Leibniz Universität Hannover

Risk Perception and the Acceptance of New Security Technology

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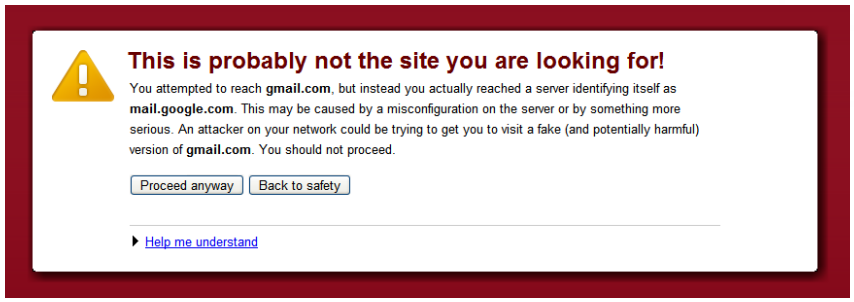
Risk Communication



Related Work

- Risk communication
  - How to effectively warn against a certain threat

- Risks selected for the study participants, e.g.
  - Wash 2010: Malware, hackers
  - Blythe et al. 2011: Phishing

Previous Work

- Harbach et al. 2013: Acceptance of privacy-preserving authentication technology
  - Generally unsafe Internet
  - Apathy towards security improvements

- *"Whether you use [an alternative mechanism] or continue using passwords [...] there are vulnerabilities everywhere."*

The Generally Unsafe Internet

- Security consists of many independent parts that address specific risks
  - easily overwhelms a user
- Users may not differentiate between risks arising because of
  - insecure authentication mechanisms,
  - lax privacy policies, or
  - missing transport security.
- Users may believe that guessing a weak password and breaking RSA are equally likely.

Research Questions

- How do users actually perceive risk during everyday Internet use?
  - Which risks are perceived in which situations?
- How do users believe to be able to protect themselves against these risks?
- Why are the perceived risks not causing a demand for improved IT security measures?

Research Questions II

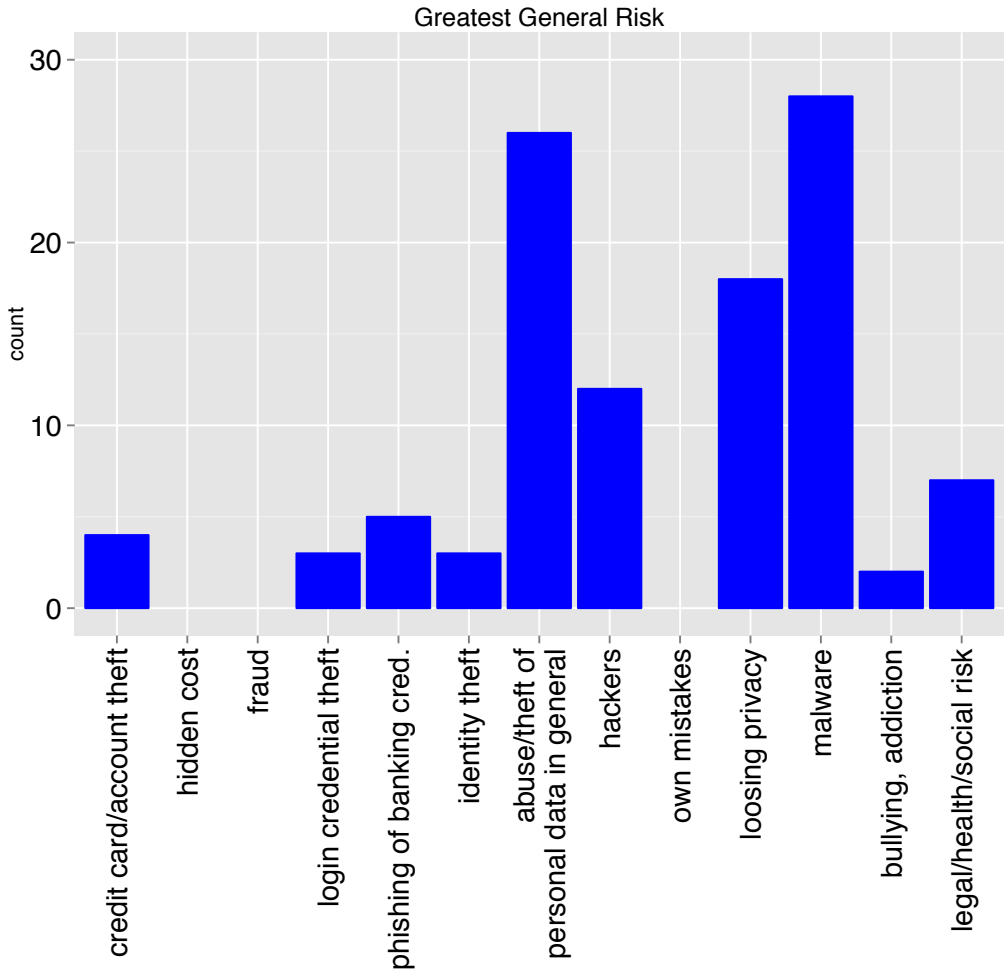
- Does communicating specific risks hamper adoption of security mechanisms in general?
  - Causing the perception of a "generally unsafe Internet"?

- Does tailoring new security mechanisms to address the actually perceived risks increase acceptance?

Everyday Internet Risks Survey

Preliminary Survey Results (N=111)

"In general, what do you think is the greatest risk/the greatest danger that arises for you personally during day to day Internet use?"



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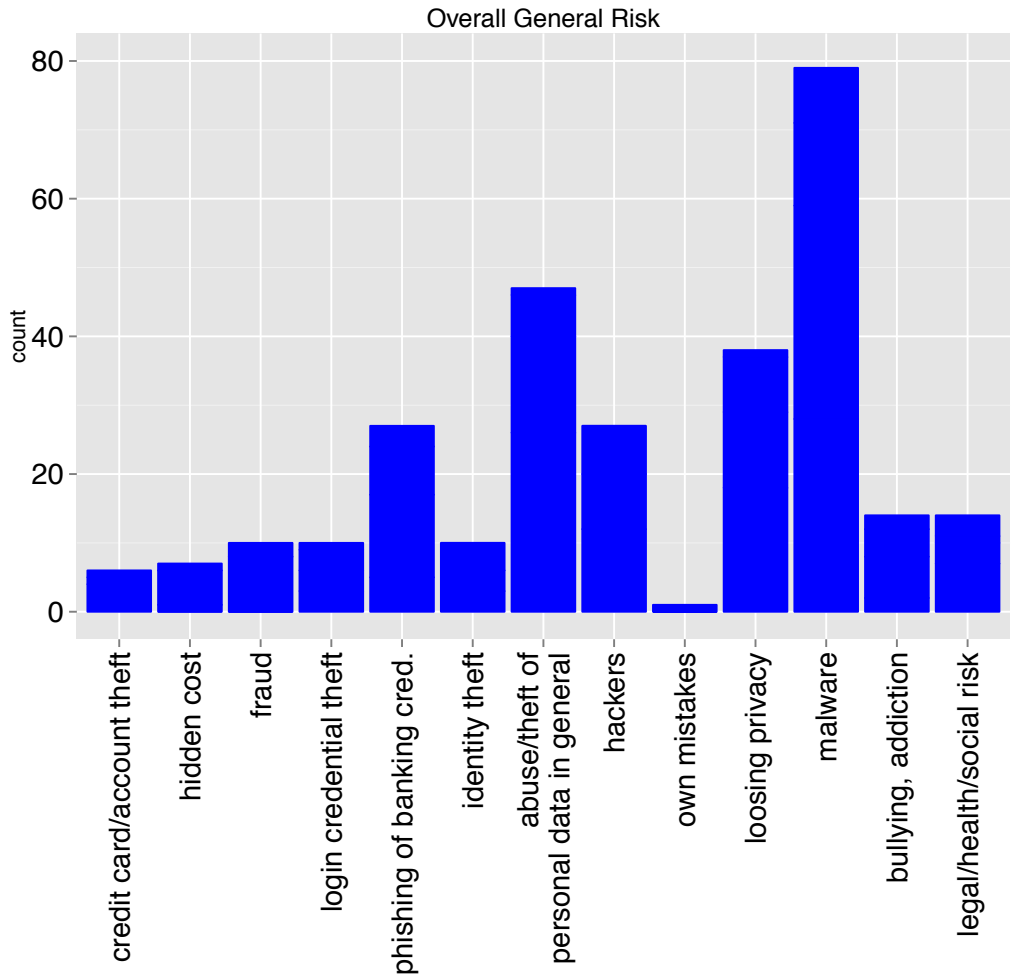

Conclusion

- Everyday IT security risk perception and its influence on technology choice is not well-understood
- Acceptance of new security technology may be increased by addressing perceived risks
  - What if users don't perceive any relevant risks?
- Currently, users seem to be mostly concerned about malware, loosing their privacy and hackers