

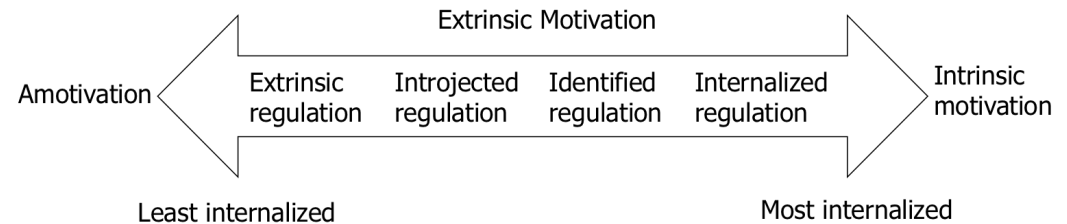
THE NEW SECURITY CALCULUS: Incentivizing Good User Security Behavior

Challenge:

- Intrinsic motivation for improving employee security behavior is lacking.
- PMT and DT internally regulates user behavior based on an understanding of security threats and the consequences of risky behavior. However, users often minimize the risks associated with their behavior, rationalize noncompliant behavior (neutralization), and feel that the costs of compliance outweigh perceived benefits.
- There is a gap between user motivation and compliance. Most users do not attach an economic value to the security of their systems.

Solution:

- Use positive extrinsic motivation (financial incentives) to shift user behavior towards security policy compliance.
- Use nudges to stem the decay in the user motivation from extrinsic rewards.



Scientific Impact:

- The study found that financial incentives improved individuals' security behaviors regarding phishing emails, password setting, and use of non-work emails.
- When nudges were given post incentive phase, signs of increase in employees' non-compliance showed but the compliance level was higher than that before the incentive program started.

Broader Impact:

- Addressing the 'human issue' in information security could protect the privacy of users and protect organizations intellectual property.
- Our work will stimulate further research in behavioral security and security economics in cyber security, as well as provide a reference point for investigating human factor issues.

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