

VISION: DEVELOPING A BROAD USABLE SECURITY & PRIVACY QUESTIONNAIRE

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WHAT WE DO

Research Goals

- develop and validate a broad security and privacy questionnaire
- measure different dimensions and a wide range of topics
- gain insights into end-users' security and privacy perception
- conduct a long-term study to determine changes in end-users' security and privacy perception over time



WHY WE DO THAT

Why a Questionnaire?

- economical way of gaining insights into users' knowledge, concerns ...
- easy way to reach many users with relatively little effort

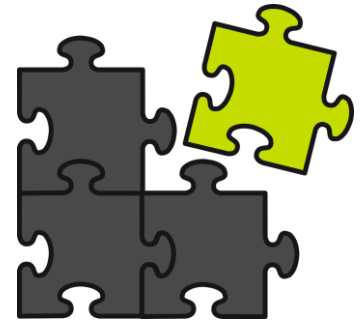
Why a New Questionnaire, Why Don't Use an Existing One?

- our goal is a precise picture of a wide range of security and privacy related topics
- many of the existing questionnaires focus on
 - either specific target groups, like employees (e.g., *H AIS-Q* by Parsons et al., 2013)
 - or focus on specific constructs like privacy concerns (e.g., *IUIPC* by Malhotra et al., 2004) or security attitudes (*SA-6* by Faklaris et al., 2019)

ONGOING WORK

Questionnaire Development

1. *Conceptualization*: scope of the questionnaire
 - literature review
 - expert workshop & interviews
2. *Initial Large Item Pool*: follow the principles of item wording
 - we generated so far 280 items
3. *Testing and Item Analysis*: pilot test(s), item analysis & validation
 - pilot testing to evaluate comprehensibility of items
 - first evaluation with representative sample is about to start



ONGOING WORK

Questionnaire Topics & Dimensions

- *Topics*: authentication, data protection, messaging, mobile security, smart home, social media, software security, web security
- *Dimensions*: knowledge, attitude, perceived usefulness, perceived easy of use, behavior
- *Response Scales (by Rohrmann 1978-German- & 2007-English-)*
 - 5-point rating scale: 1 fully disagree – 5 fully agree / 1 stimme nicht zu – 5 stimme sehr zu
 - behavior items: “Within the last 4 weeks ...”, 1 never – 5 always / 1 nie – 5 immer

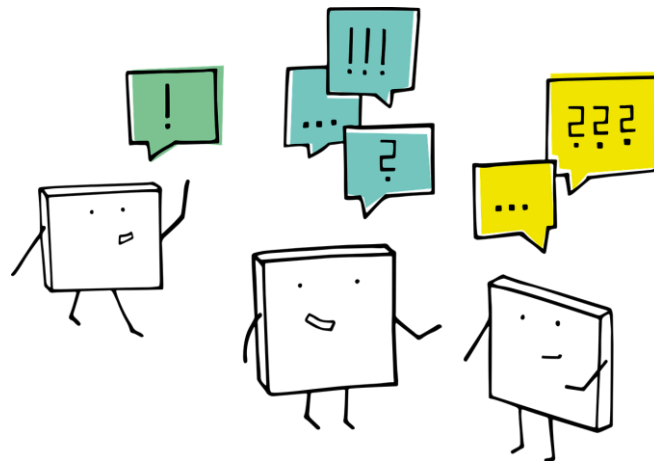
ONGOING WORK - EXAMPLES

| TOPIC | DIMENSION | ITEM EXAMPLE |
|-------------------|-----------------------|--|
| authentication | attitude | Using a password manager makes me feel secure. |
| data protection | perceived ease of use | It's difficult for me to understand privacy terms. |
| messaging | perceived usefulness | End-to-end-encryption is one of the most important measures to secure the content of my messages. |
| mobile security | perceived ease of use | It is too time-consuming to lock my devices when I don't use them. |
| smart home | knowledge | Once I give Wi-Fi access to a smart home device, e. g., Amazon Alexa, it can be attacked over the Internet. |
| social media | behavior | Within the last four weeks, I have publicly shared location data (e. g., a screenshot of my running course), e. g., on social network sites. |
| software security | attitude | Security updates should be automated, so that I don't have to do anything. |
| web security | knowledge | If a URL starts with HTTPS the connection to the website is encrypted. |

DISCUSSION

What you can help us with

- Do you miss any topic?
- Do you miss any dimension?
- Any (other) recommendations for our questionnaire?



Short Summary

Topics:

- authentication, data protection, messaging, mobile security, smart home, social media, software security, web security

Dimensions:

- knowledge, attitude, perceived usefulness, perceived easy of use, behavior