A decorative network diagram in the top-left corner, featuring a complex web of nodes and edges. Some nodes are highlighted with blue circles, and others with blue dots. The nodes are connected by thin lines, creating a dense, interconnected structure.

Toward Critical Security and Cryptography

Ko (Natnatee) Dokmai,
Indiana University, Bloomington

A decorative network diagram in the bottom-right corner, similar to the one in the top-left. It shows a network of nodes and edges, with several nodes highlighted by blue circles and blue dots. The overall structure is a complex, interconnected web.



“

*Those who pursue a Science of Security should be cognizant of history—including that progress in science is neither steady nor straight-line. **Simply wishing for a Science of Security will not make it happen. What is needed is for security researchers to learn and adopt more scientific methodologies.***

Herley, C. and Oorschot, P. (2017). SoK: Science, Security and the Elusive Goal of Security as a Scientific Pursuit. *2017 IEEE Symposium on Security and Privacy (SP)*.

Ontological and Epistemological Approach to Critical Security and Privacy

1. socio-political > technical
⇒ S&P needs to take into account the power relations
2. cultural > psychological
⇒ S&P research methodology needs to engage in *cultural studies*
3. situated knowledges > universal objectivity
⇒ S&P research needs to be contextualized and position-dependent

Toward Critical Security and Cryptography

How?

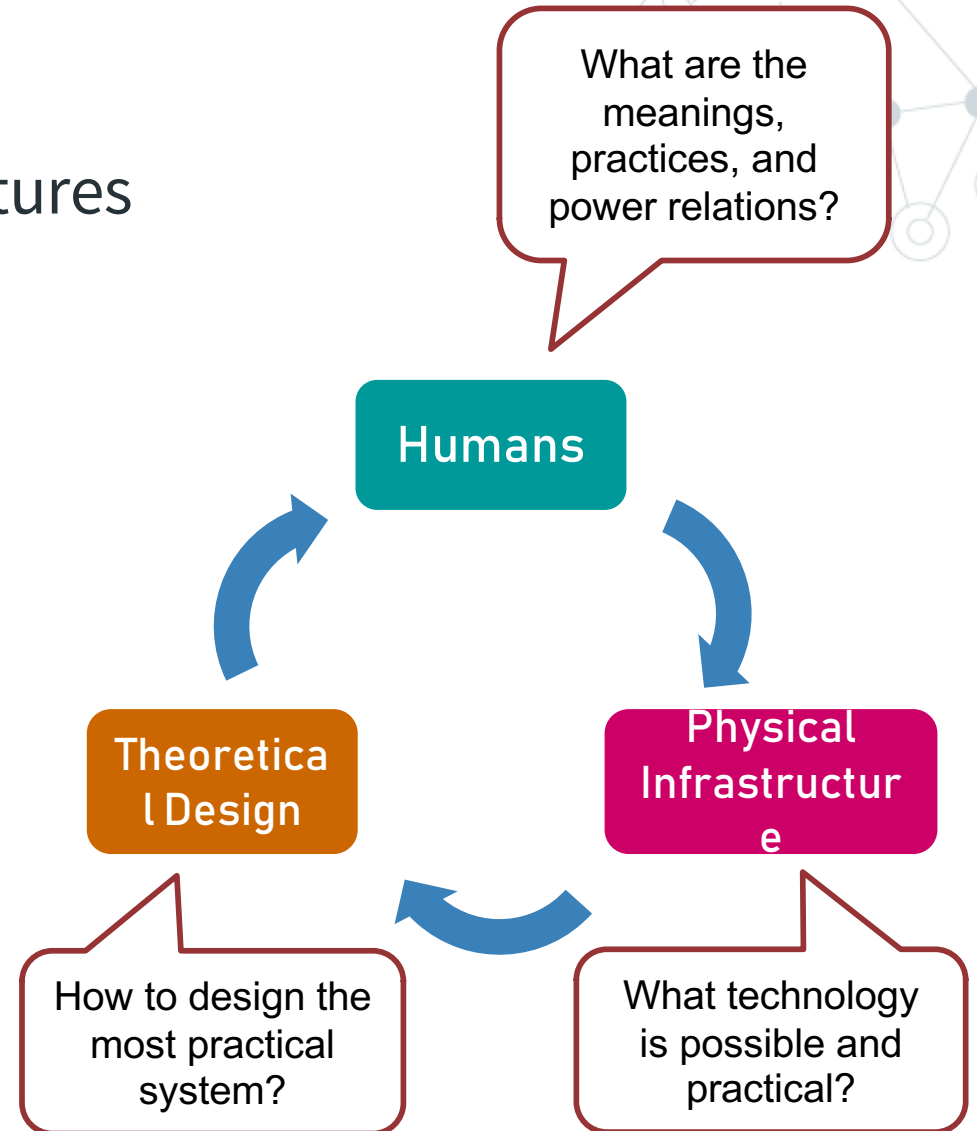
The humans and infrastructures
as an indispensable part of
security and cryptography
theoretical design

Theoretical foundations

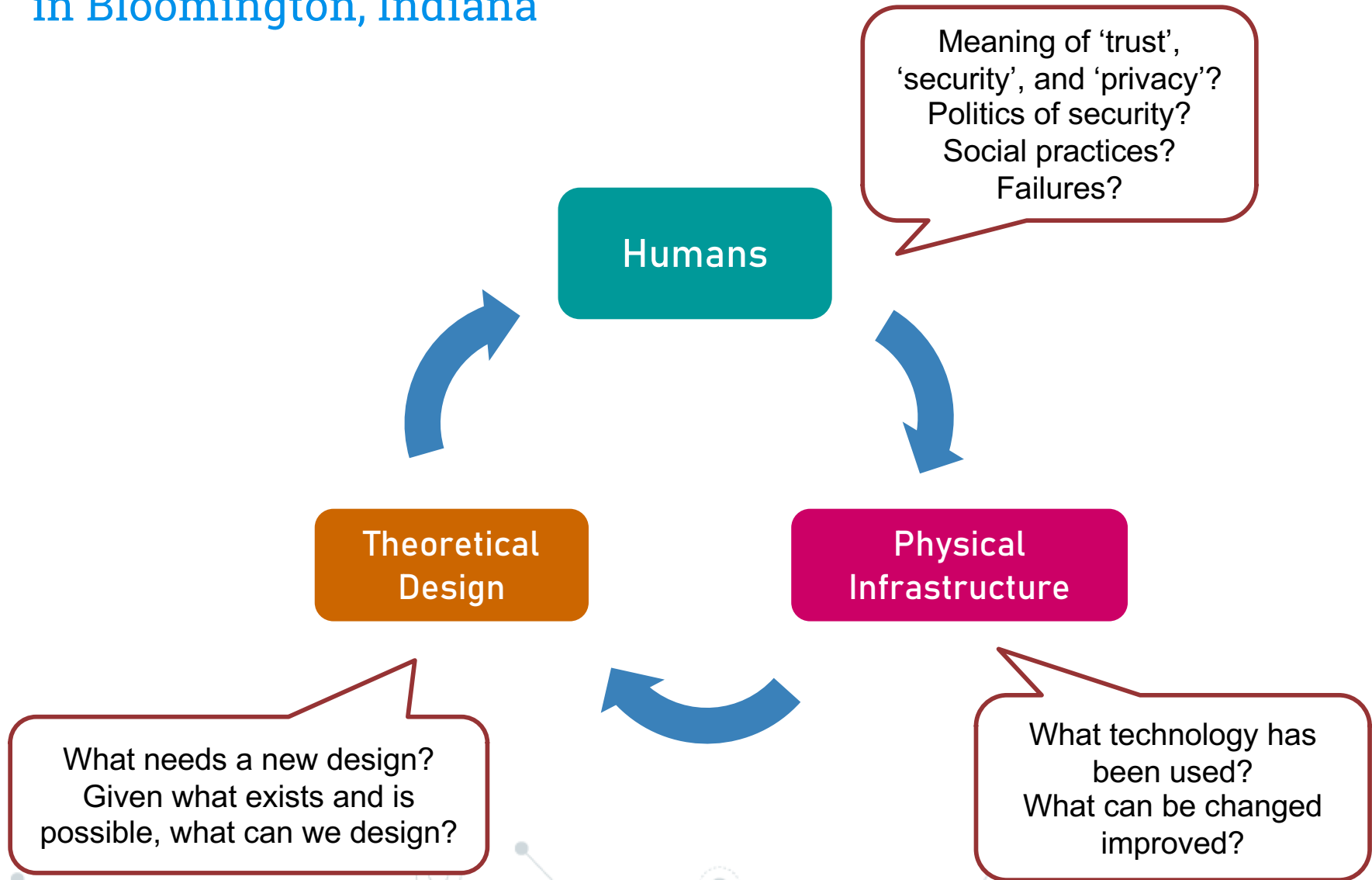
Security and cryptography,
Science and Technology
Studies, Critical Geography

Methodological Framework

Ethnography, Grounded Theory



Case Study: Trust networks in activism in Bloomington, Indiana



Discussion

- ◎ Resilience over scalability
- ◎ Autonomy over centrality
- ◎ Speak to the community over academia/industry
- ◎ Scholar-activism: researchers need to engage in multiple disciplines and the community