Hello!

Dr. Courtney Cronley

My goal: Promote equitable access to opportunities through interdisciplinary efforts to rethink and design our built environments.
Today’s Lecture

• Broadband as a public good
• How much time do we really spend online?
• Digital Divide
• Equity and Digital Equity
• Socio-technical Systems
• Ideas for Solutions
How much time do you spend online?
World wide

Historically telecommunications was run by the state.

At the end of the 20th century, we saw a rise in privatization of telecommunications.

A new need for the state to protect those aspects of telecommunications that are considered a public interest.

In many countries (the United States included), Broadband is only a universal service and the government has no obligation to ensure/provide access.

In some countries, Broadband is a part of a Universal Service Obligation and all citizens have a right to it, and the government ensures/provides the access.

**Universal Service and Public Good**
The gap between underserved members of society, who lack reliable access to computers or the Internet, often based on geographic or demographic characteristics, particularly those who are lower-income, rural, older adults, or have a disability.

Sources: Populated places data from geonames.org, internet based on anonymized IP addresses from MaxMind (both IPv4 and IPv6) | Visual: Orion Wilcox
Digital Divide Stats

9 out of 10 Americans say Internet has been essential during the pandemic.
But 7% of U.S. adults (~18 million people) aren’t accessing the Internet.

And in Rural America...

And in minority communities...
### Why Not Connected?

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<tbody>
<tr>
<td>Can use elsewhere</td>
<td>3%</td>
<td>3%</td>
<td>3%</td>
<td>2%</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>No need or interest</td>
<td>51%</td>
<td>52%</td>
<td>51%</td>
<td>60%</td>
<td>64%</td>
<td>67%</td>
</tr>
<tr>
<td>No computer</td>
<td>14%</td>
<td>12%</td>
<td>14%</td>
<td>8%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td>Internet unavailable</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>3%</td>
<td>3%</td>
<td>4%</td>
</tr>
<tr>
<td>Privacy and security</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>2%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Too expensive</td>
<td>30%</td>
<td>31%</td>
<td>30%</td>
<td>26%</td>
<td>24%</td>
<td>21%</td>
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Source: National Telecommunication and Information Administration, Census Computer and Internet Use Survey
How Does Tennessee Compare?
Equality, Equity, and Justice

1) Equal accessibility to destinations
2) Recognition of underserved populations
3) Increased access to opportunities
4) Equal distribution of benefits and consequences

**REALITY**
One gets more than is needed, while the other gets less than is needed. Thus, a huge disparity is created.

**EQUALITY**
The assumption is that everyone benefits from the same supports. This is considered to be equal treatment.

**EQUITY**
Everyone gets the support they need, which produces equity.

**JUSTICE**
All 3 can see the game without supports or accommodations because the cause(s) of the inequality was addressed. The systemic barrier has been removed.
Digital Equity

Equity: Allocating resources and opportunities to those in need in order to reach an equal outcome.

Digital Equity: Every individual, regardless of race, ethnicity, or other demographic characteristic, can access wireline and wireless services.

It involves: Access to hardware and software, reliable Internet connection, knowledge of how to use technology, infrastructure investment.
But Who’s Responsible?

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<th>% of U.S. adults who say the federal government ___ to ensure all Americans have each of the following during the coronavirus outbreak</th>
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<tbody>
<tr>
<td>High-speed internet connection at home</td>
</tr>
<tr>
<td>Govt has this responsibility</td>
</tr>
<tr>
<td>Cellphone services</td>
</tr>
<tr>
<td>Govt has this responsibility</td>
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</tbody>
</table>

Note: Those who did not give an answer are not shown.
Source: Survey of U.S. adults conducted April 7-12, 2020.
“53% of Americans Say the Internet Has Been Essential During the COVID-19 Outbreak”

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(Remember, we’re a universal service, not universal service obligation, state)
A Sociotechnical Problem

- Sociotechnical Systems – the interdependence of technology, people, and environment (Cumming, 1994)
- Engineers design hardware/software operates by studying and resolving technical issues
- Humans adopt and use technology according to perceived utility, ease of use, affordability, etc.
- Governments and institutions facilitate use through funding, infrastructure, regulation
- The most successful technologies are robust in technical design and implicitly or explicitly designed to facilitate human use
Some Solutions!

Technology Navigators

Infrastructure in Public Schools

Checking out hot-spots at libraries

Micro-connectivity and mobile devices

Co-locating with natural gathering spots and other services – churches, rural health departments
Digital Equity Act

• Sponsored by Senator Patty Murray (D-WA)
  • Included in the **Infrastructure Investment and Jobs Act**
• Equity plans and implementation for all states and territories
• Additional competitive grants for digital inclusion projects
• Evaluation and research to establish evidence base of what works best
Thank you!

And future reading...

Cummings (1994) Digital Equity Act One-Pager
How To Close the Digital Divide in the US
Pew Research Center