
How the Design of Social Technology Fails Rural America

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Abstract

Researchers and designers understand that social technologies need to be designed and understood from the perspective of many different geographies and identities. This provocation argues that, unless we abandon growth and scalability as metrics of success in social technologies, we will never be able to appropriately design for rural places.

Author Keywords

Rural; rurality; neoliberalism; economics; geography.

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CSS Concepts

- Human-centered computing ~HCI theory, concepts and models

Introduction

Rural areas in the United States have numerous challenges and barriers to participation in modern digital life. Many of these barriers are attributed to the digital divide (i.e., lower Internet access and adoption rates in rural areas compared to urban areas), though times are changing. Both the Obama and the Trump Presidencies put forth new initiatives and funding to increase rural Internet infrastructure and access. While we can be hopeful for a shrinking digital divide, it remains to be seen what the role of design is in rural barriers to adoption and access. Based on prior research that has found that contemporary social technologies and the code they rely upon may not actually be designed with rural people in mind [3,4,7,8], this paper turns to underlying driving forces in social technology to investigate how they are frequently at odds with rural livelihood. Organizing this paper into three premises on rural design, I argue here that a reliance upon neoliberal notions of scalability and economic growth is fundamentally at odds with rural realities in the United States.

Premise One: Social technology is built on logics of neoliberal growth

Grow the pie

Liberal economic policies in the United States, especially since 1980, have largely been based in a form of economic growth that seeks to grow the amount of wealth that a nation has (i.e., neoliberalism). This mode of economic growth exists in opposition to other economic policies that seek to redistribute rather than grow wealth. The former economic policy is frequently referred to as "Grow the Pie." Rather than taking away from one person's piece of the pie to make another person's piece comparable in size, these policies argue that we should be increasing the size of the pie so the person with the smaller piece has an opportunity to make their piece bigger without making other people's pieces smaller [2]. These policies have arguably resulted an increased concentration of wealth in the hands of the few [6]. In other words, while the pie has grown, only the people with already big pieces of pie have seen their pieces grow. Whereas early liberal economic policies were paired with an increase in social services and government expenditure, neoliberal economic policies in the United States, especially since 2000, have resulted in a decline of funding for governmental social services, with the tab largely being picked up by an expanding non-profit sector relying more and more on private donations [11].

User-generated content is neoliberal

Social technologies are largely deemed successful based on their ability to scale. With advertising being the primary revenue source for social technologies, a bigger user base means more eyes on advertising and

a larger revenue. A funding model for technology which largely relies on the ability to return on investment reinforces this growth-oriented model. Another defining feature of contemporary social technologies is their reliance on user-generated content as the primary form of content creation. Social technology companies provide a platform for connection and the users provide the content to populate that platform. User generated content feeds scalability by making ad targeting more and more advanced. As users continue to create content, paired with behavioral tracking on larger platforms such as lingering time and engagement metrics, advertising becomes more effective and therefore more profitable. In this sense, user-generated content is inherently tied up in the logics of neoliberalism and free market capitalism [12].

We can see here how, when economic policies that encourage limitless economic growth are combined with social technologies whose primary revenue source is advertising, user-generated content at its basis becomes a primary tool of neoliberalism in the technology economy. To be successful is to scale to (and make money off of) as many users as possible.

Premise Two: Technology collapses geography and ignores rural difference

Scalability = Geographic Simplicity

As technologies scale to reach broader audiences, they also enter into vastly different geographies. These geographies bring with them their own understandings of culture, values, and sociality. Large platforms frequently portray themselves as culturally neutral, in that local users can impart their culture and context into the platforms through content creation and

What is neoliberalism?

"Neoliberalism is in the first instance a theory of political economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets and free trade." – David Harvey, *A Brief History of Neoliberalism*

developing networks of community that reflect their own physical geographies. When broader social technologies do reflect cultural specificity in targeting a certain demographic (e.g., Grindr for gay men or JDate for Jewish people), they largely leave geography out of the cultural equation [4]. When these technologies do consider geography, it is largely to determine what content to show to a user (e.g., Facebook's use of a user's location to algorithmically curate Newsfeed and ad content). Though, prior research has found that even location inference algorithms perform poorly for rural users due to inherent biases in the design of those algorithms [8].

Social technologies ignore rural-urban difference

Rural areas are inherently different than urban areas with regards to values, culture, demographics, relationship to nature, and access to various resources [5]. When geographic context is ignored or left behind in the creation of a social technology, that technology either becomes appropriate for different use or used very little, if at all [4]. Prior research has shown that platforms that rely on user generated content (e.g., Wikipedia, OpenStreetMap) have much lower quality content on rural areas [7]. An example of this that has become very salient in my own rural experiences has been the use of Yelp. Platforms like Yelp require a density of contribution that is largely not possible in rural and remote places. In the rural areas where I spend most of my time in the Midwestern United States, Yelp reviews are largely coming from outsiders (i.e., tourists) who are in the area temporarily. These reviewers bring their own expectations of service or product quality with them that may not be in line with the reality of service and product that rural businesses

provide. In these cases, the content on Yelp does not reflect the reality of locals' perception of that business.

Social technologies by and large fail to account for geographic differences in the United States, especially across the urban-rural spectrum.

Premise Three: Rurality is incompatible with neoliberal economics

Rurality is about community and sustainability

A neoliberal mindset of growth may not be a good thing for rural economic development. While rural areas have a higher proportion of small business owners than urban areas [14], they have different motivation than might be expected given current discourse related to innovation and economic growth. In fact, rural entrepreneurs by and large don't start businesses to reap large profits. Rather, rural business owners are more likely to be concerned about providing for family and offering needed resources in their community [1]. This means that an expectation of economic growth and expansion does not reflect the reality of most rural entrepreneurs. Rather than seek limitless economic and population growth, rural communities are better positioned to think critically about sustaining themselves in the future.

Making the rich richer

Contemporary expectations of growth in rural communities, that they should be "recovering" from the collapse of industrialism and small-scale agriculture, are largely predicated in current literature (and practice) on embracing specific tactics. These tactics revolve almost exclusively on combining amenity-based tourism with urban-tested innovation practices such as

expanding the creative class, placemaking, and building entrepreneurial support systems [10]. While it is useful to understand what is and is not successful in rural communities, these existing tactics largely rest on bootstrap narratives without the broad influx of federal and state support that would make these successful everywhere. In other words, it is the job of the rural communities to lift themselves out of despair by relying on their own resources, but only rural areas who are already well-resourced are going to succeed.

Economic development policies that prioritize growth over a base level of self-sufficiency are going to replicate the rich get richer phenomenon that we are seeing in urban areas all over the globe.

The Result

Given that neoliberal modes of growth are largely incompatible with rural equality and sustainability, I argue that a priority of growth and scalability in social technologies will continue to fail rural areas. Rural people are not passive to changes in social technology. In fact, rural people have long sought to solve their own technological problems before urban corporations and urban-based governments saw them as profit or priority [9]. By prioritizing growth, or getting as many users as quickly as possible, social technology companies make their platforms wholly incompatible with rural areas. In particular, a continued focus on user-generated content as the primary drive of social technologies means that geographies with few users will never be designed for.

To design for rural areas means to design in wholly different ways. If we are to design for rural areas, we must leave universal design in the past and design for

hyper-local needs. Universal design will only replicate the narrative that we must design for everyone and every geography simultaneously. Instead, we should be asking questions about how we design for as few people as possible.

- Small and remote populations in the United States are not going away anytime soon, and may become more common if people continue to be priced out of and disenfranchised from cities. What does it look like when we design social technologies for three people to communicate with each other rather than three billion?
- Universal Internet adoption and access is much more difficult to imagine when someone lives tens or hundreds of miles away from the nearest town. What happens when we recognize that constant connectivity is a near impossibility with current infrastructure expectations? How might we design for dis-connectivity or sporadic connectivity?
- The development of social technologies and expectations of connection may even draw resources away from rural communities. For example, telehealth has been recently approved for coverage on Medicaid and Medicare (the public healthcare in the United States for the poor and elderly). Rather than investing in developing much-needed specialty healthcare resources in rural communities, it is possible that this could result in a drain of healthcare away from rural areas. Rather than see a doctor down the road, rural residents could be forced into telehealth appointments with specialists located in urban areas far away. How might we prioritize the need to build tangible local resources using social technologies?

References

- [1] Terry Besser and Nancy Miller. 2013. Community Matters: Successful Entrepreneurship in Remote Rural US Locations. *The International Journal of Entrepreneurship and Innovation*. 14, 1, 15-27.
- [2] Leslie Carbone and Jay Richards. 2009. The Economy Hits home: What Makes the Economy Grow? *The Heritage Foundation*.
- [3] Eric Gilbert, Karrie Karahalios, and Christian Sandvig. 2008. The Network in the Garden: An Empirical Analysis of Social Media in Rural Life. In *Proceedings of the 2008 SIGCHI Conference on Human Factors in Computing Systems (CHI '08)*, 1603-1612.
- [4] Jean Hardy and Silvia Lindtner. 2017. Constructing a Desiring User: Discourse, Rurality, and Design in Location-Based Social Networks. In *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '17)*. ACM, New York, NY, USA, 13-25.
- [5] Jean Hardy, Dharma Dailey, Susan Wyche, and Norman Makoto Su. 2018. Rural Computing: Beyond Access and Infrastructure. In *Companion of the 2018 ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '18)*. ACM, New York, NY, USA, 463-470.
- [6] David Harvey. 2005. *A Brief History of Neoliberalism*. Oxford University Press.
- [7] Isaac L. Johnson, Subhasree Sengupta, Johannes Schöning, and Brent Hecht. 2016. The Geography and Importance of Localness in Geotagged Social Media. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems (CHI '16)*. ACM, New York, NY, USA, 515-526.
- [8] Isaac Johnson, Connor McMahon, Johannes Schöning, and Brent Hecht. 2017. The Effect of Population and "Structural" Biases on Social Media-based Algorithms: A Case Study in Geolocation Inference Across the Urban-Rural Spectrum. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (CHI '17)*. ACM, New York, NY, USA, 1167-1178.
- [9] Ronald Kline. 2000. *Consumers in the Country: Technology and Social Change in Rural America*. The Johns Hopkins University Press.
- [10] David McGranahan, Timothy Wojan, and Dayton Lambert. 2011. The Rural Growth Trifecta: Outdoor Amenities, Creative Class and Entrepreneurial Context. *Journal of Economic Geography*. 11, 3, 529-557.
- [11] David Reich, Isaac Shapiro, Chloe Cho, and Richard Kogan. 2017. Block-Granting Low-Income Programs Leads to Large Funding Declines Over Time, History Shows. *Center on Budget and Policy Priorities*.
- [12] Nick Srnicek. 2016. *Platform Capitalism*. Polity Press.
- [13] Anna Tsing. 2009. Supply Chains and the Human Condition. *Rethinking Marxism*. 21, 2, 148-176.
- [14] Li Yu and Georgeanne M. Artz. 2018. Does rural entrepreneurship pay? *Small Business Economics*, 1-22.