

Border Security: Problems of Technology-Policy Alignment

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What is Technology?

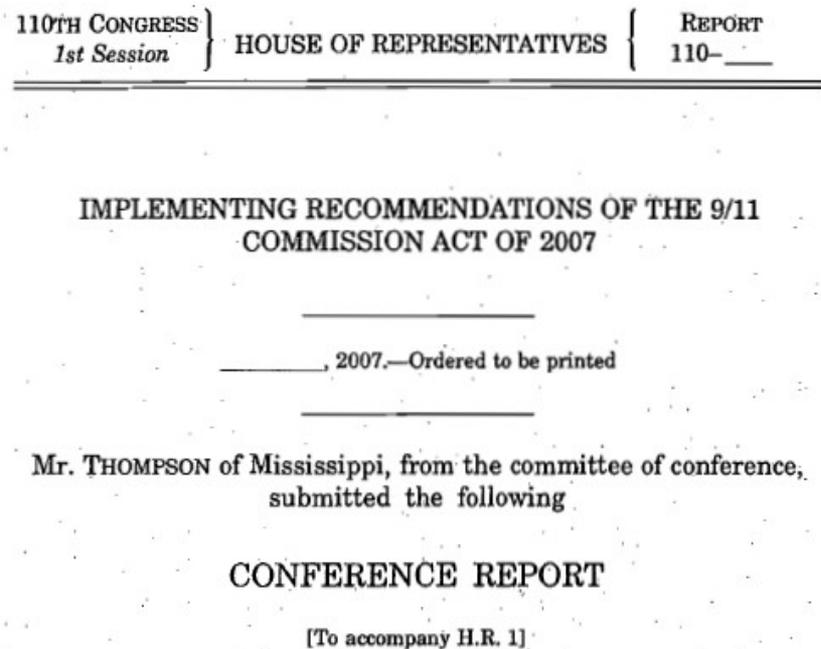
Technology is the **purposeful application of knowledge**, or

“the process by which humans modify nature to meet their needs and wants.”

(National Academy of Engineering)



What is Policy?



- *Policy* is a **plan of action** pursued by actors to guide decisions and achieve goals (Fredrich 1969).
- Policy is embedded and implemented in a **socio-political context**.
- Technology is both shaped by society (and policy) but also itself shapes society (and policy).

The Problem of Aligning Technology and Policy



The Problem of Aligning Technology and Policy

- Security technologies are often only formulated at the *implementation stage* of the policymaking process (the last stage).
- Security technologies are often developed in a social *vacuum*, leading to suboptimal results and (potentially) avoidable resistance.
- Security technologies typically outpace existing legal and normative frameworks.
- Technological acceptance is arguably crucial for success, yet issues of socio-political alignment are typically marginalized.

Attitudes Toward Security Systems

Security systems are operated by people, but people are also *subjects of security systems*.

Several security systems have encountered problems regarding privacy concerns:

Example: TSA backscatter screening



Technological Acceptance Model (TAM)

TAM describes an individual's acceptance of a technological system.

Key variables:

- Perceived usefulness
- Perceived ease of use
- Behavior outcomes
- Social context (underdeveloped dimension)

The Social Context Variable

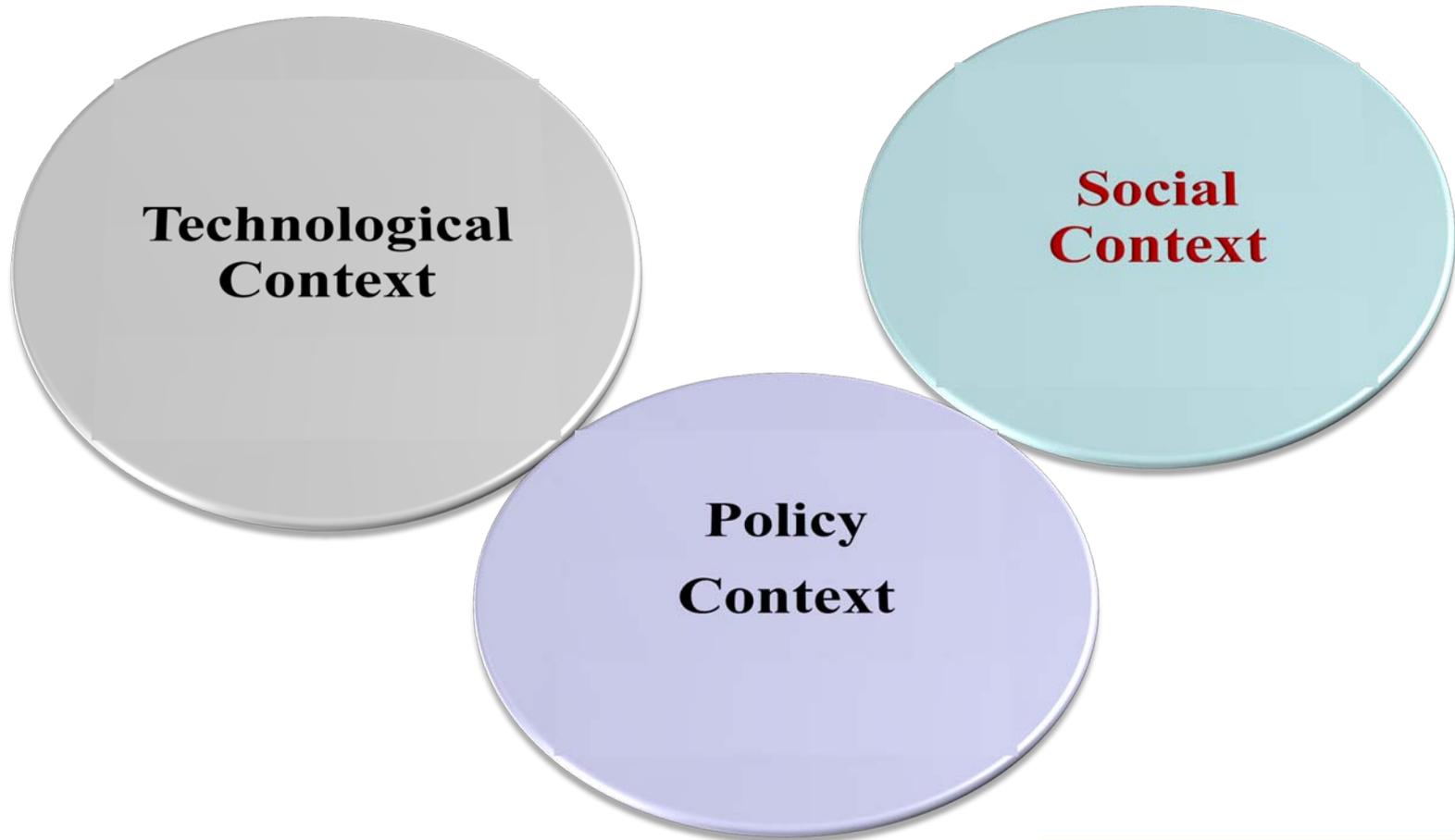
Components



**Social
Context**

1. *Socio-Political Acceptability*
2. *Cultural and Religious Sensibilities*
3. *Core Values*
4. *Feedback*

A General Technology Alignment Model



Conclusion: Research Needs

- We need a S&T research program that will incorporate the appropriate **socio-cultural context** into the cycle of border security technology development, adoption, and deployment.
- We need better models to understand and predict public acceptance of, or resistance to, security technologies.
- We need good case studies of border security technology successes and failures.

Preventing Unintended Consequences

Misalignment can lead to several unintended consequences:

1. Public criticism and resistance.
2. Negative ramifications for public trust which is essential for policy success.
3. Suboptimal policy outcomes.

Conclusion: Collaboration and Integration

- Policy-technology alignment and social integration can only occur through **collaboration** between technologists and social scientists.
 - **Input and feedback** from stakeholders and the public is also crucial *at different stages* of system development.
- Such a holistic approach will help build HS capacity for the future.