

# quello center

MEDIA & INFORMATION POLICY

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## 2021-2022 Mid-Year Update

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   /quellocenter



## Mission

The James H. and Mary B. Quello Center is one of the leading U.S. academic centers in communication, media, and information policy. Our work examines the interactions between technology, policy, and society at the level of individuals, communities, and society. We collaborate with practitioners to translate rigorous academic research into the design and implementation of better information policy and governance. The Center's interdisciplinary research draws from multiple empirical methods and multi-disciplinary theoretical perspectives. The Center is based in the Department of Media and Information at Michigan State University (MSU). It consists of a core set of researchers, complemented by research associates across MSU as well as other U.S. and international universities and research centers.

## Research Areas

|   |                                     |  |
|---|-------------------------------------|--|
|    | <b>ICTs &amp; society</b>           | Interactions of ICTs and society, e.g., social media use and self-esteem; information seeking and COVID-19 beliefs and knowledge formation during COVID-19.                              |
|  | <b>Digital equity and inclusion</b> | Several projects focus on broadband access and quality, digital skills, and barriers to use, across rural and urban communities, to inform decisions aimed at narrowing digital divides. |
|  | <b>Digital innovation</b>           | Roles of policy in harnessing the benefits of emerging technologies, public interest innovation, responsible innovation.   |
|  | <b>Platform and Internet policy</b> | Our work covers a range of themes related to renewed efforts to design policy frameworks for digital platforms, to revisit Section 230, and to address the market power of big tech.     |
|  | <b>Information security</b>         | With researchers in computer science and criminal justice we explore the economic, legal, behavioral, technical and policy aspects of cybersecurity.                                     |
|  | <b>Foundations</b>                  | Work in this area develops foundational knowledge informing policy responses to challenges such as digital platform power, privacy, surveillance, data ethics, and the governance of AI. |

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## EXECUTIVE SUMMARY

Despite the continuing repercussions of the COVID-19 pandemic, the Quello Center can look back at a productive first half of the 2021-2022 academic year. We continued our research and outreach on broadband policy, worked on two funded research projects, and submitted major and several smaller grant proposals. Our research was published in top-peer reviewed journals. It was also presented at national and international conferences and in practitioner workshops. Moreover, our activities were featured in public policy documents, media reports, and commentaries.

Findings from our *Broadband Gap and Student Performance* report have become part of common knowledge. They feature in media reports, government websites (e.g., the Michigan Department of Education), and are regularly mentioned by experts and working groups (e.g., the Pew Charitable Trust). Michigan State University honored Keith N. Hampton and Johannes M. Bauer with a MSU Distinguished Partnership Award for Community-Engaged Service, a prestigious university-level recognition for research and outreach.

We continued work on the information seeking project, supported by a grant from the *John S. and James L. Knight Foundation*. The project studies how individuals seek, update, verify, and process information from traditional and online media sources during times of rapid change. This collaboration with researchers from three other institutions has immediate implications for response strategies to COVID-19, but it also has longer-term implications for discussions about misinformation online and the future of Section 230 of the Communications Act.

A gift from *Facebook* is supporting work on the effects of digital platforms on innovation. This research aims to generate insights into the multifaceted and often ambiguous roles of platforms on innovation in digital ecosystems. Both foundational and applied work, this project provides urgently needed theoretical and empirical insights that can help put the ongoing “teclash” discussions on a scientific basis. Parts of this research were presented to national and international regulators and policymakers and have added more nuanced perspectives to the debate.

Quello Center Director Johannes M. Bauer is the Principal Investigator of a large proposal submitted in August 2021 to the Broadband Infrastructure Program (BIP) administered by the National Telecommunications and Information Administration (NTIA). The proposal is under review and a decision is expected early in 2022. Additional grant proposals to the National Science Foundation are in preparation for submission early in 2022.

Despite the constraints imposed by the COVID-19 pandemic, Quello Center affiliates continued to present work at academic research conferences. We also participated in national and international webinars for professional audiences and in several events for practitioners related to our work on broadband. The Center also organized and co-sponsored, with CITI at Columbia University, a well-attended townhall at the 49th Research Conference for Communication, Information, and Internet Policy (TPRC49).

Center affiliates published several articles in peer-reviewed publications, including *Telematics & Informatics* and *Telecommunications Policy*. Additional articles are in revision and under review at top-ranked journals. Several book chapters, technical reports, and policy briefs complement the portfolio. As in past years, we used the Quello Center *SSRN E-Journal* to disseminate working papers prior to publication.



## 1. SPEAKER SERIES AND POLICY DISCUSSIONS

One of our missions is to stimulate discussion of important and controversial issues, based on detailed examination of historical experiences as well as rigorous analyses of forward-looking policy options. Depending on the topic and the speaker, we conduct some discussions following Chatham House rules, record others for time-delayed release in our video archive (<https://vimeo.com/quellocenter>) or stream them live to a national and global audience (streamed talks are also placed in our video archive). Notable Center and co-sponsored events in the recent past include:

### 1.1. Speaker Series (archived at <https://vimeo.com/quellocenter>)

- **Bianca C. Reisdorf**, University of North Carolina, Charlotte; **Grant Blank**, University of Oxford; **Craig T. Robertson**, University of Oxford, **et al.** *Information Seeking During COVID-19: A Multi-Method Approach* (December 2021).
- **Josephine Wolff**, Tufts University, *Cyber Insurance Policy: The Role of Carriers and Regulators in an Emerging Market* (November 2021).
- **Pablo J. Boczkowski**, Northwestern University, *Abundance: On the Experience of Living in a World of Information Plenty* (October 2021).
- **Christopher Ali**, University of Virginia, *Farm Fresh Broadband* (September 2021).
- **Alyssa Harvey Dawson**, Gusto, *Challenges of Smart Cities/Public-Private Partnerships in the Digital Economy* (April 2021).
- **Jasmine E. McNealy**, University of Florida, *Sonic Privacy* (April 2021).
- **Philip M. Napoli**, Duke University, *Regulating “Fairness” on Social Media: Lessons from the Fairness Doctrine* (March 2021).
- **Ruth Shillair**, Michigan State University & **William H. Dutton**, Oxford University, *Multidisciplinary Perspectives on Cybersecurity Capacity Building* (February 2021).
- **Robin Mansell**, London School of Economics & **W. Ed Steinmueller**, University of Sussex, *Platform Economics: Possible Futures* (January 2021).
- **Silvia M. Lindtner**, University of Michigan, *Prototype Nation: China and the Contested Promise of Innovation* (December 2020).
- **Karen Mossberger**, Arizona State University, *Digital Activity and Economic Resilience in Communities* (October 2020).
- **Keith N. Hampton**, Michigan State University, *Digital Media, and Human Capital in Rural America* (November 2020).

### 1.2. Panel Discussions and webinars

- **The Information Society—Restoring the Future**, townhall at TPRC 49. Co-organized with Eli M. Noam at Columbia University. With The Honorable Ro Khanna (U.S. Representative, D-CA), Sherry Turkle (Massachusetts Institute of Technology), Robin Mansell (London School of Economics), and Michael R. Nelson (Carnegie Endowment for International Peace) (September 2021).
- **Digital Security in Enterprises in a Context of Increasing Digitalization**. Organized by NIC.br, Sao Pãolo, Brazil. With Laurent Bernat (OECD), Johannes M. Bauer (Quello Center), Éireann

Leverett (Concinnity Risks), Cristine Hoepers (CERT.br|NIC.br), Leonardo Melo Lins (Cetic.br|NIC.br), Georgina Núñez (UN ECLAC), (May 2021).

- **Resilience as a Goal of Information and Communication Policy: A Reassessment and Outlook**, at TPRC 48. Moderated by Johannes M. Bauer, Quello Center. Panelists: Chris Ritzo & Lai Yi Ohlsen, Measurement Lab; David D. Clark, MIT; Patricia H. Longstaff, Syracuse University; Angela Siefer, National Digital Inclusion Alliance; Carleen F. Maitland, Pennsylvania State University; Richard Whitt, GLIANet. (February 2021).
- **Free Speech, Societal Harmony, and Media Diversity: Pick Two**, at TPRC 48. Co-sponsored with the Columbia Institute for Tele-Information (CITI). Moderation by Johannes M. Bauer, Michigan State University, and Eli M. Noam, Columbia Business School; Panelists: Nadine Strossen, American Civil Liberties Union/NYU; L. Jean Camp, Indiana University; Olivier Sylvain, Fordham University; Thomas W. Hazlett, Clemson University (February 2021).
- **International Impact of AI on Economy and Society**. Webinar with the International Telecommunications Society (ITS) examining the current and potential impact of artificial intelligence (AI) on the economy and society. See <https://itsworld.org/wp-content/uploads/2020/10/AI-Webinar-Outline.pdf> for details (November 2020).
- **Antitrust and Platform Regulation**. Panel discussion hosted by the Research Conference on Communications, Information, and Internet Policy (TPRC) (April 2020).

## 2. PROJECTS IN DEVELOPMENT

### 2.1. The COVID-19 Pandemic and Rural Digital Inequities in Educational Attainment, Student Performance, and Psychological Wellbeing

This research will study the role of digital inequality on change in rural student's academic performance, educational aspirations, and psychological wellbeing due to the COVID-19 pandemic. Utilizing existing survey and student record data from a 2019 sample of rural students will be paired with student records from standardized exams (2019-2022), and information on student internet during the pandemic. This work will answer the question of whether students with no or poor Internet access, and those with lower digital skills, experienced declines in academic performance, educational aspirations, or psychological wellbeing? And if initiatives by schools to "fill the gap" in the missing infrastructure for rural Internet access (e.g., deploying cell phone hotspots) was successful at preventing negative consequences to student performance, educational aspirations, and psychological wellbeing due to preexisting digital inequalities?

### 2.1. Spectrum Economics, Policy, and Regulation

The Quello Center is the lead for the research related to spectrum economics, policy, and regulation and the MSU coordinator for related research on spectrum security and privacy. With a national consortium of academic researchers and industry partners, we were competing in the highly competitive *NSF Spectrum Innovation Initiative (SII)*. Although the award in this competition was given to the Spectrum X Consortium coordinated by Purdue University, we continue to explore federal and other funding opportunities with our collaborators at Virginia Tech. The MSU team brings together faculty from the College of Communication Arts and Sciences, Engineering, and Law. Our work will connect the technical understanding garnered from technical and engineering analyses

with the economics of spectrum policy and regulation. We will also serve as the liaison to national and international spectrum policy organizations and other stakeholders. After exploratory work in 2020 as part of an NSF planning grant to Virginia Tech, the full proposal was submitted in April 2021.

### **2.3. Spatial Inequality in the Digital Economy**

A joint initiative with researchers at the Oxford University and the Humboldt Institute for Internet and Society (HIIG) in Berlin, this project seeks to understand the forces that drive inclusion and exclusion of regions and nations in the global digital economy. Building on strands of work in development economics and on digital entrepreneurship, we hypothesize that the digital development of nations can be measured as a network of technologies and the relations between them. Global inequalities in digital development can then be understood as differences in the positions of countries in the “technology space.” Using data from Stack Overflow, the world's largest question and answer website for programming related topics, we describe this technology space as a network. We believe that this perspective has the potential to result in a better understanding of persistent inequalities in the development of the digital economy. We were able to obtain funding from programs at Oxford University to carry out project development work.

### **2.4. Michigan MOON-Light**

This collaboration brings together Michigan State University, Merit Network, and several retail ISP partners across Michigan to reduce the persistent broadband gap. Key part of the project is a next-generation middle mile network that will reduce the cost for local access providers and facilitate competition at the local level. If supported, the project will transform broadband access in Michigan.

## **3. ONGOING PROJECTS**

### **3.1. Political and Health Information Seeking**

This project, partially funded by a grant from the *John S. and James L. Knight Foundation*, seeks to understand information seeking and how different practices influence knowledge about matters of public importance during periods of dynamic change. Such situations, exemplified but not limited to the coronavirus pandemic, necessitate that individuals and organizations make decisions based on incomplete and changing information, often complicated by deliberately misleading information. Using the unfolding coronavirus pandemic as a case to study the broader phenomenon of information seeking and verification under conditions of uncertainty and rapidly changing information, the research project examines the interplay between political and health information seeking. Controlling for socioeconomic and other factors, we are particularly interested in how sources and channels used to obtain, verify, and update information influence individuals’ mental models and factual knowledge about the pandemic and appropriate responses.

A team of researchers from Michigan State University, University of North Carolina Charlotte, Oxford University, and Clemson University conducted two nationally representative surveys in the United States and the United Kingdom. We are currently examining four research questions pertaining to theories of information seeking, information verification, and trust in different information sources: (1) What online media, offline media, and other information sources do American and British

Internet users rely on and trust during the COVID-19 pandemic, and how do socio-demographic factors influence these choices? (2) (How) Do people update and verify information to deal with incomplete information and uncertain knowledge? (3) How do socio-demographic factors, information sources, and the updating rules used by individuals relate to their perceptions and knowledge about political and health topics related to COVID-19? (4) How do socio-demographic factors, information sources, and the updating rules used by individuals influence behavioral intentions?

#### Publications, Conference Papers, and Policy Briefs

- Reisdorf, B.C., Blank, G., Cotten, S., Argyris, A., Robertson, C.T., Knittel, M., & Bauer, J.M. (2021). Overcoming COVID-19 Vaccine Hesitancy. *Quello Center Policy Brief* 02/21.
- Reisdorf, B.C., Blank, G., Bauer, J. M., Cotten, S., Robertson, C.T., & Knittel, M. (2021). Information Seeking Patterns and COVID-19 in the United States. *Journal of Quantitative Description: Digital Media*, 1. [DOI](#)
- Robertson, C.T., Knittel, M., Blank, G., Bauer, J.M., & Shillair, R. (2021). The influence of news media, politicians, and experts as information sources on COVID-19 attitudes and beliefs: A US–UK comparison. Under review.
- Blank, G., & Reisdorf, B.C. (2021). Digital inequalities and public health during COVID-19: Media dependency and vaccination. Under review.

### **3.2. Policies to Support Digital Innovation**

This multi-year research initiative seeks to inform policies toward advanced ICT service and applications in the United States, with a current emphasis on 5G wireless services, platform ecosystems, and systemic types of innovation (e.g., smart mobility). Many of the topics addressed will also apply to emergent technologies, including 6G and sub-THz services as well as the Internet of Intelligence (IoI). 5G, 6G and sub-THz wireless services will constitute an integral part of the future gigabit communication network infrastructure. Platform ecosystems have been the focus of much criticism but the drivers of innovation in these markets, and positive and negative effects of digital platforms, are only poorly understood.

Projects in this area will examine how policy choices affect innovation outcomes. The \$100,000 gift from Facebook has helped launch work in this family of projects. A proposal to the *Sloan Foundation* was submitted and it currently in review. Some of the issues raised in the spectrum policy proposal to NSF addresses some of the issues is in preparation, together with researchers in the Economics Department at MSU and a project partner at MIT.

#### Publications and Working Papers

- Prado, T.S., & Bauer, J.M. (2021). Effects of Big Tech Acquisitions on Start-up Funding and Innovation. Under review.
- Bauer, J.M. & Bohlin, E. (2021). Regulation and innovation in 5G markets. *Telecommunications Policy*, 102260, <https://doi.org/10.1016/j.telpol.2021.102260>.
- Knieps, G. & Bauer, J.M. (2021). Internet of things and the economics of 5G-based local industrial networks. *Telecommunications Policy*, 102261, <https://doi.org/10.1016/j.telpol.2021.102261>.

- Bauer, J.M. and Prado, T.S., Digital Platforms and Innovation: Lessons for Innovation Policy and Regulation (December 15, 2020). Available at: [SSRN](#) or [DOI](#).

### **3.3. Broadband and Educational Achievements**

Initiated in 2019, this study was designed to understand the repercussions of absent or poor home Internet connectivity on student performance and the associated costs to society. The focus was on Internet connectivity outside of school among middle and high school students enrolled in rural and small-town schools. Inequalities related to income and race are often used to explain why some people still do not have Internet or broadband access at home. Often overlooked in this discussion is the role of geography and varying levels of infrastructure access. Our study allowed to disentangle these factors.

The report published in March 2020 was widely read by policymakers and stakeholders. Building on the experience with the Broadband Gap project, we helped Merit Network to develop a toolkit that facilitates a highly granular assessment of the availability and quality of broadband connectivity. During the past year, the approach has been used by several counties across Michigan, including Washtenaw County, Berrien County, and Ottawa County, to assess the state of connectivity among their residents and to develop appropriate responses to overcome gaps and discrepancies. It was also used by several large organizations, including Wayne State University, to identify and help overcome connectivity gaps among students and faculty. The approach is scalable and applicable to state and national level information collection.

#### Publications and Working Papers

- Hampton, K.N., & Shin, I. (under review). Disconnection is More Problematic for Adolescent Self-Esteem Than Heavy Social Media Use: Digital Inequality, Restrictive Parenting, and the Relationship to Time Rural Youth Spend with Friends and Family.
- Hampton, K.N., Robertson, C.T., Fernandez, L., Shin, I. & Bauer, J.M. (2021). How variation in Internet access, digital skills, and media use are related to rural student outcomes: GPA, SAT, and educational aspirations. *Telematics and Informatics* 63, 101666, <https://doi.org/10.1016/j.tele.2021.101666>.
- Bauer, J.M., Hampton, K.N., Fernandez, L., & Robertson, C.T. (2020). *Overcoming Michigan's homework gap: The role of broadband Internet connectivity for student success and career outlooks*. Quello Center Working Paper No. 06-20.
- Hampton, K.N., Fernandez, L., Robertson, C.T., & Bauer, J.M. (2020). *Broadband and Student Performance Gaps*. James H. and Mary B. Quello Center, Michigan State University. March. <https://doi.org/10.25335/BZGY-3V91>.

### **3.4. Threats from Ideologically Motivated Cyber Attackers**

This research project led by Tom Holt (Criminal Justice), Arun Ross (Computer Science), Ruth Shillair (Quello Center), and Johannes M. Bauer (Quello Center) at Michigan State University and a team of collaborators at Arizona State University is examining an extensive data set documenting cyberthreats posed by politically motivated attackers. Ideologically driven attackers do not follow the monetary logic of financially motivated cybercriminals. Whereas there is rich research in the economics of cybercrime on profit-seeking cybercriminals, the strategies of politically motivated

attackers are poorly understood, and defenses are often weak. We go beyond the prevailing machine learning approaches and develop a better system to identify such attacks and prevention strategies. The project is funded by contracts with Arizona State University and the Department of Homeland Security (DHS). We were invited to submit an additional round of funding. Additional funding will be sought from the National Science Foundation (NSF). The project has generated several conference presentations and two papers are currently under review at peer-reviewed venues.

### Publications

- Banerjee, S.; Swearingen, T.; Shillair, R.; Bauer, J.M.; Holt, T.J.; & Ross, A. (2021). Using machine learning to examine cyberattack motivations on web defacement data. *Social Science Computer Review*. Published online on 23 February 2021, [DOI](#).
- Holt, T.J.; Lee, J.R.; Freilich, J.D.; Chermak, S.M.; Bauer, J.M.; Shillair, R. & Ross, A. (2020) An exploratory analysis of the characteristics of ideologically motivated cyberattacks, *Terrorism and Political Violence*, DOI: [10.1080/09546553.2020.1777987](https://doi.org/10.1080/09546553.2020.1777987).

## **3.5. Social Tolerance and Communication Technologies**

This project focuses on how the use of new communication technologies, such as social media and mobile phones, affects the durability of relationships, including intergenerational ties (e.g., child-parent-grandparent relations), exposure to other people's opinions and background, and how this exposure is related to outcomes such as social tolerance. This work tests a new theory in the study of community, that modern technologies facilitate persistent contact and pervasive awareness of social ties. As a result of persistence, relationships may be less transitory than in the recent past. This research expands our understanding of how the use of innovative technologies is related to the supportive nature of people's communities, the communication of diverse information, and interaction that could help counter the loss of social capital in contemporary communities. These processes and trends have the potential to increase social cohesion and social tolerance, thus improving the well-being of individuals and society. Keith Hampton is leading this project, with funding by the NSF.

## **4. MATURE AND COMPLETED PROJECTS**

Data collection and analysis for the following projects has been concluded but additional articles and book chapters are under review and in preparation. For a list of publications please check <https://quello.msu.edu/publications>.

### **4.1. Cybersecurity Capacity Building**

William Dutton continues his role as chair of the Social and Cultural Dimension of the Oxford Martin Institute's Global Cybersecurity Capacity Center at the University of Oxford. He is working on the specific notion of a cybersecurity 'mindset' with papers of his own and with Ruth Shillair. The research on the impact of cyber security capacity, based on a comparative analysis of 120 nations, is featured in a chapter of the 2<sup>nd</sup> edition of *Society and the Internet* by Oxford University Press. In addition, several journal articles and many conference presentations have come out of the project. This work is supported by the Foreign and Commonwealth Office in the UK, along with partners from other nations.

## **4.2. Improving the Quality of Broadband Data**

This project started with comments submitted to the National Telecommunications and Information Administration (NTIA) in July 2018, in collaboration with Merit Network seeking input on improved methods for measuring broadband availability and quality. We proposed to use a crowd-sourcing inspired mechanism to collect individual level data and to combine it with complementary methods to reach the unconnected. From these comments, Merit developed a measurement framework consisting of an online speed test and a survey instrument, as well as a second information gathering channel, to obtain information from the unconnected.

## **4.3. Quello Search Project**

This study examined public political opinions by asking Internet users how they use search, social media, and other important media, for political information, and what difference it makes for them. Led by William H. Dutton, the research team conducted an online survey of stratified random samples of Internet users in seven nations, including Britain, France, Germany, Italy, Poland, Spain, and the United States. For a full list of publications related to this project see <https://quello.msu.edu/research/quello-search-project/>.

## **4.4. Broadband to the Neighborhood in Detroit**

This project investigated the degree that neighborhoods in Detroit are disconnected from the Internet and what could be done to increase digital equity. Working in collaboration with the Wayne State University Center for Urban Studies, we conducted 525 telephone surveys with residents across three Detroit neighborhoods and conducted three focus groups. The team completed data collection in December of 2017 and has since published several articles based on the research.

# **5. COMMUNITY AND OUTREACH**

## **5.1. Quello Center Policy Briefs**

In March 2020, we launched the inaugural Quello Center Policy Brief, a series of brief documents synthesizing longer research contributions that is intended for decisionmakers. See <https://quello.msu.edu/policy-briefs/>.

## **5.2. In the Media**

In response to increasing coverage in news and other online events, we added a new page to our website. See <https://quello.msu.edu/in-the-media/>.

## **5.3. Live Streams**

We stream featured lectures in addition to making archive videos available.

## **5.4. Video Library**

We have steadily grown our library of archived talks and short interviews with our speakers. See <https://vimeo.com/quellocenter> for a list of the archived videos.

## 5.5. Online Presence

If you have not already done so, please:

- Check out the Quello Center website at <https://quello.msu.edu/>.
- Like our Facebook page at <https://www.facebook.com/QuelloCenter/>.

## 5.6. SSRN E-Journal

In addition, we have an online working paper archive on the Social Science Research Network (SSRN), currently featuring more than 100 working papers and reports. See:

<https://www.ssrn.com/link/Quello-Center-PUB.html>

## 6. SELECTED PUBLICATIONS AND PRESENTATIONS<sup>1</sup>

### 6.1. Journal Articles and Conference Proceedings

Creese, S., **Dutton, W.H.**, Esteve-Gonzalez, P. & **Shillair, R.** (2021). Cybersecurity Capacity Building: Cross-National Benefits and International Divides. Forthcoming in the *Journal of Cyber Policy*. <https://doi-org.proxy1.cl.msu.edu/10.1080/23738871.2021.1979617>.

**Bauer, J.M.** & Bohlin, E. (2021). Regulation and Innovation in 5G Markets. *Telecommunications Policy*, 102260, <https://doi.org/10.1016/j.telpol.2021.102260>.

Knieps, G. & **Bauer, J.M.** (2021). Internet of Things and the Economics of 5G-based Local Industrial Networks. *Telecommunications Policy*, 102261, <https://doi.org/10.1016/j.telpol.2021.102261>.

**Shin, I., & Hampton, K.N.** (2021). New Media Use and the Belief in a Just World: Awareness of Life Events and the Perception of Fairness for Self and Injustice for Others. *Information, Communication & Society*, 1-17. <https://doi.org/10.1080/1369118X.2021.1950804>.

**Hampton, K.N., Robertson, C.T., Fernandez, L., Shin, I. & Bauer, J.M.** (2021). How variation in Internet access, digital skills, and media use are related to rural student outcomes: GPA, SAT, and educational aspirations. *Telematics and Informatics* 63, 101666, <https://doi.org/10.1016/j.tele.2021.101666>.

**Reisdorf, B.C., Blank, G., Bauer, J. M., Cotten, S., Robertson, C.T., & Knittel, M.** (2021). Information Seeking Patterns and COVID-19 in the United States. *Journal of Quantitative Description: Digital Media*, 1. <https://doi.org/10.51685/jqd.2021.003>

**Prado, T.S. & Bauer, J.M.** (2021). Improving broadband policy design using market data: A general framework and application to Brazil, *Telecommunications Policy*, 45(5), 102111, [DOI](https://doi.org/10.1016/j.telpol.2021.102111).

Banerjee, S.; Swearingen, T.; **Shillair, R.; Bauer, J.M.**; Holt, T.J.; & Ross, A. (2021). Using machine learning to examine cyberattack motivations on web defacement data. *Social Science Computer Review*. Published online on 23 February 2021, [DOI](https://doi.org/10.1089/sscr.2021.0001).

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<sup>1</sup> In reverse chronological order within each subsection.



- Holt, T.J.; Lee, J.R.; Freilich, J.D.; Chermak, S.M.; **Bauer, J.M.**; **Shillair, R.** & Ross, A. (2020) An exploratory analysis of the characteristics of ideologically motivated cyberattacks, *Terrorism and Political Violence*, <https://doi.org/10.1080/09546553.2020.1777987>.
- Feijóo, C.; Kwon, Y.; **Bauer, J.M.**; Bohlin, E; Howell, B.; Jain, R.; Potgieter, P.; Vu, K.; Whalley, J.; & Xia, J. (2020). Harnessing AI to increase wellbeing for all: The case for a new technology diplomacy, *Telecommunications Policy*, 44(6), 101988, <https://doi.org/10.1016/j.telpol.2020.101988>.
- Hong, S.J.; **Bauer, J.M.**; Lee, K.; Granados, N.F. (2020). Drivers of supplier participation in ride-hailing services, *Journal of Management Information Systems*, 37(3), 602-630. <https://doi.org/10.1080/07421222.2020.1790177>
- Robertson, C.T.**, & Mourão, R. (2020). Faking alternative journalism? An analysis of self-presentations of “fake news” sites. *Digital Journalism*, published online 25 March 2020, DOI: [10.1080/21670811.2020.1743193](https://doi.org/10.1080/21670811.2020.1743193).
- Reisdorf, B., Fernandez, L., Hampton, K.N., Shin, I., & Dutton, W.H.** (2020). Mobile Phones will not Eliminate Digital and Social Divides. *Social Science Computer Review*, published online March 2020. <https://doi.org/10.1177/0894439320909446>.
- Robertson, C.T.**, Mourão, R.R., & Thorson, E. (2020). Who Uses Fact-Checking Sites? The Impact of Demographics, Political Antecedents, and Media Use on Fact-Checking Site Awareness, Attitudes, and Behavior. *The International Journal of Press/Politics*, 194016121989805. DOI: [10.1177/0894439320909446](https://doi.org/10.1177/0894439320909446).
- Aguelakakis, N., & **Yankelevich, A.** (2019). Collaborate or consolidate: Assessing the competitive effects of production joint ventures. *Economic Inquiry*, 57(1), 73-84.
- Astorne-Figari, C., López, J.J., & **Yankelevich, A.** (2019). Advertising for consideration. *Journal of Economic Behavior & Organization*, 157, 653-669.
- Dutton, W.H.**, and **Fernandez, L.** (2018/19), ‘How Susceptible Are Internet Users?’, *InterMEDIA*, December/January 2018/19 46(4): 36-40.
- Dutton, W.H.**, Creese, S., **Shillair, R.**, & Bada, M. (2019). Cybersecurity Capacity: Does It Matter? *Journal of Information Policy*, 9, 280-306.
- Fernandez, L.H., Reisdorf, B.C., & Dutton, W.H.** (2019). Urban Internet myths and Realities: A Detroit case study. *Information, Communication & Society*, 1–22, published online 5 June 2019, DOI: [10.1080/1369118X.2019.1622764](https://doi.org/10.1080/1369118X.2019.1622764).
- Hampton, K.N.** (2019). Social Media and Change in Psychological Distress over Time: The Role of Social Causation. *Journal of Computer-Mediated Communication*.
- Mack, E.A., **Dutton, W.H.**, Rikard, R.V., & **Yankelevich, A.** (2019). Mapping and measuring the information society: A social science perspective on the opportunities, problems, and prospects of broadband Internet data in the United States. *The Information Society*, 35(2), 57–68.
- Marin, A., & **Hampton, K.N.** (2019). Network Instability in Times of Stability. *Sociological Forum*, 34(2): 313-336.
- Mourão, R. R., & **Robertson, C. T.** (2019). Fake News as Discursive Integration: An Analysis of Sites That Publish False, Misleading, Hyperpartisan and Sensational Information. *Journalism Studies*, 20:14, 2077-2095, DOI: [10.1080/1461670X.2019.1566871](https://doi.org/10.1080/1461670X.2019.1566871)

**Reisdorf, B.C., Yankelevich, A., Shapiro, M., & Dutton, W.H.** (2019). Wirelessly bridging the homework gap: Technical options and social challenges in getting broadband to disconnected students. *Education and Information Technologie*, 24, 3803–3821.  
<https://doi.org/10.1007/s10639-019-09953-9>

**Robertson, C.T., Dutton, W.H., Ackland, R., & Peng, T.-Q.** (2019). The democratic role of social media in political debates: The use of Twitter in the first televised US presidential debate of 2016. *Journal of Information Technology & Politics*, 1–14.

## 6.2. Books and Chapters

**Bauer, J.M.** (forthcoming). Agile Regulation: Towards Flexible Governance of the Digital Economy Governance. In: F. Birke, G. Brunekreeft, V. Stocker, & H.-J. Weiß (eds.), *Perspektiven der Netzökonomie*. Baden-Baden: Nomos Verlag.

**Bauer, J.M. & Dutton, W.H.** (2021). “A nova agenda de cibersegurança: desafios econômicos e sociais para uma Internet segura,” in: NIC.br (ed.), *Segurança Digital: uma análise de gestão de risco em empresa brasileiras*, Sao Pãulo, Brazil: Cadernos NIC.br Estudos Setoriais.

**Hampton, K.N.** and Wellman, B. (2021). All the Lonely People? The Continuing Lament about the Loss of Community. In L. Lievrouw and B. Loader (Eds.), *Routledge Handbook of Digital Media and Communication*. Abingdon, UK. Routledge. 281-296.

**Fernandez, L.** (2020). Digital Advertising in Political Campaigns and Elections. In W. H. Dutton (Ed.), *A Research Agenda for Digital Politics*. Edward Elgar Publishing.

Creese, S., **Shillair, R.**, Bada, M., **Reisdorf, B.C.**, Roberts, T., & **Dutton, W.H.** (2019). The Cybersecurity Capacity of Nations. In M. Graham & W.H. Dutton (Eds.), *Society and the Internet: How Networks of Information and Communication are Changing our Lives* (2nd ed.). Oxford: Oxford University Press.

**Dutton, W.H.** (2019). Wired City. In A.M. Orum (Ed.), *The Wiley Blackwell Encyclopedia of Urban and Regional Studies* (1st ed.).

**Dutton, W.H., Reisdorf, B.C.,** Blank, G., Dubois, E., & **Fernandez, L.** (2019). The Role of Search and Social Media in Shaping Public Opinion. In M. Graham & W. H. Dutton (Eds.), *Society and the Internet: How Networks of Information and Communication are Changing our Lives* (2nd ed.). Oxford: Oxford University Press.

Graham, M., and **Dutton, W.H.** with a foreword by Manuel Castells (2019) (eds), *Society and the Internet, 2nd Edition: How Networks of Information and Communication are Changing our Lives*. Oxford: Oxford University Press.

**Reisdorf, B.C.,** Blank, G., & **Dutton, W.H.** (2019). Internet Cultures and Digital Inequalities. In M Graham & W. H. Dutton (Eds.), *Society and the Internet: How Networks of Information and Communication are Changing our Lives* (2nd ed.). Oxford: Oxford University Press.

## 6.3. Book Reviews

**Dutton, W.H.** (2019), *Internet Daemons: Digital Communications Possessed*. Fenwick McKelvey. Minneapolis, MN: University of Minnesota Press, for *Journal of the Association for Information Science and Technology*.

## 6.4. Technical Reports

**Bauer, J.M., Hampton, K.N., Fernandez, L.H., & Robertson, C.T. (2020).** Overcoming Michigan's homework gap: The role of broadband Internet connectivity for student success and career outlooks. Quello Center Working Paper No. 06-20.

**Hampton, K. N., Fernandez, L.H., Robertson, C.T., & Bauer, J. M. (2020).** Broadband and Student Performance Gaps. James H. and Mary B. Quello Center, Michigan State University. 3 March 2020, DOI.

## 6.5. Recent and Upcoming Presentations

**Knittel, M. (2022, January).** How an Online Health Support Community Responded to the COVID-19 Crisis," Paper to be presented at the Hawaii International Conference on System Sciences (HICSS) 2022.

**Hampton, K.N., & Bauer, J.M. (2021, November).** The Social Side of Building Fiber: Implications for Middle and High School Students Academic Performance and Self-Esteem. Michigan Universities Network Research Collaboration Summit. Merit Networks. Ann Arbor, MI.

**Grant, B., & Reisdorf, B.C. (2021, September).** Digital inequalities and public health during COVID-19: Media dependency and vaccination. Presented at the Digital Inclusion Policy and Research Conference 2021 (DIPRC2021), Liverpool, UK, September 14, 2021.

**Hampton, K.N., & Bauer, J.M. (2021, November).** When Access is Not Enough: Evidence from Rural Michigan. Washington, D.C., The Pew Charitable Trust.

**Bauer, J.M. (2021, October).** ICT Convergence: Challenges and Opportunities for Regulation and Public Policy. PURC/World Bank International Training Program on Utility Regulation and Strategy, Gainesville, Florida, October 12, 2021.

**Prado, T.S., & Bauer, J.M. (2021, August).** Effects of Big Tech Acquisitions on Start-up Funding and Innovation (August 17, 2021). Quello Center Working Paper No. 04-21, Available at SSRN: <https://ssrn.com/abstract=3787127> or <http://dx.doi.org/10.2139/ssrn.3787127>

**Prado, T.S. (2021, June).** Kill Zones? Effects of Big Tech Start-up Acquisitions on Innovation. 23rd Biennial Conference of the International Telecommunications Society (ITS), Gothenburg, Sweden, 21st-23rd June. <https://www.econstor.eu/handle/10419/238049>.

**Shillair, R., Dutton, W.H., Esteve-Gonzalez, P. and Creese, S. (2021, May).** *Understanding the Role of Human and the Machine in Cybercrime and Cybersecurity. Cybersecurity Capacity Building: Cross National Benefits and International Divides.* [Online]. SECREV: The Cybersecurity Revolution. <https://secrev.org/index.html>

**Hampton, K.N.; Robertson, C.T.; Fernandez, L.H.; Shin, I.; & Bauer, J.M. (2021, May).** Digital Media and Human Capital in Rural America: Broadband Access, Digital Skills, and Excessive Media Use for GPA, SAT, and Educational Aspirations. International Communication Association. Virtual Conference.

**Hampton, K.N.; Robertson, C.T.; Fernandez, L.H.; Shin, I.; & Bauer, J.M.** (2021, May). Beyond Equitable Access: Everyday Use and Digital Skills for Rural Students' Academic Outcomes. IEEE International Workshop on Communications Quality and Reliability. Virtual Conference.

**Hampton, K.N.** (2021, May). Beyond Equitable Access: Everyday Use and Digital Skills for Rural Students' Academic Outcomes. Bridging the Connectivity Challenge Hackathon. Cybera, Inc. Calgary, Canada.

Creese, S., **Dutton, W. H.**, Esteve-Gonzalez, P., & **Shillair, R.** (2021, February). Cybersecurity Capacity Building: Cross-National Benefits and International Divides. TPRC48, The Research Conference on Communications, Information, and Internet Policy. Washington D.C. Available at SSRN: <https://ssrn.com/abstract=3658350> or <http://dx.doi.org/10.2139/ssrn.3658350>

**Knittel, M., & Shillair, R.** (2021, February) Information Policy, Privacy Failings, and Steps Towards Empowerment in Cases of Technology-Facilitated Sexual Violence. The Research Conference on Communications, Information, and Internet Policy TPRC48. Washington, D.C. <http://dx.doi.org/10.2139/ssrn.3748984>.

## 6.6. Work in Progress

**Bauer, J.M.** (under review) New Guardrails for the Information Society (September 12, 2021). Quello Center Working Paper No. 05-21, Available at SSRN: <https://ssrn.com/abstract=3938541>.

**Hampton, K.N., & Shin, I.** (under review). Disconnection is More Problematic for Adolescent Self-Esteem Than Heavy Social Media Use: Digital Inequality, Restrictive Parenting, and the Relationship to Time Rural Youth Spend with Friends and Family.

Please see <https://quello.msu.edu/publications/> for additional work in progress.