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Holt, Thomas J. (2016). *Crime Online* (3rd ed.). Carolina academic press: Durham, NC.

Chapter 8: Taking Stock: The Current Status of Cyberstalking Research

Chapter 9: Terrorism and Technology: Operationalizing Cyberterrorism and Identifying Concepts

Chapter 10: The Erotic Highway

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CHAPTER 8: TAKING STOCK:
THE CURRENT STATUS OF
CYBERSTALKING RESEARCH

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CYBERSTALKING RESEARCH

- There has been a growth in research around cyberstalking, but there are many limitations
 - What are the commonalities between victims and offenders?
 - What conclusions can be drawn about predictors for perpetration and victimization?

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DEFINING CYBERSTALKING

- US model legislation defines stalking as:
 - "Any person who purposely engages in a course of conduct directed at a specific person and knows or should know that the course of conduct would cause a reasonable person to:
 - fear for his or her safety or the safety of a third person; or
 - suffer other emotional distress
- Is guilty of stalking" (National Center for Victims of Crime, 2007, p. 24).
- Cyberstalking may not need a fear criteria

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CONCEPTUALIZING STALKING AND CYBERSTALKING

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CYBERSTALKING STATISTICS

- The proportion of research on cyberstalking perpetration suggests that rates of offending among college students varies between 4.9 and 26.5% of samples
- Victimization studies have a much greater range depending on sample size
 - National samples vary between 24.7% and 26%
 - College samples range between 6.3 and 42.8%

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OFFENDER CHARACTERISTICS

- There are some common characteristics among cyberstalkers
 - White
 - Heterosexual
 - Use email as common point of contact
 - May have low self-control
 - May target individuals with whom they have had a prior relationship
 - May have emotional or sexual abuse experiences

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VICTIM CHARACTERISTICS

- There are several common characteristics identified in studies of cyberstalking victimization
 - Females
 - Young
 - Non-white
 - May spend time in online environments that expose them to motivated offenders

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FUTURE RESEARCH

- There is a need for substantial research to better understand cyberstalking
 - More research on the role of defining cyberstalking and fear
 - Better information on the psychological consequences of victimization
 - How to respond to victimization effectively?

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Chapter Nine - Terrorism and Technology:
Operationalizing Cyberterrorism and Identifying Concepts

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INTRODUCTION

- Lack of a universal definition of terrorism
- Globalization of commerce, information, and communications
 - Created a “technological house of cards”
- People will exploit vulnerabilities
 - Threats to individuals, corporations
 - More significant threats to government and society
- Greatest utility of Internet for terrorists is as a facilitator, not a trigger

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DEFINING TERRORISM

Dependent on the individual and social characteristics affecting defining body

- Cultural norms
- Religious ideology
- Institutional history
- Political/organizational agenda
- Stability of government
- Status of economic structures
- Situational placement or vulnerability
- Historical stratification

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DEFINING TERRORISM

- Definitions by government entities have traditionally required the demonstration of three elements
 - The use of violence against non-combatants
 - Political objectives
 - The use of fear as a coercive tactic
- Lack of international consensus
- State-sponsored versus individual motivations?
- Legal clarifications of sovereignty and extradition

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A WORKING DEFINITION?

- Compile using characteristics
 - Presence of violence
 - Political
 - Fear or terror
 - Threats
 - Anticipated psychological reactions
 - Premeditation or system operations
 - Tactical, strategic, or combative methodology

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SYNTHESIS OF ACADEMIC AND POLITICAL ETYMOLOGIES

- Violence
- Victimization of innocents
- Methodical or serial operations
- Advance planning
- Criminal character
- Absence of moral restraint

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SYNTHESIS OF ACADEMIC AND POLITICAL ETYMOLOGIES

- Political, social, or ideological motivation
- Attempt to garner attention
- Performed for audience
- Unpredictable/unexpected
- Intended to instill fear

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OPERATIONALIZING CYBERTERRORISM

Convergence of terrorism and cyberspace
The premeditated, methodological, ideologically motivated:

- Dissemination of information, facilitation of communication or attack
- Against physical targets, digital information, computer systems, and or computer programs
- Intended to cause harms to noncombatants and audiences
- For purpose of effecting change
- Includes propaganda, information, recruitment, training

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PROPAGANDA, INFORMATION DISSEMINATION, AND RECRUITMENT

- Fundamental to maximization of fear and longevity and growth of the group
 - Use of the Internet as a tool
- Organizational websites
 - Include vilification of a particular group
 - Justifications from patriotism to divinity
 - Visual aids to illustrate victimization
- Increasingly employed as medium of choice

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INTERNET AS A MEDIUM OF COMMUNICATION

- Terrorists use the Internet to communicate
- Online dialogue is cheaper
- International in scope
- More widely accessible
- Poses far less risk of discovery
- Increasingly rely on technology for social networking and communication

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TRAINING, RESEARCH, AND FACILITATION

Ability to adopt training modules

- Appropriate to resources available and current technological landscape

Globalization of communication, commerce and information has provided avenue for mass dissemination of rhetoric, propaganda, and instruction

- Offer tutorials to geographically distance participants
- Web-based learning
- Training, research, pre-mission planning and coordination

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Chapter 10: Industrial Control Systems and Cybercrime

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INDUSTRIAL CONTROL SYSTEMS (ICS)

Industrial Control Systems (ICS) have become a vital resource in the operation of nearly all critical infrastructure in the US and around the world

- Airports
- Electrical grids
- Power plants
- Pipelines
- Sewage

Vital to allow remote and cost-effective management of infrastructure equipment

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VARIANTS OF ICS

- There are three key forms of ICS
- SCADA systems
 - Serve as top-level management systems for both acquisition and control
- DCS
 - Serves primarily as a control system
- PLC
 - Allow for management and communication of local devices

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ICS VULNERABILITIES

- ICS were originally designed and implemented before the emergence of the Internet
 - They have not changed much making it possible to compromise the systems in various ways
 - Vulnerabilities and exploits used together
- There are three forms of vulnerabilities present in ICS
 - Policy and Procedure
 - Platform
 - Network

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ICS ATTACK THREATS

There are multiple groups that may engage in attacks against ICS

- Leisure cybercriminals
- Industrial spies
- Foreign intelligence services
- Nation states
- Disgruntled insiders
- Criminal groups
- Phishers
- Spammers
- Spyware authors

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ICS INCIDENTS

- There have been various attacks against ICS over the last few decades
 - US compromise of Russian Pipelines in Siberia
 - Worcester Airport Hack
 - Queensland Sewage Hack
 - The Russia/Estonia Conflict
 - Stuxnet

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CRIMINOLOGY AND ICS

- There is minimal research applying criminological research techniques to ICS
 - Typologies of offenders
 - Organizational composition of offenders
 - Attack techniques

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FUTURE RESEARCH

- It is difficult to research ICS attacks from criminological perspectives due to the lack of data in this area
 - Rational Choice and Situational Crime Prevention may apply to ICS attacks though further study is needed
 - Simulation data may also help
 - Trend analyses are also valuable
 - Need for research on the overlap between virtual and real attack vectors

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