jennifer Kavanagh, Rupal Mehta, Anna Péczeli, Steve Pifer, Keith Porter, Philip Reiner, Scott Sagan, John Scott-Railton, Lior Tabansky, Phil Taubman, Devon Terrill, Ben Valentino, Heather Williams, and Amy Zegart.

The editors give special thanks to Amy Zegart for her early thought contributions and support throughout this project. As a professor of political science, codirector of CISAC, and Davies Family Senior Fellow at the Hoover Institution, Zegart was uniquely well positioned to recognize an opportunity to invest in and contribute to an inno-

vative research project that aimed to address highly important policy questions that were of immediate relevance. Throughout the writing of this volume, the editors benefited from her questions, insights, and participation. In addition, we are grateful for the support of the Hoover Institution and, in particular, the Robert and Marion Oster National Security Affairs Fellows Program and the Lakeside Foundation in making this work possible by providing critical funding and meeting space. We also thank CISAC for providing the staff support that kept this whole enterprise moving. Herb Lin's work at CISAC on this project was also supported in part by the Carnegie Corporation of New York grant G-17-55292 (International Program), "For research, teaching, international engagement, and outreach in international security."

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We would also like to acknowledge the work of the *Bulletin of the Atomic Scientists*, whose iconic Doomsday Clock provided an inspiration for the front cover of our book. The clock was conceived in 1947 by the *Bulletin* as a means of conveying to humanity the organization's collective expert assessment of the risks posed by nuclear weapons. Each year, the Science and Security Board of the *Bulletin* (of which one of the editors, Herb Lin, is a member) updates the Doomsday Clock. As of the time of writing in 2019, the clock stands at two minutes to midnight, the closest it has been since 1953. We share the concern of the experts and staff of the *Bulletin* over the growing risk of nuclear conflict, which was a major motivation for the writing of this volume. That its title is *Three Tweets to Midnight* reflects creative license rather than any disagreement by the editors with the assessment of the Science and Security Board of the *Bulletin of the Atomic Scientists*.

Finally, we would like to be clear that the views expressed in this book are those of the editors and authors, and any remaining errors are ours alone.

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Notes

1. Stanley Center for Peace and Security, "Three Tweets to Midnight: Nuclear Crisis Stability and the Information Ecosystem," 58th Strategy for Peace Conference, January 2018, https://www.stanleyfoundation.org/resources.cfm?id=1646&title=Three-Tweets-to-Midnight:-Nuclear-Crisis-Stability-and-the-Information-Ecosystem.