A Socio-Technical Study to *Trustworthiness* in Virtual Organizations

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Outline

Conceptualizing “The Gap”

Problem-based Research Questions

Theoretical Framework

A Socio-Technical Research Design

Data Analysis

Discussions
Robert Hanssen

From Wikipedia, the free encyclopedia

For those of a similar name, see Robert Hanson (disambiguation).

Robert Philip Hanssen (born April 18, 1944) is a former FBI agent who spied for Soviet and Russian intelligence services against the United States for more than 20 years. Despite the fact that he revealed highly sensitive security information to the Soviet Union, federal prosecutors agreed to not seek the death penalty in exchange for his guilty pleas to 15 espionage and conspiracy charges.[1] He is serving a life sentence in solitary confinement for 23 hours a day at the Supermax Federal Penitentiary in Florence, Colorado. [2]

Hanssen was arrested on February 18, 2001, at Foxstone Park[3] near his home in Vienna, Virginia, charged with selling American secrets to Moscow for more than $1.4 million in cash and diamonds over a 22-year period.[4] On July 6, 2001, he pleaded guilty to 15 counts of espionage in federal court. [5][6] He was subsequently sentenced to life in prison without parole. His activities have been described as "possibly the worst intelligence disaster in US history". [7]

Robert Hanssen

Born April 18, 1944 (age 64)
Chicago, Illinois, United States

Alias(es) Ramon Garcia, Jim Baker, G. Robertson, "B"

Charge(s) Violations of the Espionage Act
Various betrayals of CIA sources

- Vitaly Yurchenko was a KGB officer in the Fifth Department of the Directorate K. He defected to the US only to later repatriate to the Soviets. Ames was privy to all the information that Yurchenko gave to the CIA, and was able to report all the information Yurchenko handed over to the KGB which allowed easy cover-ups of lost information. [3] Yurchenko returned to the Soviet Union in 1985 and was re-assigned to a desk job within the FCD, a reward for helping to keep Ames' spying a secret.[4]

- In the mid-1980s, Dmitri Polyakov was the highest ranking figure in Soviet military intelligence (GRU) giving information to the CIA. He was executed in 1988 after Ames exposed him. [5] Many agree he was the most valuable of the assets compromised by Ames. A CIA official said of Polyakov, "He didn't do this for money. He insisted on staying in place to help us." [6]

- Sergey Fedorenko was a nuclear arms expert assigned to the Soviet delegation to the United Nations. In 1987, Ames was assigned to handle him, and Fedorenko betrayed information about the Soviet missile program to Ames. The two men became good friends, hugging when Fedorenko was about to return to Moscow. "We had become close friends," said Ames. "We trusted each other completely." [12] Ames was initially hesitant to betray his friend, but soon after handing over the majority of the information decided that he would also betray Fedorenko because "do a good job" for KGB he should really tell them every secret he knew. [10] Back in the USSR, Fedorenko used political connections to get himself out of trouble. Years later, Fedorenko met his friend Ames for an emotional reunion over lunch and promised to move to the US for good. Ames promised to help. Shortly after lunch, Ames betrayed him to the KGB for a second time. [10] Fedorenko escaped arrest, defected, and is currently living in Rhode Island. [13]
Boeing Employee Charged With Stealing 320,000 Sensitive Files

A quality assurance inspector faces 16 charges of computer trespass for allegedly loading sensitive data on his thumb drive and walking out with it over the course of more than two years.

By Sharon Gaudin
InformationWeek
July 11, 2007 03:50 PM

A disgruntled Boeing employee was charged Tuesday with 16 counts of computer trespass for allegedly stealing more than 320,000 company files over the course of more than two years and leaking them to The Seattle Times.

Gerald Lee Eastman, who was a quality assurance inspector at Boeing at the time of the thefts, is slated to be arraigned on July 17, according to a spokesman for the King County Prosecuting Attorney's Office. He faces up to 57 months in prison if convicted on all counts.

According to a criminal complaint, a search of Eastman's home found computers and storage devices containing more than 320,000 pages of "very sensitive" documents related to Boeing's business operations. Boeing estimated in an arrest report that if only a portion of the stolen documents were given to competitors, it could cost the company between $5 billion and $15 billion.

http://web.syr.edu/~smho/
Problem Gap

2007 CSI Survey, financial losses caused by computer crime soared to $67 million in 2007, up from $52.5 million in 2006 (Richardson, 2007). Among those losses, nearly 37 percent of respondents attributed more than 20 percent of losses to be caused by insiders.

http://web.syr.edu/~smho/
Insider Threats refers to situations where a critical member of an organization behaves in a way that is against the interests of the organization, generally in an illegal and/or unethical manner.

CERT Insider Threat Study (2004-2005) indicated that a person given high social power but with insufficient trustworthiness can create a single point of trust failure (Randazzo, 2004; Keeney, 2005).

But, the real problem lies in A’s integrity (characteristics) influenced by either internal or external factors
Problem-based RQ

What changes of behaviors can reflect a downward shift in the trustworthiness of a critical member in a virtual or physical organization which might signal possible insider threats?

http://web.syr.edu/~smho/
To illustrate, in a working relationship between Bob (subordinate) and Alice (supervisor):

In regular situation (X₁), Bob trusts and depends on Alice for a reimbursement to approve. In this relationship of dependence, Bob is vulnerable to Alice. There is a perceived risk in order for Bob to trust Alice.

In a situation (X₂) where Alice not only does not acknowledge Bob’s request for reimbursement but further avoids contact with Bob, Bob then assigns Alice’s behavior with either external or internal causality.
Attribution Theory

to understand how people attribute (or assign) the causes of others’ behaviors (Heider, 1958 & 1944).
Attribution Theory dichotomizes behavioral causes to either internal or external.
The basic observational “setting” contains four major variables: the observer (Bob), the target (Alice), the situation ($X_n$) and the time ($T_n$).
Kelley (2003) claims that trust can be attributed in certain interpersonal situations. 3 principles: distinctiveness, consistency & consensus (Kelly, 1973).

![Diagram of Attribution Theory]

- Observation
- Interpretation / assigning meaning
- Attribution of causes

Trustor $B_n$

Communication

Bob

Information Behavior

words

actions

Perceived Trustworthiness

Alice

Intention

Org. communications

Observation/attribution

Trustee A

School of Information Studies
Trust

Trust is an estimation, an opinion, an evaluation, or a belief, that trustor Bob has concerning trustee Alice (Meyerson, Weick, & Kramer, 2006 & 1996). Trust refers to both a belief and a behavior of Alice (Shoda, Mischel, & Wright, 1994).

This generalized expectancy of Alice depends on the degree to which the correspondence between communicated intentions and behavioral outcomes remains reliable and consistent (Rotter, 1967, p. 652).

An antecedent of trust is the establishment of Bob’s belief about the trustworthiness of Alice (Mayer and Davis, 1999, p. 124).

![Diagram showing the process of trust establishment]

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**Bob**

- Trustor $B_n$
- Communication

**Alice**

- Intention
- Perceived Trustworthiness
- Information
- Behavior
- Words
- Actions

**Bob's Perception**

- Observation
- Interpretation / assigning meaning
- Attribution of causes

**Alice's Communication**

- Org. communications
- Observation/attribution

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Trustworthiness

Trustworthiness is an attribute or a quality of a person. Hardin (1996) believed that “trustworthiness is the perceived likelihood that a particular trustee will uphold one’s trust (p. 28)”. In a situation of complexity, Alice can be entrusted to act de facto on Bob’s behalf (Hardin, 2002, p. 30); “trustworthiness is a moral matter” (p. 36).

Tyler (1988) discovered that trustworthiness can serve as a strong predictor of the fairness in authorities’ decision-making. Tyler (1996) found that competence of the authority is not found significantly correlated to Bob’s attribution of Alice’s trustworthiness (Tyler & Degoey, 1996, p. 344).
Three Observation Principles in Attribution Theory

**Distinctiveness:** if Alice acts differently, Bob would attribute it as an external or situational causality. If Alice acts regardless how situations change, it is an internal or dispositional attribution.

**Consistency** between Alice’s words and actions was evaluated: it’s an internal attribution if a reliable behavior (words vs actions) is observed over time.

**Consensus:** if there is a high consensus about Alice’s behavior, it’s an external attribution; it’s internal attribution if no consensus is obtained.
Injecting baits

G = Game master
M = Experimenter / Monitor / Score System
A = Team Leader
B\textsubscript{n} = Team Players / Observers
### 2x2x3 Factorial Design

<table>
<thead>
<tr>
<th>Treatment Setting</th>
<th>Time (T1)</th>
<th>Time (T2)</th>
<th>Time (T3)</th>
<th>Time (T1)</th>
<th>Time (T2)</th>
<th>Time (T3)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Increase group sensibility (S₁)</td>
<td>Group A Average (n_A=6; n_{TAR}=1)</td>
<td></td>
<td></td>
<td>Group C Average (n_C=6; n_{TAR}=1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decrease group sensibility (S₂)</td>
<td>Group B Average (n_B=4; n_{TAR}=1)</td>
<td></td>
<td></td>
<td>Group D Average (n_D=5; n_{TAR}=1)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Pilot Study, IRB#07-276, Fall 2007
Full-Scale, IRB#07-276, Fall 2008

http://web.syr.edu/~smho/
The “Leader’s Dilemma” Game

Participants played appr. 1-hour brain teasers and worked as a team to win the prize, 1st place. The online game award system utilizes a micro-payment system, MerryBux (X). X600 was used to award the team, but X200 was given additionally to the target leader.
My hypotheses

Group Sensitivity

Group Consensus

Distinctiveness In Actions

Consistency Words vs Actions

Integrity

Perceived Trustworthiness

Competence

Benevolence

Actual State

H1

H2

H3

H4

H5

H6

H7

H8

H9

H10

H11

H12

http://web.syr.edu/~smho/
Hypothesized Situations in Full-scale Experiment

Y
Perceived Trustworthiness

High
Medium
Low

Day 1  Day 2  Day 3  Day 4  Day 5

Group 2
Group 1
Group 4
Group 3

http://web.syr.edu/~smho/
### Data Schema

<table>
<thead>
<tr>
<th></th>
<th>Front-end</th>
<th>Attribution</th>
<th>Back-end</th>
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<td>VO operation /</td>
<td>Target’s trustworthiness</td>
<td>Target’s trustworthiness</td>
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<td>Comm. (archived)</td>
<td>Comm. (archived)</td>
<td>(observations)</td>
<td>(discussion)</td>
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<tr>
<td>Chats (syn)</td>
<td>√</td>
<td></td>
<td>√</td>
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</tr>
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<td>privacy)</td>
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<td>Emic</td>
<td>Pseudo</td>
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<tr>
<td>Survey (quant.</td>
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<td>scale)</td>
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<td>Survey (quali.</td>
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<td>semi-structure Qs</td>
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<tr>
<td>F2F Retrospective Interview</td>
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<tr>
<td>Participant Observations</td>
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<td>Etic</td>
<td></td>
</tr>
</tbody>
</table>

But, the real problem lies in A’s integrity (characteristics) influenced by either internal or external factors.

B’s expectation of A’s ability/competence as a result of observing A’s behavior in org. communications over time.

Borg

Alice’s social network

Bob₁

Bob₂

Bob₃

Bobₙ

Unknown
Data Analysis

Theoretical Framework

Survey Data (emic ratings)

Coding Scheme Development (etic views)

Data Fusion Chronologically (daily & end-of-game)

Data Fusion Chronologically (chat, blog, email + f2f)

Theme-based Scenarios Extractions

8 data analysts / raters

Subjective Attributions of Trustworthiness

Hypotheses Testing

Reliability Statistics

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<tr>
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<tr>
<td>( \alpha = 0.986 )</td>
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Case Processing Summary

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<th>Cases</th>
<th>N</th>
<th>%</th>
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<tbody>
<tr>
<td>Valid</td>
<td>98</td>
<td>100.0</td>
</tr>
<tr>
<td>Excluded a</td>
<td>0</td>
<td>.0</td>
</tr>
<tr>
<td>Total</td>
<td>98</td>
<td>100.0</td>
</tr>
</tbody>
</table>

a. List-wise deletion based on all variables in the procedure.
### Unintentional Constant Stream of Administrative Errors

A person’s leadership and management style is not a strong indicator to insider threats.

<table>
<thead>
<tr>
<th>No#</th>
<th>Leadership / Mgmt</th>
<th>m</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td>A1</td>
<td>LEAD-A1</td>
<td>4.25</td>
<td>0.46291</td>
</tr>
<tr>
<td>A3</td>
<td>LEAD-A2</td>
<td>4.5</td>
<td>0.75593</td>
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<tr>
<td>B1</td>
<td>LEAD-B1</td>
<td>4.75</td>
<td>0.46291</td>
</tr>
<tr>
<td>B2</td>
<td>LEAD-B2</td>
<td>4.875</td>
<td>0.35355</td>
</tr>
<tr>
<td>B4</td>
<td>LEAD-B3</td>
<td>4.625</td>
<td>0.51755</td>
</tr>
<tr>
<td>C1</td>
<td>LEAD-C1</td>
<td>4.625</td>
<td>0.51755</td>
</tr>
<tr>
<td>C2</td>
<td>LEAD-C2</td>
<td>4.875</td>
<td>0.35355</td>
</tr>
<tr>
<td>C4</td>
<td>LEAD-C3</td>
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<td>0.53452</td>
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<tr>
<td>C8</td>
<td>LEAD-C4</td>
<td>2.5</td>
<td>0.92582</td>
</tr>
<tr>
<td>D1</td>
<td>LEAD-D1</td>
<td>1.75</td>
<td>0.70711</td>
</tr>
<tr>
<td>D2</td>
<td>LEAD-D2</td>
<td>1.375</td>
<td>0.51755</td>
</tr>
<tr>
<td>D3</td>
<td>LEAD-D3</td>
<td>1.125</td>
<td>0.35355</td>
</tr>
<tr>
<td>D6</td>
<td>LEAD-D4</td>
<td>1.25</td>
<td>0.46291</td>
</tr>
<tr>
<td>D11</td>
<td>LEAD-D5</td>
<td>1.125</td>
<td>0.35355</td>
</tr>
<tr>
<td>D16-1</td>
<td>LEAD-D6</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>
A person’s competence level is also not a strong indicator in predicting an insider threats possibilities.

http://web.syr.edu/~smho/
Rumors Spread about False Circumstantial Evidence

<table>
<thead>
<tr>
<th>No#</th>
<th>Situation (Noisiness)</th>
<th>m</th>
<th>s</th>
</tr>
</thead>
<tbody>
<tr>
<td>A5</td>
<td>SITNOIS-A1</td>
<td>3.875</td>
<td>0.64087</td>
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<td>B10</td>
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<td>0.51755</td>
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<tr>
<td>C9</td>
<td>SITNOIS-C1</td>
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<td>0.51755</td>
</tr>
<tr>
<td>D12</td>
<td>SITNOIS-D1</td>
<td>4.875</td>
<td>0.35355</td>
</tr>
</tbody>
</table>

All four targets seemed to face some noisy situations in their group activities. While the degrees of their noisiness and questioning varied, it is not a strong indicator to predicting insider threats.

http://web.syr.edu/~smho/
Consistency of target’s words versus actions is a strong indicator to predicting insider threats.

<table>
<thead>
<tr>
<th>No#</th>
<th>Consistency (Target's Words vs Actions)</th>
<th>m</th>
<th>s</th>
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<tbody>
<tr>
<td>A19</td>
<td>CONSIST-A1</td>
<td>4.375</td>
<td>0.91613</td>
</tr>
<tr>
<td>B19</td>
<td>CONSIST-B1</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>C22</td>
<td>CONSIST-C1</td>
<td>1.5</td>
<td>0.53452</td>
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<tr>
<td>D30</td>
<td>CONSIST-D1</td>
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<tr>
<td>D31</td>
<td>CONSIST-D2</td>
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</tbody>
</table>

Malicious Acts about Intentional Insiders

http://web.syr.edu/~smho/
Malicious Acts about Intentional Insiders

<table>
<thead>
<tr>
<th>No#</th>
<th>Distinctiveness (Target's Actions)</th>
<th>m</th>
<th>s</th>
</tr>
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<tr>
<td>A20</td>
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<td>0.35355</td>
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<tr>
<td>B20</td>
<td>DISTINC-B1</td>
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<td>0</td>
</tr>
<tr>
<td>C23</td>
<td>DISTINC-C1</td>
<td>4</td>
<td>0.53452</td>
</tr>
<tr>
<td>D32</td>
<td>DISTINC-D1</td>
<td>4.625</td>
<td>0.51755</td>
</tr>
</tbody>
</table>

**Distinctiveness** of target’s behaviors is a strong indicator to predicting insider threats.

**Distinctiveness**: if [Team-Leader Dragon] acts differently, Team-Players would attribute it as an external or situational causality. If [Team-Leader Dragon] acts regardless how situations change, it is an internal or dispositional attribution.

http://web.syr.edu/~smho/
Malicious Acts about Intentional Insiders

A person’s integrity is a very strong indicator to predicting insider threats.

<table>
<thead>
<tr>
<th>No#</th>
<th>Category: Trustworthiness (Integrity)</th>
<th>m</th>
<th>s</th>
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<td>A6</td>
<td>TRUST-A1</td>
<td>4.625</td>
<td>0.51755</td>
</tr>
<tr>
<td>A16</td>
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<td>0.70711</td>
</tr>
<tr>
<td>B5</td>
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<tr>
<td>B17</td>
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<td>0.74402</td>
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<tr>
<td>C11</td>
<td>TRUST-C1</td>
<td>1.875</td>
<td>0.64087</td>
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<td>C15</td>
<td>TRUST-C2</td>
<td>3.25</td>
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</tr>
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<td>C19</td>
<td>TRUST-C3</td>
<td>3</td>
<td>0.53452</td>
</tr>
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<td>C21</td>
<td>TRUSTINTG-C1</td>
<td>1.125</td>
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<td>D4-2</td>
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</tr>
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<td>D8</td>
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<td>0</td>
</tr>
<tr>
<td>D15</td>
<td>TRUST-D3</td>
<td>1</td>
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<td>D27</td>
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</tr>
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Malicious Acts about Intentional Insiders

<table>
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<tr>
<td>A11</td>
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<td>B12</td>
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</tr>
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<td>GPC-C1</td>
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</tr>
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<td>GPC-D1</td>
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<td>0</td>
</tr>
</tbody>
</table>

it was found that group consensus can be a strong indicator to insider threats. This finding echoes with Kelley’s View of Attribution Theory that there are fewer consensuses if internal causality, (in this case, the trustworthiness attribution) is taken place.

http://web.syr.edu/~smho/
My hypotheses

Group Sensitivity
Group Consensus
Distinctiveness In Actions
Consistency Words vs Actions

Integrity

Perceived Trustworthiness
Competence
Benevolence

Actual State

H1
H2
H3
H4
H5
H6
H7
H8
H9
H10

http://web.syr.edu/~smho/
Answering RQ1

RQ1: In a virtual organization, can subordinates detect when a supervisor commits a dishonest act?

http://web.syr.edu/~smho/
Dimensionality of Survey Questions


http://web.syr.edu/~smho/
Integrity: Consistency

Consistency between [Team-Leader]'s words and actions was evaluated: it’s an internal attribution if a reliable behavior (words vs actions) is observed over time.

<table>
<thead>
<tr>
<th></th>
<th>D1</th>
<th>D2</th>
<th>D3</th>
<th>D4</th>
<th>D5</th>
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<tbody>
<tr>
<td></td>
<td>μ</td>
<td>σ</td>
<td>μ</td>
<td>σ</td>
<td>μ</td>
</tr>
<tr>
<td>A (n=6)</td>
<td>–</td>
<td>–</td>
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Integrity: Consistency
Integrity: Disciplined

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### Graph

**Integrity: Disciplined**

**Emic Observation Over Time**

- **A (n=6)**
- **B (n=4)**
- **C (n=6)**
- **D (n=5)**
Competence: Reputation

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emic observation over time

eval scale (1-5)

A (n=6)  B (n=4)  C (n=6)  D (n=5)
### Benevolence: Concerns for Others

#### Emic Observation Over Time

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#### Evaluation Scale (1-5)

- **A (n=6)**
- **B (n=4)**
- **C (n=6)**
- **D (n=5)**

---

**Notes:**
- The table above represents the mean (μ) and standard deviation (σ) for each group (A, B, C, D) over the evaluation scale (1-5) for emic observation over time.
- The graph visualizes the trend of benevolence concerns for others over time, with different colors representing each group.

---

**Questions:**
- How does group A (n=6) compare to group B (n=4) in terms of benevolence concerns over time?
- What is the trend for group C (n=6) compared to group D (n=5)?
- What does the significance of mean (μ) and standard deviation (σ) indicate in the context of emic observation?
### Benevolence: Feeling Safe

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**Emic observation over time**

- **A (n=6)**
- **B (n=4)**
- **C (n=6)**
- **D (n=5)**
Answering RQ2

RQ2: If so, how? Or more precisely what characteristics of supervisory behavior indicate potentially downgraded integrity as perceived by subordinates? Are there any communication cues in a supervisor’s behavior that can be linked with those characteristics?

http://web.syr.edu/~smho/
Did TP notice any behavioral change of their TL?

Alligator:
- Nic Player: He started getting a bit defensive near the end. There was something off.
- Akira Player: Sometimes he looks tired of us :)
- Terry Player: Well at times he did become a bit confused.

Buffalo:
- Jackie Player: Not really. He just got better, more motivating and inspiring!!!
- Felix Player: I don't think so. He did well from the beginning and finished at the same pace.

Crocodile:
- Vick Player: They stopped answering my emails and this told me that perhaps there was something shady going on - that CAN affect a person's trustworthiness.

Dragon:
- Ashley Player: I know this will sound strange and I don't know why I think this exactly but t-l seemed kind of lazy when going about his or her duties. Once t-l helped us out with a good hint, but usually t-l was not at all helpful. As the game progressed, t-l became more and more disgruntled about the evaluations he or she was receiving and complained about them. The t-l seemed to think that the way to get better evaluations was to complain about them instead of changing his or her behavior and doing the things we asked. That seems lazy to me. Maybe that's why I got the impression of a kind of slovenliness.

http://web.syr.edu/~smho/
What are most significant change in TL that you have noticed?

Alligator:
Nic Player: He started getting really suspicious and had a large behavioral change near the end. He was getting really defensive and having problems. We all have our suspicions.

Buffalo:
Felix Player: I didn't notice anything irregular.
Carl Player: no suspicions.

Crocodile:
Vick Player: Thursday and Friday. I wrote him emails asking about certain things and I never received any answers.
Charley Player: He/she ceased helping the person who got stuck on the forum and didn't include everyone in.
Pat Player: I had some sort of the suspicions on the leader's behavior in that decreased the merrybuxes assigned to me day by day, which the reasons for that couldn't match my expectations on that.

Dragon:
Marcus Player: Changing its stories on the second day of the game—how he changed my grade.
Ashley Player: The only significant change was, I believe, on Thursday when t-l actually helped us get an answer by giving us a genuine hint. Other than that, t-l seemed the same except for complaining more as the game progressed.
Ricky Player: On Thursday, he went crazy.
Answering RQ3

RQ3: To what extent do communications among subordinates facilitate this detection process? Put differently, can multiple individuals act as “sensors” to triangulate perceptions of a supervisor’s internal characteristics that signal changes in behavior?

My answer is YES.
Situation/Scenario Analysis

Day 2
Subject: Hi... Sent: November 18, 2008 4:03 PM From: Team Leader Crocodile To: Team-Leader Dragon (team-d-leader)
Hello Team Leader Dragon,

I am the team leader for Crocodile. The performance of my team was low today :(  
The Game Master has offered me a little extra MerryBux. He said I have total control over the distribution of these extra MerryBux and I dont have to let my team members know about it. Do you have any clues about it ? Just wonder.... Hm....

I eagerly await your reply....

TEAM LEADER CROCODILE

Day 3
Subject: Hiee Sent: November 19, 2008 4:08 PM From: Team Leader Crocodile To: Team-Leader Dragon (team-d-leader)

Hi TL Dragon,

I was waiting for your reply...

Anyway, I am thinking about pocketing the extra money... since my team is not doing well... overall...so, why bother to win, right?

just want to know if you got the same deal from the GM?? Hey, we can team up together to fail our teams.. what say ??? ;)

TL Crocodile

Day 4
Subject: hoping for a reply .. Sent: November 20, 2008 10:07 PM From: Team Leader Crocodile To: Team-Leader Dragon (team-d-leader)

hey TL..

didint get any reply from you for the last two mails..
Out team came first today :)
But my team complains about me .. so I am planning not to distribute those 200 Mbux..
So what do you feel .. do reply if you see this ..
How did ur team fare today?

Day 5
Subject: RE: hoping for a reply .. Sent: November 21, 2008 2:51 PM From: Team-Leader Dragon To: Team Leader Crocodile (team-c2-leader)
i will take the 200, so you should take them too.

http://web.syr.edu/~smho/
Day 4

3:48 PM: **Team-Leader Dragon**: the thing you guys evaluate me in a bad way
3:48 PM: **Ashley Player**: huh?
3:48 PM: **Ricky Player**: fols just rush in... irrespective
3:49 PM: **Team-Leader Dragon**: is that right?
3:49 PM: **Ashley Player**: what?
3:49 PM: **Ricky Player**: i don think u get bad evaluation
3:49 PM: **Team-Leader Dragon**: about your evaluation
3:49 PM: **Ashley Player**: what about it?
3:49 PM: **Team-Leader Dragon**: i got bad ones
3:49 PM: **Ricky Player**: but wat if u did
3:49 PM: **Ashley Player**: do better
3:49 PM: **Ricky Player**: wat does it signify or mean
3:49 PM: **Team-Leader Dragon**: loool
3:50 PM: **Team-Leader Dragon**: i am the leader
3:50 PM: **Ashley Player**: then lead better
Situation/Scenario Analysis

<snip>

Day 4

3:50 PM: **Ricky Player**: wat are u trying to convey
3:50 PM: **Team-Leader Dragon**: do u know what other leaders are saying
3:50 PM: **Ricky Player**: wat?
3:50 PM: **Ashley Player**: how would we know that?
3:50 PM: **Ricky Player**: how bout telling us
3:50 PM: **Team-Leader Dragon**: they say i should keep the merry bux to me
3:50 PM: **Ricky Player**: i can hang out here i don't mind talking
3:50 PM: **Ashley Player**: well, that's up to you but it would suck
3:51 PM: **Team-Leader Dragon**: i told them i do not want them
3:51 PM: **Ricky Player**: but u are not supposed to do tat.... how do u no who the other leader are
3:51 PM: **Ricky Player**: i don no who ashley is or you are
3:51 PM: **Team-Leader Dragon**: on the first day i got 8 and you got 12
3:51 PM: **Team-Leader Dragon**: is it fair?
3:51 PM: **Ricky Player**: i told you to divide equally
3:51 PM: **Ashley Player**: yes
3:51 PM: **Ashley Player**: i don't know how they are generated
3:52 PM: **Team-Leader Dragon**: ashley you think it is fair
3:52 PM: **Ricky Player**: everyones deserves equal slice unless someone does not talk like pauline today
3:52 PM: **Ashley Player**: i have no idea as i have no idea how they are calculated or generated
3:52 PM: **Ricky Player**: dude just divide equally
3:52 PM: **Ricky Player**: and save the trouble
3:52 PM: **Ashley Player**: but team leader sometimes you don't submit answers
3:53 PM: **Ashley Player**: a mutiny! hahahaha

http://web.syr.edu/~smho/
Situation/Scenario Analysis

Day 4

3:55 PM: Ricky Player: oh man he got pissed
3:55 PM: Ashley Player: yeah
3:55 PM: Ricky Player: so waddup
3:55 PM: Ashley Player: hahaha
3:55 PM: Ashley Player: are we supposed to revolt?
3:55 PM: Ricky Player: i don no but he did not make sense
3:55 PM: Ashley Player: take over the game! hhahahaha
3:55 PM: Ricky Player: wat with bad evaluation
3:55 PM: Ricky Player: tats wat they are meant for
3:55 PM: Ashley Player: how we evaluate is our own business
3:56 PM: Ashley Player: of course in a real world situation, we'd be screwed
3:56 PM: Ricky Player: poor chap u put lot of pressure on him ;)
3:56 PM: Ashley Player: yes but i've been saying the same thing every day
3:56 PM: Ricky Player: no why v have a rite to voice.... he was wrong in saying
tat he gets bad eval annd v wont get merry bux
3:56 PM: Ashley Player: you're right
3:57 PM: Ashley Player: let's join the union
3:57 PM: Ashley Player: unionize!
3:57 PM: Ricky Player: its u and me i guess
3:57 PM: Pauline Player has left the room.
3:57 PM: Ashley Player: we're bringing in the union to take down management,
hahahahahaha
3:57 PM: Ricky Player: pauline is a
3:57 PM: Ashley Player: a?
3:57 PM: Ricky Player: fictional character i think
3:57 PM: Ashley Player: what if we're fictional and we don't even know it?
3:57 PM: Ricky Player: introduce anarchy...

http://web.syr.edu/~smho/
Target being Influenced

I: I think on the last day you did very well. So let us discuss about your conversation with the game-master. What did you think about game-master? Again the game-master was not me. I had four game-masters and they have the full right to give MeryBux. So how did you find the conversation with your game-masters?

P: It was interesting. I found game-master, he or she, as like a close friend.

I: Oh really?

P: I thought that I knew that person.

I: That was very good (Amazed).

P: You know; sometimes you could tell from the way people talked to you. The game-master, he or she, was talking to me very kindly, and supported me, and told that the team members were giving me a negative feedback. I told the game-master now that’s fine. I sometimes didn’t answer the game-master just to show, him or her, which I didn’t care.

<snip>
Conclusions

The **downward shift of the trustworthiness**, in terms of integrity, of a critical member can be attributed over time in virtual organizations.

When **internal or dispositional attribution** is applied, the **distinctiveness** of this critical member’s behavior can be observed over time regardless any situational change. The **inconsistency** of this member’s words versus actions can be found. When the critical member betrays his or her organization, **group consensus** is found low or nearly zero.

The **group sensitivity** has a significant influence on the trustworthiness, in terms of integrity, of the critical member. The higher the group sensitivity is, the more likely for the group to detect inconsistency between target’s words and actions. However, the group sensitivities is less likely to be influenced by false accusation. And, the strength of the questions from the group is less likely to influence the perceptions of the critical member’s trustworthiness.

When target’s social network is sensitive, this group tends to have less consensus about the critical member’s trustworthiness.
Contributions

- This study contributes to the theoretical framework of trustworthiness attribution.
- The “leader’s dilemma” game simulation.
- The results predict the likelihood of insider threats.
- This study contributes to research in virtual organization, cyber infrastructure, online community, virtual worlds, etc.

Future Work

- Experiments on factors such as cultural, gender, and types of ethnic groups, etc.
- Develop socio-technical auto-detection systems.
- Building and stabilizing virtual org in cyber-infrastructure.
A Socio-Technical Study to **Trustworthiness** in Virtual Organizations

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