

Social Psychology & INFOSEC

CSH6 Chapter 50

“Using Social Psychology to Implement Security Policies”

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Topics in CSH6 Ch 50*

- Rationality is Not Enough
- Getting Your Security Policies Across
- Encouraging Initiative
- Group Behavior

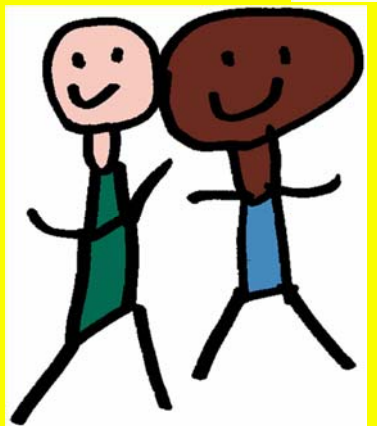


* NOTES:

- 1) Detailed, narrated lectures on organizational psychology are available at <http://www.mekabay.com/courses/academic/norwich/msia/index.htm> as a complete lecture (15.7MB Zipped) or in parts.
- 2) This presentation goes beyond Ch 50 in some respects.

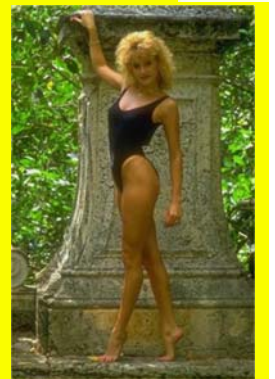
Rationality is Not Enough

- The Schema
- Theories of Personality
- Attribution Theory
- Social Cognition: Forming Judgments
- Intercultural Differences
- Framing Reality



The Schema

- Cognitive framework
- What allows observations to make sense
- We interpret observations in context
 - Imagine that your colleague appears at work dressed like this:
 - But what if your colleagues is at the company swimming pool?
 - Results in radically different interpretation from schema for the business meeting. . . .
- In security, schema for *normal politeness* conflicts with schema for *secure behavior*



Theories of Personality

- Interpersonal conflicts can interfere with security policy
- *Beware rigid categories* for framing behavior in terms of fixed personality patterns
 - Extroversion / agreeableness etc.
- Especially important not to value one personality style above another
 - People of all styles can contribute constructively to organization
 - Perceptions and expectations account for many conflicts
- *Role-playing exercises* very helpful
- Listen carefully to people's expressions of *feelings* as well as of *opinions*



Attribution Theory (1)

- How people explain their own and others' behavior
- Weiner's classification:

	Stable	Unstable
Internal	Dispositions; traits; level of ability or intelligence	Effort; mood; physical state
External	Degree of task difficulty; env helps/hindrance	Good/bad luck; opportunity; transient situations

Attribution Theory (2)



- How we explain behavior
- Fundamental Attribution Error
 - ❑ Star Trek's Leonard Nimoy is really like the character he portrays (Mr Spock)
- Actor-Observer Effect
 - ❑ What I do is a reasonable response to the situation but what you do is in your nature
- Salience
 - ❑ What stands out is perceived as most important even if it isn't



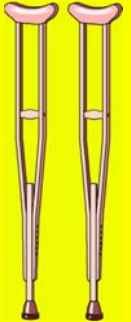
7

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Attribution Theory (3)



- Self-Serving Bias
 - ❑ If I succeed it's because of how good I am, but if I lose it's not my fault
- Self-Handicapping
 - ❑ If I expect to fail I'll make sure there's a good excuse
- Depressed People
 - ❑ If I lose it's because of how bad I am, but if I succeed it's not to my credit



8

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Attribution Theory: Implications



- Leader and others: remember not to pigeon-hole someone
 - ❑ E.g., "He's always _____"
- Reverse situation – think about explanations for perplexing or objectionable behavior
 - ❑ "If I were behaving that way, it would be because _____"
- Challenge unthinking reliance on salience – question assumptions about causality
 - ❑ "Why should the fact that he limps make a difference to _____?"



9

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Social Cognition: Forming Judgements



1. Schemas influence perception
2. Decision-making usually includes only a small subset of available information
3. Language influences perception
4. Reasoning is only a small part of forming judgments or opinions



10

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Inadequate Sampling



- Judgments are often based on inadequate samples
- Early, negative, information weighted heavily
- The *availability heuristic* can lead to errors in judgment
 - ❑ What's easy to remember weighs too heavily in decision
 - ❑ Anecdotal evidence inappropriately strong



11

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Inadequate Sampling (cont'd)



THEREFORE

1. Provide decision makers with *powerful arguments first*
2. Ensure there's lots of *striking, memorable evidence* in presentation
3. Explicitly *challenge* incorrect intuition, preconceptions, conclusions



12

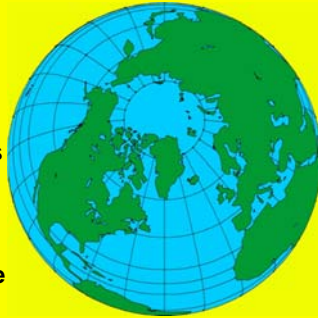
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Intercultural Differences



- International differences can lead to
 - ❑ Misunderstandings
 - ❑ Conflicts

- History, interpretation can be different; e.g.,
 - ❑ Afghani Taliban forced non-Muslims to wear badges in public
 - ❑ So how *might* a particular Hindu refugee from Afghanistan feel in the USA being forced to wear a badge to work?



- DISCUSS such problems rather than dismissing them

13

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Framing Reality



- Shift perception of reality
- Expand range of experience
- Give real-world examples
- Provide opportunities for role-playing
- Take time necessary to shift corporate culture
- Keep security at forefront of awareness
- Address feelings of participants

14

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Getting Your Policies Across: Effective Communication



What influences pace of change:

- Audience/Listener variables
- Channel variables
- Communicator/Presenter variables
- Message variables



For narrated lectures on effective communications, see

LEADERSHIP parts 3 and 4 on

<http://www.mekabay.com/msia/public/index.htm>

15

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Beliefs and Attitudes



- **Belief:** cognitive information without affect (feelings)
 - ❑ "The operators are responsible for tape mounts."



- **Attitude:** evaluation or emotional response
 - ❑ "The */\$&! operators are supposed to be responsible for tape mounts!"



- **Cognitive dissonance:** incompatible beliefs, attitudes or behavior
 - ❑ "I am an honest person – *but* I have taken home three dozen blank CD-RW disks this month from the company stockroom."

16

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Beliefs and Attitudes

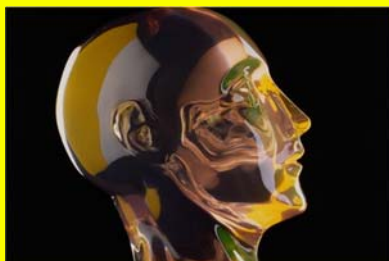


- Before attempting to change beliefs and attitudes, study what they are
 - ❑ Interviews
 - ❑ Focus groups
 - ❑ Surveys

- Use language carefully
 - ❑ Positive terms for desired end-point

- Encouragement is effective
 - ❑ Even minor praise, smile can shape beliefs and attitudes

- Allow time for change – weeks at least



17

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Beliefs and Attitudes (cont'd)



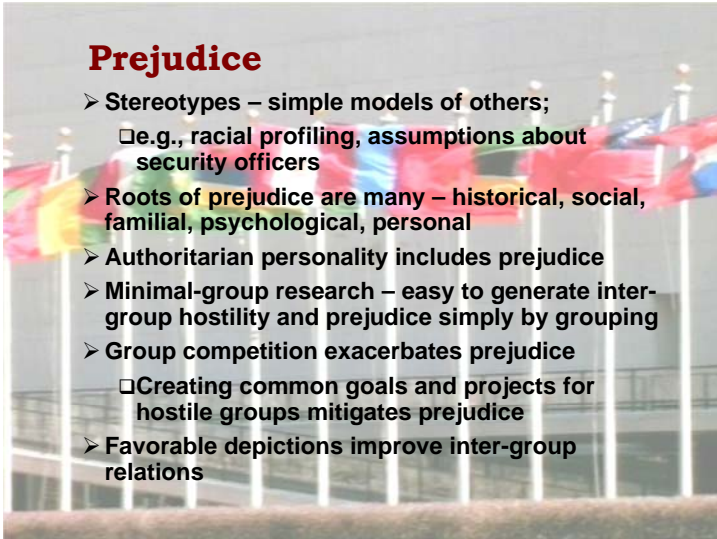
- Suggestions for security group:
 - Explore current beliefs and attitudes towards security
 - ❑ Identify areas of conflict, negative affect
 - ❑ Correct erroneous beliefs fast
 - ❑ Explore why some policies are successful
 - Provide consistent pro-security messages to avoid dissonance
 - ❑ E.g., managers should not ignore policies
 - Rewards more effective than punishment
 - ❑ Encouraging positive attitudes & behavior

18

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Prejudice

- Stereotypes – simple models of others;
 - ❑ e.g., racial profiling, assumptions about security officers
- Roots of prejudice are many – historical, social, familial, psychological, personal
- Authoritarian personality includes prejudice
- Minimal-group research – easy to generate inter-group hostility and prejudice simply by grouping
- Group competition exacerbates prejudice
 - ❑ Creating common goals and projects for hostile groups mitigates prejudice
- Favorable depictions improve inter-group relations



Encouraging Initiative

- Prosocial Behavior
- Conformity, Compliance and Obedience



20

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Pro-Social (Helpful) Behavior

- Acting helpfully requires 4 steps:
 - Notice problem
 - ❑ Need awareness
 - Recognize as emergency
 - ❑ Need training
 - Take responsibility for action
 - ❑ Need climate for responsible action
 - ❑ No worry about looking foolish
 - Decide on action
 - ❑ Sound training, good policies



21

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Pro-Sociality (cont'd)

- Bystander Effect
 - ❑ Larger groups have slower reaction time
 - ❑ Diffusion of responsibility
 - ❑ Uncertainty about social climate
- Counter bystander effect using rewards for responsible behavior
 - ❑ E.g., reporting security violations
 - ❑ Challenging unbadged strangers

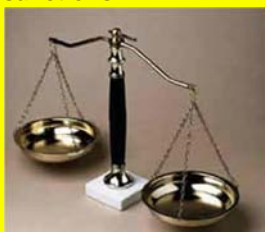


22

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Pro-Sociality (cont'd)

- Cost-benefit analysis
 - ❑ Make prosociality low cost / high gain
 - ❑ Provide hotline for security violations
 - ❑ Allow anonymity in reports
- Make failing to support policy expensive
 - ❑ Personnel policies: clear sanctions
 - ❑ Performance review
 - ❑ Possible dismissal

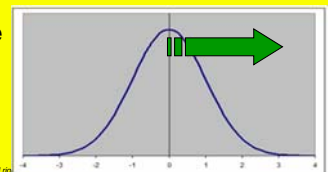


23

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Conformity, Compliance and Obedience

- Shift normative values towards goal
 - ❑ Express expectation of cooperation – “We”
- Group solidarity increases conformity
 - ❑ Group exercises, games, teamwork
 - ❑ If using contests, mix up the teams
- Outliers are especially important
 - ❑ Both enthusiasts and resisters
- Norm of reciprocity
 - ❑ Give a little, get a little
- Foot in the door
 - ❑ Get a little, get more



24

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Group Behavior

- Social Arousal
- Locus of Control
- Group Polarization
- Groupthink



25

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Social Arousal

- Large groups cause "social arousal"
 - ❑ Increased awareness of self and others
 - ❑ Facilitates *well-learned* habits
 - ❑ *Interferes* with *poorly-learned* habits
- Therefore *avoid large groups* for early security training
- Provide individualized learning as major tool



Locus of Control



- People work better when they feel in control
 - ❑ Able to affect outcomes
 - ❑ Considered by decision-makers
 - ❑ Listened-to
- Experimental evidence
 - ❑ Teams working in noisy environment
 - ❑ Patients in convalescence homes

27

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Locus of Control (1)

Locus of Control Group 1



28

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Locus of Control (2)

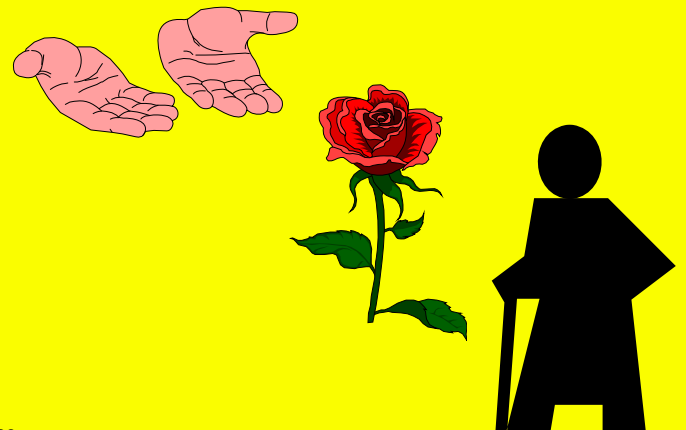
Locus of Control Group 2



29

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Locus of Control (3)



30

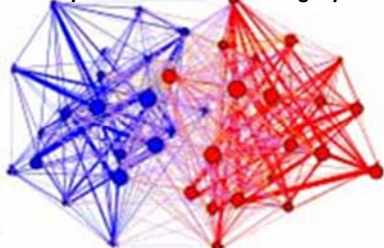
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Group Polarization



- Groups take on more extreme positions than any one member would
- E.g., can decide to take more risks (or fewer) than reasonable
- Emphasize one-on-one discussions to counter polarization
- Re-evaluate group decisions after enthusiasm has cooled

Group Polarization in the Blogosphere



From http://www.zonaeuropa.com/20050312_1.htm

31

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Groupthink



- Desire for social cohesion can lead to flawed thinking
 - ❑ Reject contrary evidence
 - ❑ Condemn anyone questioning consensus
 - ❑ Protect leader against "disturbing" views
- Factors increasing likelihood of groupthink
 - ❑ Authoritarian leader
 - ❑ Pre-existing agenda
 - ❑ Rejection of debate
- Should fight groupthink at all levels

Challenger:
January 28, 1986



32

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Review Questions (1)



1. How does the schema affect information assurance?
2. How can faulty interpretations of personality interfere with IA practitioners' ability to work effectively in an organization?
3. How do unsophisticated explanations of behavior interfere with effective security administration?
4. What is meant by "making security part of the corporate culture"?
5. Discuss three key elements for changing employees' schemas to improve receptivity to security policies.
6. Why is it valuable to evaluate current beliefs about security issues (explain with respect to cognitive theory).

33

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Review Questions (2)



7. What are the most effective mechanisms for motivating better attitudes toward security and greater compliance with security policies?
8. Analyze the case of the Hershey's Kisses on the keyboard.
9. Name and define the four types of variables affecting the effectiveness of communications designed to change attitudes.
10. Explain how each of the four communications variables can be optimized for effective attitude change in security training.
11. How can one encourage employees to take the initiative in responding to security breaches and reporting questionable behavior?

34

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Review Questions (3)



12. How does team spirit influence the work of IA trainers?
13. Why should IA trainers and security personnel pay attention to outliers?
14. How does the norm of reciprocity play a role in security policy efforts?
15. What is the significance of the "foot-in-the-door" technique for security training and awareness efforts?
16. When should security training be offered to large groups and when to small groups? Why?
17. What is the meaning of "locus of control" for security efforts?
18. How can one avoid the dangers of group polarization and groupthink in security training and awareness efforts?

35

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Optional Homework



- For 5 points, submit an essay of 100-200 words
 - ❑ Bring to light an article illustrating any principle in the chapter on Social Psychology and INFOSEC
 - ❑ Do some research in the Kreitzberg Library databases, Google Scholar, and the WWW
 - ❑ Put your summary in NUoodle Class Discussion forum
 - ❑ You may refer to a page number in the chapter or to a slide number in the PPT file to point out where the topic is mentioned.
 - ❑ Be sure to provide a complete reference to your source so others can find and read it.
- For up to 5 points per response, comment constructively on other students' postings on these social-psychology illustrations.

36

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