CONTENTS

List	of Acronyms	vii
	roduction	1
	The Approach	9
	Definitions and Limitations	11
1.	The Security Dilemma	15
•	Overview	15
	International Relations, Anarchy, and the Security Dilemma	17
	The Security Dilemma and Intelligence	22
ν.	Conclusion: The Stakes of the Security Dilemma	28
2	The Intruder's View	31
۷.	Overview	31
	An Intrusion Model	33
	How Operational Incentives Drive the Cybersecurity Dilemma	41
	Conclusion: The First Pillar of the Cybersecurity Dilemma	48
3	The Defender's View	51
٥.	Overview	51
	A Network Defense Model	53
	How Network Intrusions Can Help Defenders	64
	Conclusion: The Second Pillar of the Cybersecurity Dilemma	72
4	. How Network Intrusions Threaten	75
	Overview	75
	Network Intrusions Can Enable Targeted and Powerful Cyber Attacks	77
	Network Intrusions Can Provide a Beachhead for Further Operations	81

CONTENTS

Network Intrusions Can Change the Conditions of Conflict	
and Competition	85
Network Intrusions Can Pose Major Counterintelligence Challer	nges 92
Conclusion: The Third Pillar of the Cybersecurity Dilemma	96
5. The Failure of Traditional Mitigations	101
Overview	101
Offense—Defense Balance	103
Offense—Defense Differentiation	110
Greed	113
Unit-Level Analysis	116
Conclusion: Reaffirmation, Not Mitigation	119
6. Information Distribution and the Status Quo	121
Overview	121
Information Distribution	123
An Uncertain Status Quo	130
Conclusion: New Variables, New Opportunities	138
7. Limitations, Objections, and the Future of the Cybersec	urity
Dilemma	141
Overview	141
Objection: Attribution is Impossible	143
Objection: The Cyber Threat is Not Existential	147
Objection: Cyber Capabilities are Unevenly Distributed	151
Conclusion: The Present and Future of the Cybersecurity Dilen	mma 155
8. Mitigating the Cybersecurity Dilemma	157
Overview	157
The Value of Baseline Defenses	158
Advancing Bilateral Trust	163
Contributions to System-wide Security	169
Establishing a Security Posture	178
Conclusion: Old Variables, New Mitigations	185
Conclusion: The Dangers of the Cybersecurity Dilemma	187
Notes	
Bibliography	
Acknowledgments	
Index	