Social Good and Privacy

- Choice between social good and privacy is a *false choice*, much like:
  - You are with us or against us
  - Happiness of others or my own happiness
- Technological solutions can help resolve the dilemma
  - Example: Hippocratic databases

Hippocratic Data Systems

Systems that protect the privacy, security, and ownership of data while not impeding the flow of information

Specification Controlled Data Management

Fine-grained enforcement over collection, disclosure, and retention of data respecting an organization's policy and user preferences

Privacy Preserving Data Analytics

Preserve privacy at the individual level, while still building accurate data mining models at the aggregate level

Sovereign Information Sharing

Selective, minimal sharing across databases separated due to statutory, competitive or security reasons

Compliance Auditing

Audit and provenance if data has been disclosed in violation of the specified data sharing policy

Series of papers from the Quest group in IBM Almaden and by others (circa 2000-05)

Democratizing High Quality Education: A Gedanken Experiment

- Assume migration of education material to the inexpensive, cloud-connected electronic devices
- Opportunities for social good:
  - Identification of deficiencies in the educational material from user interactions
  - Dynamic formation of study groups
  - Personalized study plans
- Threats to privacy:
  - Advertisement for tutoring services
  - Misuse of past test scores
- Design Hippocratic safeguards to avoid throwing the baby out with the bath water!

Email rakesha@microsoft.com if interested in an internship on this topic