Making Visible the Invisible

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In the smart city...

- Connectivity
- Interconnections
- Convenience
- Efficiency

Source: https://www.gemalto.com/iot/inspired/smart-cities

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- Invisibility
- Opaque processes
- Opportunities for abuse

Maker Empowerment

"maker empowerment is a... dispositional outcome... comprised of three elements: ability, inclination, and sensitivity... '[S]ensitivity to opportunity' is a key developmental bottleneck: in other words, people often do not activate dispositional behavior because they simply do not notice opportunities to do so"

Agency by Design, Project Zero, Harvard Graduate School of Education

Thinking Routine: Parts, Purposes, and Complexities

1. What are the system's various pieces or components?
2. What are the purposes for each of these parts?
3. How is it complicated in its parts and purposes, the relationship between the two, or in other ways?

Agency by Design

Three Essential Dispositions/Sensitivities

1)   Develop infrastructure literacy

2)   See technology as constantly evolving

3)   Explore hidden ethical dilemmas

1) Develop infrastructure literacy

"Infrastructure literacy is thus about visualizing infrastructures in order to facilitate civic participation in debates about network ownership, development, and access."

Ingrid Forsler

From Michelle Ciccone and Reuben Loewy presentation:
https://spark.adobe.com/page/WguKuWznl4NB6/

2) See technology as constantly evolving
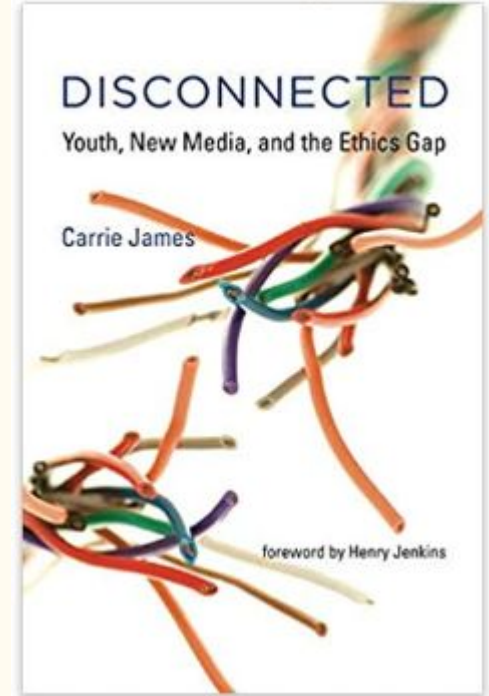
Infrastructure is...

- built on old structures and systems
- linked to certain practices and something you learn as member of a community
- invisible when established and working, but visible when first introduced or in case of malfunction

Susan Leigh Star and Karen Ruhleder, cited in Forsler

3) Explore hidden ethical dilemmas

"Central to ethical thinking is impartiality, or disinterest: the capacity to look beyond one's own interests, feelings, and empathy for close relations in order to make decisions that are in the interests of a larger group, public, or society."

Carrie James

3) Explore hidden ethical dilemmas

Kade Crockford: Why should you care about digital security if you're not a target?

"How is encryption useful for people who are not targets of government surveillance? Well, it sort of works like vaccines... Maybe you are not likely to get the measles, but we get vaccines as a community, as a society, because of something called herd immunity. If we all do it, the weakest among us are protected from diseases like measles and mumps. The same thing is true with encryption. Maybe you yourself are not going to be a target of government surveillance in a special, individual kind of way. But what about other members of your community? Muslims, dissidents, young Black people, immigrants -- those people are targets of government surveillance. And if you want to help protect them, you should use encryption because doing so works like herd immunity with vaccines. It makes it so that those communications don't look suspicious and it pushes back against the government's argument that somehow encryption means you're doing something wrong."

Kade Crockford, Director, Technology for Liberty Program, ACLU Massachusetts

3) Explore hidden ethical dilemmas

- Case studies
- Themes:
  - In/equality of access
  - Customization of experience
  - Rise of automation
  - Surveillance

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