

# The Crisis in Physical Security Education

Janie A. Enter, M.S., Ed.S.  
Eddie G. Bitzer, M.A.  
Roger G. Johnston, Ph.D., CPP

Vulnerability Assessment Team  
Los Alamos National Laboratory  
505-665-0756 [volcano@lanl.gov](mailto:volcano@lanl.gov)  
<http://pearl1.lanl.gov/seals>



## Definition of Physical Security

Protecting valuable tangible assets from harm, or using physical methods to protect intangible assets.

Tangible assets can include, for example, people, equipment, buildings, cargo, money, weapons, museum artifacts, consumer products, food and drugs, medical supplies and equipment, chemicals, hazardous materials, etc.

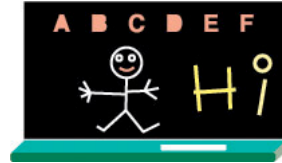
Intangible can include, for example, computer data, software code, communications, trade secrets, intellectual property, medical histories and other sensitive personnel data, instrument calibration, sterility of medical supplies/equipment, etc.

The "harm" we wish to avoid can include theft, sabotage, tampering, destruction, vandalism, espionage, or counterfeiting.

Physical methods for protection can include guards, guns, fences, access control, biometrics, closed-circuit TV cameras, intrusion detectors, locks, safes, vaults, and tamper-indicating seals...plus a lot of other things.

## What is the Crisis in Physical Security Education?

- The field has an identity crisis - it is more than just guns, guards, & gates
- Training
  - Is not Education nor Research
  - Expensive in the private sector
  - Shoehorn fit - not what is needed
  - How are trainers qualified/certified?
- No standardized security training or curriculum or standards
- Physical security requirements vary greatly from state to state
- Getting a credible degree in Physical Security is next to impossible



## More Worries

- Not very attractive to young people, females, the best & the brightest--**do they even know the field exists?**
- All encompassing field - highly multi-disciplinary - requiring expertise in engineering, computer science, sociology, psychology, management, economics, communication, and law
- Needs research in all these disciplines
- Few peer-reviewed, scholarly journals, or R & D conferences
- Lots of snake oil salesmen & questionable training organizations



## **If that isn't enough to keep you up at night...**

Department of Treasury – Feasibility Study of Proposed Security Training Initiative (2000)

**“Currently, there exists no single entity offering standardized training and a curriculum specifically designed to provide an in-depth understanding of available technology, methodologies, and best practices to plan and implement effective physical security programs.”**

**“Further, no single universally recognized set of concepts, standards or controls exist that appropriately address today's more complicated security environment.”**

**“Additionally, the quality of training received by physical security specialists varies greatly from agency to agency.”**

## **DHS Interactions**

- dhs.gov - confusing, convoluted, redirects to press room, links do not work
- Lack of responsiveness to inquiries
- First contact did not know what physical security is
- Preparedness Directorate, Office of Grants and Training
- Focus – Training of first responders, state requests
- Education is not an “issue area”



## And once inside DHS...



### **Information Analysis and Infrastructure Protection Department:**

DHS is cognizant of variability in performance and quality of training in Physical Security

DHS acknowledges:

- No consistent certification regime
- A serious lack of standards in physical security education

## Just what is out there in academia?

Lancaster and Cross pulsed system in April, 2004 (nearly 2 years ago)

Only accredited degree programs in regionally accredited institutions

Does not include certificate programs or training programs, seminars, or workshops

### **Two general areas**

Colleges and Universities

Distance Education Programs



## Colleges & Universities

### Findings:

Forty eight colleges and universities offering 71 degree programs, ranging from AA to Ph.D. Most degrees offered at MS level (32/71 = 45%). More MAs than BAs.

### Degree Focus:

Computer (45/71 = 63%)  
First Responders (8/71 = 11%)  
Forensics/Investigations (2/71 = 3%)  
Psychology (2/71 = 3%)  
General/Security Management/Manager (14/71 = 20%)

Where is Physical Security??????



## Distance Education

Twelve Distance Education Programs offering 15 degrees ranging from AS to MJA. BS (5/15 = 33%), MS (6/15 = 40%)

### Degree Focus:

Computer (12/15 = 80%)  
General (3/15 = 20%)

Where is Physical Security??



## Vulnerability Assessment Team Recommendations

- Continue to keep bugging DHS, particularly in the Information Analysis and Infrastructure Protection Department
- Encourage our best and brightest to pursue degrees in Physical Security
- Summer Programs (including R&D internships) for middle & high school students, undergraduates, teachers, and professors
- Seminars on physical security research & technologies for security managers and practitioners
- Magnet high school focused on Homeland Security in Maryland

## Security Research

Clearly the state of education in the field of physical security is poor.

But what is the state of the research in the field?

Only two PhD level programs related to the field of physical security could be found

Peer-reviewed research journals dedicated to physical security are virtually nonexistent

## Analysis of Security Positions

What makes a good seal inspector?

Do successful inspectors do things differently than poor inspectors?

Analysis of this type of work is necessary to adequately answer these questions:

Eye tracking studies  
Analysis using signal detection theory



## Turnover Among Guards

A significant problem for a variety of guard positions

Estimated at 100%-300% annually among contract guards

Guard quality, partially as a result of turnover, was a major consideration for the creation of TSA

Many seal inspectors work under many of the same conditions as traditional guard forces and may experience similar levels of turnover or burnout

## Reducing Guard Turnover

### Pre-hire turnover reduction tools

- Realistic Job Previews
- Personality Testing
- Biodata

### Post-hire turnover reduction tools

- Organizational socialization training
- Job design
- Management training

## Organizational Security Culture

Organizational culture and organizational climate have repeatedly been shown to positively enhance desired work behaviors

Discussions have recently turned to applying these constructs to the field of security.

Attention has even reached the highest levels of government.



## Organizational Security Culture

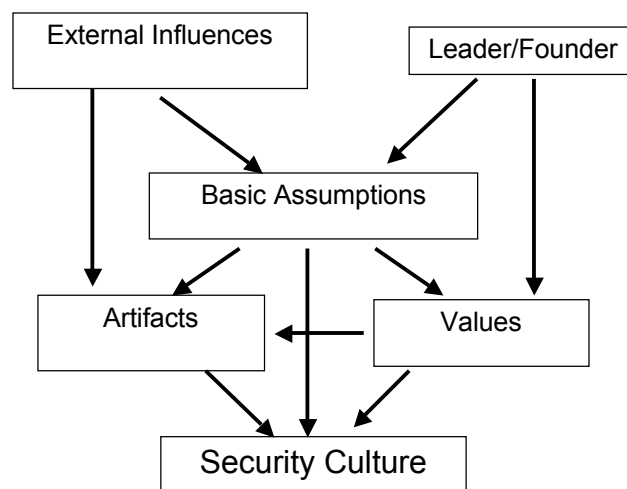
Unfortunately, actual research on the topic has been limited:

An extensive review of the literature revealed only two papers that attempted to put forth comprehensive explanations, and both had significant flaws

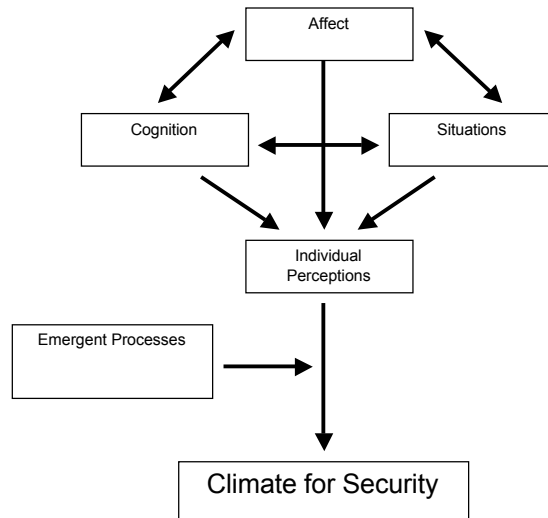
Actually two constructs:

Security culture  
Climate for security

## Organizational Security Culture



## Organizational Security Culture



## Organizational Security Culture

