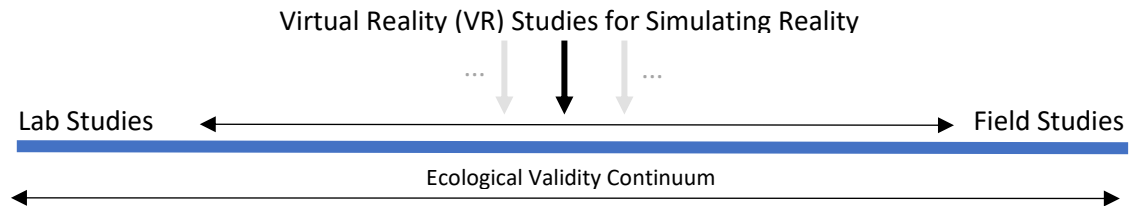# Moving Usable Security and Privacy Research Out of the Lab:
Adding Virtual Reality to the Research Arsenal

A Lightning Talk for SOUPS 2022, BOSTON, MA, USA

Florian Mathis
University of Glasgow, UK; University of Edinburgh, UK; Bundeswehr University Munich, Germany
florian.mathis@glasgow.ac.uk

Abstract:

A common research method in usable privacy and security (UPS) is conducting online surveys, e.g., on Amazon Mechanical Turk. Studies of that type enable researchers to advance UPS research by targeting large and diverse samples and contributing to the ecological validity of the research findings. However, online surveys are often infeasible to accurately study physical prototypes and users' interaction behaviour. The current challenges when prototyping physical UPS systems, such as building and deploying robust prototypes for in-the-wild studies, often lead to evaluations in the lab. However, lab studies threaten the ecological validity because simulating security as a secondary task is challenging to do in the lab and local participant recruitments often result in homogenous and small samples.

This lightning talk presents "virtual reality (VR) for simulating real-world research", a novel approach to design, implement, and evaluate virtual replicas of UPS prototypes. The talk discusses how (remote) VR studies can advance and facilitate lab-based UPS research and potentially bridge the gap between lab and field studies. It showcases a set of VR studies for simulated reality (e.g., [1,2,3,4]) to spark discussions on future research challenges and opportunities when using VR studies as a complementary research method within UPS.

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