

User Data as Public Resource:

Implications for Social Media Regulation

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Abstract

Revelations about the misuse and insecurity of user data gathered by social media platforms have renewed discussions about how best to characterize property rights in user data. At the same time, revelations about the use of social media platforms to disseminate disinformation and hate speech have prompted debates over the need for government regulation to assure that these platforms serve the public interest. These debates often hinge on whether any of the established rationales for media regulation apply to social media. This paper argues that the *public resource rationale* that has been utilized in traditional media regulation in the U.S. applies to social media. The public resource rationale contends that, when a media outlet utilizes a public resource – such as the broadcast spectrum, or public rights of way – the outlet must abide by certain public interest obligations that may infringe upon its First Amendment rights. This paper argues that aggregate user data can be conceptualized as a public resource that triggers the application of a public interest regulatory framework to social media sites and other digital platforms that derive their revenue from the gathering, sharing, and monetization of massive aggregations of user data.

Introduction

Since the revelations regarding Facebook's controversial "emotional contagion" research became public in 2014, the past five years have seen a steady procession of what Ananny and Gillespie (2017) term "public shocks" related to social media platforms. These public shocks represent "public moments that interrupt the functioning and governance of these ostensibly private platforms, by suddenly highlighting a platform's infrastructural qualities and call it to account for its public implications" (p. 3).

Perhaps the most prominent of these public shocks have been the revelations about Russian disinformation campaigns being waged through social media during the 2016 U.S. presidential election and the Facebook/Cambridge Analytica data sharing scandal that broke in the months following the election. These occurrences have been followed by further revelations of the continued use of social media to disseminate disinformation and of additional instances of large-scale data sharing and data security breaches by Facebook (Napoli, 2019). Most recently, the use of social media platforms by a white nationalist to livestream mass murder in a pair of New Zealand mosques has added an additional public shock to the growing accumulation of concerns about the performance and governance of social media platforms (Cheng, 2019).

In the U.S., these occurrences have prompted widespread commentary and debate over the need for greater regulatory oversight of social media platforms (see, e.g., Applebaum, 2019; Hughes, 2019; Zuckerberg, 2019), as well as a series of congressional hearings on topics ranging from Russian interference in the election, to the privacy and security of user data, to the possibility of political bias affecting the operation of search engines and social media platforms (see Napoli, 2019). The focal points of these debates and policy deliberations fall into two broad categories: 1) user data privacy/security; and 2) content moderation/curation. The policy discussions and debates that have emerged around these two issue areas have proceeded more or

less independently. Concerns about data privacy and security generally are situated within the normative framework of consumer protection (see, e.g., Federal Trade Commission, 2016) and have rekindled the longstanding debate over if/how policymakers should assign property rights to user data. However, we are also seeing an emerging data justice movement and associated calls for situating user data issues within broader social responsibility and human rights frameworks (see, e.g., Taylor, 2017; Tisne, 2018). Content-related concerns such as disinformation and extreme violence are situated within a media and democracy framework and have sparked debates over the appropriate scope of social responsibility that should be required of social media platforms in their gatekeeping and content curation functionality (see, e.g., Napoli, 2019). These two issue silos do, however, overlap around concerns such as political micro-targeting and filter bubbles, which both involve the role that user data play in the production and distribution of news, disinformation, and political messaging (see, e.g., Papakyriakopoulos, et al., 2018).

Undoubtedly, moments of transition in communicativity create instability as institutions, processes and practices are adapted. Such moments require policy makers to search for appropriate paradigms that will bring the communications system back into an equilibrium that supports societal ends – in this case issues of democratic stability, public participation and understanding loom large.

We have seen little, at this point, however, in terms of specific legislative or regulatory actions within the U.S. on these issues. This may be the case for a variety of reasons; however, in both cases, the lack of action can likely be explained at least in part by the impediment that the First Amendment poses to any type of aggressive regulatory intervention into the operation of digital platforms (Hendrickson & Galson, 2019). On the content front, the First Amendment

impediments are obvious, given that any governmental directives regarding the curation of content on social media platforms represents a potential intrusion upon the First Amendment rights of platform owners. On the data front, First Amendment issues also arise, in terms of the ways in which restrictions on data gathering can serve to restrict speakers' abilities to deliver messages to the audiences that they desire to reach (Balkin, 2016).

In the approach to media regulation that has evolved in the U.S., government interventions into the media sector often must be rationalized on the basis of some distinguishing characteristic of the technology or service, which in some way justifies the intrusion upon the First Amendment freedoms of the media outlets. So, for instance, we have seen regulatory interventions in the broadcast sector justified on the basis of the “uniquely pervasive” character of the broadcast medium (see, e.g., *Federal Communications Commission v. Pacifica Foundation*, 1978). We have seen cable television regulations justified on the basis of cable being “reasonably ancillary” to broadcast television, and thus eligible for at least some aspects of the broadcast regulatory framework (*United States v. Southwestern Cable Co.*, 1968). Perhaps the most frequently employed – and most thoroughly critiqued – rationale for media regulation has been the notion of the “scarce public resource,” which characterizes the broadcast spectrum utilized by radio and television broadcasters,¹ and which justifies a lower level of First Amendment freedom in exchange for exclusive access to this resource (Berresford, 2005).

The regulatory interventions that have been justified by this range of rationales have taken a variety of forms, including restrictions on the type of content that can be disseminated (e.g., indecency), and affirmative obligations to provide public interest-oriented content such as objective, balanced newscasts (e.g., the Fairness Doctrine), programming addressing local issues and concerns, and privileged access for political candidates (for an overview, see Napoli, 2001).

An underlying assumption of most discussions of possible regulatory interventions in the social media space is that these platforms generally do not possess any of the technological characteristics reflected in these established regulatory rationales (see Napoli, 2019); that, in terms of digital platforms such as social media, there is an “absence of clearly defined rationales” (Wiener, 2019, p. 808). However, as calls from various stakeholders for social media platforms to exhibit greater social responsibility increase (see, e.g., Suzor, et al., 2019), and as discussions about possible forms of government intervention become more prominent (see, e.g., Feld, 2019; McNamee, 2019), this question about the applicability of regulatory rationales is likely to emerge as a focal point of policy debate and legal proceedings.

This paper seeks to contribute to this debate by offering up the following proposition – that the public resource rationale that has traditionally been applied to the broadcast spectrum² may be transferrable to the social media context. Indeed, conceptualizing aggregate user data as a public resource may represent a logical resolution to the ongoing debate over if/how to conceptualize property rights in user data that is at the core of the data privacy/security issue, while also providing a basis for the constitutionality of content-based regulation of social media platforms. Conceptualizing aggregate user data in this way not only opens up an established rationale for government interventions into how platforms gather, handle, and utilize such data, but it also provides a grounding for the imposition of content-related public interest obligations in a manner similar to the way that the public resource character of the broadcast spectrum justifies a range of content-related public interest obligations.

In developing this argument, the first section of this paper reviews the primary technologically-derived regulatory rationales that have historically been utilized in the regulation of the media sector in the U.S. As this section will illustrate, many of these rationales do not

hold up particularly well to scrutiny and critique. The exception in this regard may be the public resource rationale.

The second section reviews the persistently ambiguous and contested status of user data. As this section will illustrate, concerns about the privacy and security of social media users' data have resurrected a long-running debate over whether the user data generated and aggregated by digital platforms such as social media sites represent a form of private property, with the individual platform user retaining the rights to, and control of, this property. The nature of this ambiguity and debate seems to open the door to more collective, rather than individual, property rights (i.e., aggregate user data as a public resource).

Some scholars and policymakers have advocated that social media platforms be regulated as *information fiduciaries* (see, e.g., Balkin & Zittrain, 2016), in recognition of the gathering and monetizing of sensitive data that fuels their operation. The third section uses this information fiduciary proposal as the jumping off point for a broader, more expansive regulatory rationale that is premised on a conceptualization of aggregate user data that has a grounding in notions of property – aggregate user data as public resource. This section compares aggregate user data with broadcast spectrum on a number of dimensions in an effort to consider the strengths and weaknesses of this analogy.

The concluding section considers how this conceptualization of aggregate user data as a public resource might translate into a regulatory framework for social media by briefly considering a range of applicational issues that would require resolution. This section also considers the broader implications, and potential applications (beyond social media), of this proposal.

Regulatory Rationales and the Durability of the Public Resource Rationale

Given the United States' strong First Amendment tradition, compelling public-interest-based *motivations* to apply regulatory oversight to the media often must be grounded in compelling technologically derived *rationales* capable of overcoming assertions that any regulatory oversight represents an infringement on the First Amendment rights of media organizations (Napoli, 2019). What may seem on the surface like a semantic distinction between motivations and rationales is, in many ways, key to understanding the complex and idiosyncratic framework for media regulation in the U.S., and why digital platforms such as social media companies operate largely outside of this framework.

Within the context of this analysis, the term *motivations* refers to the underlying needs and objectives that create the impetus for the imposition of a public-interest regulatory framework. In the United States, these motivations have taken the form of core (and often contested) public-interest principles such as diversity, localism, competition, and universal service that are generally seen as facilitating the effective functioning of the democratic process (see Napoli, 2001). They have also included less politically oriented concerns such as protecting children from adult content.

The term *rationales* refers to the way that the pursuit of these objectives is justified when confronted with a First Amendment tradition that, when interpreted narrowly, stands in opposition to any government intervention into the media sector. These technologically derived rationales are built on the premise that characteristics of certain media technologies or services compel public-interest oversight that, in some instances, necessarily infringes on the speech rights of media organizations. The key point here is that public-interest-minded motivations are, on their own, often insufficient to justify regulatory interventions. There must be a distinctive characteristic of the technology that can justify such interventions, well intentioned and

beneficial (and even speech-enhancing) as these interventions might be.

Consider, for instance, the *pervasiveness* rationale. This rationale refers to the fact that certain media (broadcasting and cable in particular) have been deemed *uniquely pervasive* in terms of the ease with which harmful or offensive content can be accessed (often unintentionally) and the reach that these media can achieve. Pervasiveness has therefore provided the logical foundation for regulatory interventions such as restrictions on indecent programming (Federal Communications Commission v. Pacifica Foundation, 1978, p. 748). Congress made a failed effort to extend the pervasiveness rationale to the Internet back in the mid-1990s, when it attempted to restrict the dissemination of adult content online through the Communications Decency Act of 1996. In this case, however, the Supreme Court concluded that the Internet failed to meet the pervasiveness standard of broadcast or cable television, noting that “the receipt of information on the Internet requires a series of affirmative steps more deliberate and directed than merely turning a dial” and that “the Internet is not as ‘invasive’ as radio or television” (Reno v. ACLU, 1997, p. 869).

Critics have raised valid questions about how lines can be effectively drawn distinguishing uniquely pervasive media from all the rest (see, e.g., Wallace, 1998). The central case involving the pervasiveness rationale (FCC v. Pacifica Radio, 1978) involved accidental exposure to profanity on the radio, which suggests that the probability of accidental exposure to inappropriate/harmful content is the determining factor. However, according to some critics of this rationale, “there do not appear to be empirical tools available to show why radio is ‘uniquely pervasive’ in ways that newspapers, books, and magazines are not” (Krattenmaker & Powe, 1994, pp. 220-221). Some have considered whether pervasiveness should be interpreted as comparable to impactful, and have raised the question of whether the magnitude of the potential

effect of a medium should serve as a justification for government intervention; and whether blanket generalizations can be made regarding the power/impact of one technology (and all content providers using that technology) over other technologies (Krattenmaker & Powe, 1994).

Regulatory interventions also have been based on the rationale that some technologies are *reasonably ancillary* to other regulated technologies. Specifically, certain cable television regulations have been enacted because cable has traditionally played an important intermediary role in the delivery of broadcast television signals. According to this perspective, cable is sufficiently “ancillary” to broadcasting that the regulatory authority already established for broadcasting can, to some extent, be extended to cable (United States v. Southwestern Cable Co., 1968). This rationale was first established in a Supreme Court decision that focused on whether the FCC had the authority to regulate cable television, after the FCC proposed regulations that, among other things, prohibited cable systems from importing out-of-market broadcast signals (United States v. Southwestern Cable Co, 1968). When the Supreme Court considered the challenge to the FCC’s authority to impose such regulations, it upheld the FCC’s authority, in part on the basis that such authority was “reasonably ancillary to the effective performance of the Commission’s various responsibilities for the regulation of television broadcasting (United States v. Southwestern Cable Co., 1968, p. 178).

Critics of the reasonably ancillary rationale have noted that, as the cable industry evolved over time and became a robust and independent provider of a wide range of content offerings, the logic of conceptualizing cable as ancillary to broadcasting weakens considerably (Ugland, 1995). Indeed, the industries evolved in ways that may make more sense for policymakers to consider broadcasting as ancillary to cable (for more details on this argument, see Ugland, 1995).

Perhaps the most well-known, and widely criticized regulatory rationale is the *scarcity*

rationale. According to the scarcity rationale, because there is insufficient broadcast spectrum to accommodate everyone wishing to broadcast, it is necessary for the government to provide regulatory intervention. The scarcity rationale is well articulated in the Supreme Court's response to an early challenge to the FCC's authority to regulate media ownership. In *NBC v. United States* (1943), in which the Court heard NBC's challenge to an FCC order that the company divest itself of one of its national broadcast networks, the Court noted "certain basic facts about radio as a means of communication—its facilities are limited; they are not available to all who may wish to use them; the radio spectrum simply is not large enough to accommodate everybody. There is a fixed natural limitation upon the number of stations that can operate without interfering with one another" (*NBC v. United States*, 1943, p. 213). This spectrum scarcity allowed the FCC to be "more than a kind of traffic officer of the airwaves," but to also play a role in "determining the composition of . . . traffic" (*NBC v. United States*, 1943, p. 216). In this way, the scarcity of the broadcast spectrum became the primary justification upon which the entire system of broadcast regulation—the regulatory model that allows for the greatest degree of public-interest oversight over the structure and behavior of media outlets—has been built.

The spectrum-scarcity rationale has persisted despite the fact that it is riddled with logical flaws. As economists have noted, for instance, all goods are scarce to some extent (Hazlett, 1990). Certainly, when a valuable good is being given away (as is the case with broadcast spectrum), the demand is likely going to exceed the supply. Other critiques have noted that, as other communications infrastructures have developed (cable, Internet, etc.), it is difficult to make the argument that the logic of the scarcity rationale still holds up at all (Wiener, 2019).³

The scarcity rationale is often coupled with the related *public resource* rationale, under

the notion that spectrum is a scarce *public* resource (see, e.g., Logan, 1997). However, it is important to emphasize that the public resource logic essentially operates independently of the scarcity logic, as a distinct rationale that is independent of the question of scarcity (see Krattenmaker and Powe, 1994). As Logan (1997) notes, it is not scarcity that is the distinguishing feature of spectrum, but rather the subsidy that has taken place in the form of the government's allocation of spectrum rights.

Fully understanding the public resource rationale requires a brief review of how U.S. policymakers have historically treated spectrum. The broadcast spectrum has historically been characterized as "The People's Airwaves," on the basis of the premise that "the airwaves belong to the people" (U.S. House of Representatives, 1969, p. 1). This notion of public, collective ownership is a reflection of how the U.S. chose to govern and allocate the use of the broadcast spectrum:

In most countries, when the value of the radio spectrum became apparent to civil and military authorities, the immediate reaction was to declare that the spectrum was exclusively state property. . . Private parties, whether commercial users or amateurs, obtained rights of access to the spectrum only by permission of these arms of the state. In the United States the reaction was different. The radio spectrum was considered part of the public domain and therefore *the property of all the people*. (Aitken, 1994, p. 688, emphasis added)

Essentially, then, spectrum is a *common asset*, or what the Romans termed *res publica*. This concept, in turn, serves as the foundation for the public trust doctrine. The key point of the public trust doctrine is that "because of their unique characteristics, certain natural resources and systems are held in trust by the sovereign on behalf of the citizens" (Calabrese, 2001, p. 6).

What was established in U.S. broadcasting, then, was a model in which the broadcast spectrum was treated as a public trust, with broadcasters governed as trustees of the spectrum (Flew, 2006). The public trust doctrine “requires that certain property be used for public benefit, because of either its unique characteristics or its essentially public nature” (Corbett, 1996, p. 615). This perspective led to the system of broadcast licensing – and, more importantly, the accompanying public interest obligations – that persist to this day,⁴ even as other parts of the spectrum have been auctioned off and essentially privatized. A key component of this framework is that the public trustees granted the rights to use the spectrum (and to monetize it, given the primarily commercial character of U.S. broadcasting) relinquish a certain degree of First Amendment freedom in exchange for access to the spectrum.

It is worth noting that, like the debate that has characterized user data (to be discussed in the next section), there has been a long-running debate over the appropriate property status of spectrum. Over the years, a number of scholars and policy advocates have examined and critiqued the motivations for the regulatory framework that was established, and have argued that a private property regime in the broadcast spectrum would have been both feasible and efficient (see, e.g., Coase, 1959; Hazlett, 1990; Moss & Fein, 2003). While it is beyond the scope of this paper to consider the relative merits of different approaches to property rights in the broadcast spectrum, the key point here is that the legislative decision to conceptualize property rights as collectively shared “by the people” is central to the public interest-oriented regulatory framework (diminished First Amendment freedoms; affirmative public interest obligations, etc.) that was applied – and continues to be applied – to broadcasting in the U.S.

It is important to note that, even amongst those most critical of government regulation of the media and its underlying rationales, the public resource rationale seems to hold up reasonably

well under scrutiny. Consider, for instance, the perspective of Thomas Krattenmaker and Lucas Powe (1994), legal scholars with long histories of opposing government intervention in the media sector. They conclude that the public resource rationale is the “only possible rationale grounded in logic and precedent that could justify refusing to subject government regulation of broadcast programming to conventional First Amendment analysis” (Krattenmaker & Powe, 1994, p. 225). Thus, within the context of media regulation, the extent to which a media sector relies upon a public resource appears to represent the most robust and defensible rationale for government oversight.

In sum, as Aitken (1994) has noted, in the U.S. regulatory approach to the broadcast spectrum, there persists “the sentiment that the electromagnetic spectrum is a *special kind of natural resource*, affecting the public interest in a distinct way, and *not to be treated as just another kind of real property*” (p. 716, emphasis added; see also Ryan, 2005). As the next section will illustrate, a similar sentiment seems to emerge from contemporary debates about aggregate user data.

Privacy and the Contested State of User Data

The privacy concerns that have accompanied the evolution of our digital media ecosystem have given rise to long-standing debates over if, or to what extent, policymakers and the courts should establish explicit property rights pertaining to user data. Some accounts trace debates about property rights in personal data as far back as the 1970s (Purtova, 2015). These debates became particularly prominent in the early 2000s, as the Internet emerged (see, e.g., Bergelson, 2003; Schwartz, 2004); and have recently increased in prominence in light of the growth of social media platforms and their user data-fueled revenue models (see, e.g., Determann, 2012) While it is beyond the scope of this paper to detail the range of arguments

that have been brought to bear on this issue (for a useful summary, see Purtova, 2015), the goal here is to highlight a few key points within the ambiguity and disagreement over the property status of user data that seem to direct us toward conceptualizing user data as a public resource akin to spectrum.

As a starting point, a number of privacy advocates have argued that, in order for individuals to be able to maintain the appropriate degree of control over how digital platforms aggregate, share, and monetize their data, users of these platforms must be afforded legitimate property rights over their personal data (see, e.g., Bergelson, 2003; Feld, 2017). Others, however, have argued that such an approach is too simplistic, and ignores important complexities and benefits associated with the markets that have developed around aggregations of user data (see, e.g., Lenard & Rubin, 2010; Schwartz, 2004; Spiekermann, Acquisti, Bohme, & Hui, 2015; Tene & Polonetsky, 2013a, 2013b; Purtova, 2017; Tisne, 2018). For this reason, it has been argued that “the dichotomy ‘property in personal data’ vs ‘no property in personal data’ . . . is false” (Purtova, 2015, p. 84).

Others have argued that “no one does, or should be able to own data” (Determann, 2019, p. 4), under the logic that the fundamental characteristics of data are incompatible with individual property rights, and with the various categories of property rights that currently exist under the law; and that the institutionalization of explicit property rights in data would have a variety of negative social and economic consequences (see also Pearce, 2018). According to this perspective, “data should be left to the public domain, a concept rooted in Roman law as *res nullius*, which means ‘property of no one,’ or *res communis*, ‘a public good’” (Determann, 2019 p. 42).

It is important to recognize that these two conceptualizations of property are not synonymous. *Res communis* refers to a resource that is “open to all persons in the state of nature” (Epstein, 2016, p. 182). This concept doesn’t seem to accurately reflect the nature of aggregate user data (since it is not – and probably should not – be something we all have access to). *Res nullius* refers to something “owned by no one, which is, however, . . . capable of being reduced to private ownership,” traditionally, through mechanisms such as occupation of land, seizure of chattels, or capturing animals (Epstein, 2016, p 182). This does not seem like an ideal conceptualization of aggregate user data either, given that the resources fitting this category generally do not emerge from the identities and activities of individuals. As will be discussed below, there is a third category of property, *res publica*, that has been applied to spectrum (see above) and that seems comparably applicable to aggregate user data.

The key point here, however is that the debates over the appropriate property status of user data remain unresolved, suggesting the need for a new, intermediate position. The persistence of these debates can be attributed to the distinctive, ambiguous, and complex characteristics of user data as a resource. While there seems to be general agreement that user data represents a valuable resource, exactly what kind of resource it is, remains more contentions.

Consider, for instance, the fact that the World Economic Forum (2011) has described personal data as a “new asset class” (p. 5). Such a position would seem to open the door for alternative conceptualizations of this resource. In this vein, Shoshana Zuboff (2015) contends that big data is “not a technology or an inevitable technological effect. It is not an autonomous process It originates in the social . . .” (p. 75). This position of data as inherently social

would seem, once again, to suggest compatibility with an approach that characterizes aggregate user data as a public resource.

Given this situation, perhaps it is not surprising that “no jurisdiction either in the U.S. or Europe has adopted or comprehensively considered the option to legally introduce property rights in personal data” (Purtova, 2015, p. 85). In the U.S., while some lawmakers have embraced the notion that “you own your data,” no legislation formalizing this perspective has yet to make it out of Congress (McNamee, 2019, p. 221). In Europe, the General Data Protection Regulation (GDPR) is perhaps the most comprehensive effort to impose a concrete regulatory framework on the aggregation and usage of user data; yet it falls short of establishing users’ explicit property rights in their data. As Daniel Chase (2018) describes the GDPR, “While the EU’s dignity-approach might cringe at the idea of personal data as property, their regulatory approach practically embodies property rights law. Though property is not mentioned once in the EU’s GDPR, its protections . . . are all crucial elements of American property law” (p. 5; see also Pearce, 2018). Yet, the GDPR’s provisions “stop short of confirming that personal data can definitively be considered property” (Pearce, 2018, p. 201). In fact, the term property is almost completely absent from the text of the GDPR, appearing only twice in relation to tangential issues.⁵ Thus, there may be some form of “quasi-property rights” inherent in personal data (for a more detailed discussion, see Pearce, 2018), which suggests that “there are perhaps additional dimensions to the ongoing . . . debate that are yet to be fully explored” (p. 208). An aggregate-user-data-as-public-resource approach may represent just such an additional dimension.

In sum, the competing perspectives described above clearly indicate that we need “A new paradigm for understanding what data is—and what rights pertain to it” (Tisne, 2018). The debates and policy initiatives centered around the question of property rights in user data would

seem to indicate that, while some form of property rights are appropriate, traditional notions of individual property rights don't quite seem to fit. This situation would seem to open the door to the aggregate-user-data-as-public-resource proposal as a resolution. The section that follows lays out the case that conceptualizing aggregate user data as a public resource may represent the appropriate resolution to this situation, and that the commonalities between spectrum and aggregate user data are sufficiently strong to warrant this approach.

Beyond Information Fiduciaries: Aggregate User Data as Public Resource

The previous section sought to illustrate that aggregate user data represents a resource for which compelling arguments for and against individual property rights have been made; and in which policy initiatives have operated from a somewhat intermediate position in relation to individual property rights. The point here, then, is to argue that if there is some non-traditional, ambiguous notion of property rights at work in relation to user data, then the notion of aggregate user data as a public resource may in fact represent an appropriate conceptual approach that both reflects and resolves this ambiguity.

The central premise here is that, whatever the exact nature of one's individual property rights in one's user data may be, when these data are aggregated across millions of users, their fundamental character changes in such a way that they are best conceptualized as a public resource. Certainly, it is in this massive aggregation that the economic value of user data emerges. As Zuboff (2015) notes, "Individual users' meanings are of no interest to Google or other firms In this way, the methods of production of 'big data' from small data and the ways in which 'big data' are valued reflect the formal indifference that characterizes the firms relationship to its population of 'users.' Populations are the sources from which data extraction proceeds" (p. 79). Also, collective benefits arise when individual-level data are aggregated, as

this allows for the observation of broader patterns that might otherwise go unnoticed, or the formulation of generalizable insights (Tisne, 2018). This is why Tisne (2018) notes that “cumulatively, [data] is a collective good.” Thus, in this collective formulation of a valuable resource, we should consider a form of collective ownership that parallels, to some extent, the notion of the public as owners of the airwaves.

The key point here is that the nature of individual user data is fundamentally different from that of aggregate user data – with the economic value really only coalescing at the aggregate level. Thus, any property rights that might exist at the individual level should manifest in some way at the collective level. The individual resource, when aggregated, becomes a public resource, with all of the regulatory implications associated with that concept. Assuming that individuals have some claims to ownership of their data, we can think of this aggregation of individual ownership rights representing a form of collective ownership not unlike the way that the spectrum is collectively owned “by the people.” Given the ways (described above) in which individual-level property rights in user data have failed to fully materialize, perhaps the proposal being put forth here, of a more collective approach to property rights in user data represents an appropriate alternative approach.

From a property standpoint, as was noted above, spectrum has been convincingly characterized as a common asset, or what the Romans termed *res publica*. This concept serves as the foundation for the public trust doctrine. The key point of the public trust doctrine is that “because of their unique characteristics, certain natural resources and systems are held in trust by the sovereign on behalf of the citizens” (Calabrese, 2001, p. 6). This characterization seems particularly well-suited to aggregate user data as well, given the unique resource characteristics of user data described above. In both cases, there is a public character to the resource. Also in

both cases, there is no expectation that this resource is legitimately accessible by the entirety of the public. Rather, the access limitations inherent in the resource require that public service obligations be imposed upon those who do receive access, in order that the public accrue benefits from their collectively held resource.

The logic of importing a regulatory rationale that is well-established in the traditional media realm to a digital media context makes particular sense when we consider the way that our very conception of the idea of media has needed to evolve in response to technological change. As media scholars Joseph Turow and Nick Couldry (2018) illustrate, the past decade has seen a convergence of “message-circulating technologies” (i.e., “media”) with “data-extraction-and-analysis technologies” (p. 415). As a result, they argue that contemporary conceptualizations of media need to better account for the user surveillance and data extraction dimensions that are increasingly inextricably intertwined with their operation. Essentially, our contemporary understanding of media needs to foreground “audiences’ role as *resources* for value extraction” (Turow & Couldry, 2018, p. 416, emphasis added).

While Turow and Couldry (2018) argue primarily in terms of how scholarly approaches to media need to evolve, the same argument applies to regulatory and policy approaches to media as well. The transference of the public resource rationale from the spectrum context to the aggregate user data context seems to be an effective way of simultaneously maintaining continuity in the regulatory approach that applies to media and responding to a fundamental way in which the nature of media has changed.

The aggregate-user-data-as-public-resource argument builds upon the widely-discussed proposal to treat social media platforms as *information fiduciaries* (Balkin, 2016). The information fiduciary concept was first applied to digital media platforms by Jack Balkin (2016).

His argument has resonated broadly, having been widely covered by journalists and embraced by many lawmakers.⁶ As laid out by Balkin and Jonathan Zittrain (2016), “In law, a *fiduciary* is a person or business with an obligation to act in a trustworthy manner in the interest of another. . . . An *information fiduciary* is a person or business that deals not in money but in information” (pp. 3-4), such as doctors, lawyers, and accountants.

The two basic duties of information fiduciaries are: 1) a duty of care (that is, to act competently and diligently so as not to harm the principal, beneficiary, or client; and 2) the duty of loyalty (that is, to keep their clients’ interests in mind and act in their clients’ interests (Balkin, 2016). A key point regarding information fiduciaries is that, “because of their different position, the First Amendment permits somewhat greater regulation of information fiduciaries than it does for other people and entities” (Balkin, 2016, p. 1186). However, the information fiduciary concept is limited, from a speech standpoint, to user data as speech. This type of speech, according to Balkin (2016) notes, “is not public discourse” and thus not trigger the type of First Amendment scrutiny that is reserved for public discourse (p. 1216).

And so, as Balkin (2018) notes, “the fiduciary approach leaves social media companies free to decide how they want to curate and organize public discussion, focusing instead on protecting privacy and preventing incentives for betrayal and manipulation” (p. 15). More specifically, the information fiduciary argument does not lead us to “expect that Facebook has a duty to keep us from receiving links from our Facebook friends that are misleading or emotionally disturbing” (Balkin, 2016, pp. 1228-1229).

In contrast, the user-data-as-public-resource approach can lead to just such an expectation, not unlike the way broadcasters are subject to regulatory action by the FCC if they engage in the distribution of disinformation or indecent programming (see Napoli, 2019).

Indeed, if policymakers treat aggregate user data as a public resource akin to spectrum, this framework provides what may be the most constitutionally robust rationale for imposing public interest obligations (whatever form they may take) upon those platforms that rely upon the aggregation and monetization of massive quantities of user data. From this standpoint, the proposal being put forth here addresses critiques that the information fiduciary proposal is not an adequate response to the range problems posed by digital platforms, which may require “more robust” regulatory approaches (Khan & Pozen, 2019, p. 5).

Admittedly, the analogy between spectrum and aggregate user data is less than perfect. Spectrum serves as the transmission mechanism upon which broadcasting’s business model was built. In the cable television context, public rights of way such as streets and sidewalks operate somewhat differently, providing the physical space through which the relevant transmission mechanism (cable) is run. Aggregate user data serve as the monetizable product in the operation of social media platforms, not as the transmission system.

However, there is no reason to think that the notion of a public resource must be associated with the process of transmission. The key factor here is the commonality of collective public ownership. If we consider other contexts in which a public trust framework has been applied to a resource (think, for instance, of land, waterways, or some forms of intellectual property), in some cases the resource is a transmission mechanism; but in other cases it is a resource from which value or benefits are being extracted (see Epstein, 2016).

Also, as Turow and Couldry (2018) have illustrated, the fundamental economic models underlying the media sector have changed. Thus, it would seem to make sense that regulatory rationales not remain strictly confined to the technological and economic dynamics of a 20th century media technology (Napoli, 2019). Instead, it would seem reasonable – even appropriate

– that policymakers consider how the underlying regulatory rationales might apply to new dimensions of the media sectors’ technological and economic models.

In developing this argument, it is also important to illustrate why this argument does not apply to previous generations of media which, like social media platforms, have operated on the basis of monetizing audience attention; with this audience attention also being quantified through aggregations of audience data (see, e.g., Napoli, 2003). That is, if aggregate user data are a public resource, why shouldn’t all advertising-supported media be regulated as if they are utilizing a public resource?

There are a number of reasons why the aggregate-user-data-as-public-resource framework does not apply to all ad-supported media. The model under which traditional ad-supported media have operated and the model under which social media platforms operate are different in a number of fundamental ways. Traditional ad-supported media have monetized audience data derived from relatively small samples of media users, who have knowingly volunteered to take part in the measurement process and typically receive compensation for doing so (Napoli, 2003). This is very different from the social media model, in which all users must agree to the terms of data extraction in exchange for access to an increasingly necessary communications platform, and certainly nobody is receiving financial compensation in exchange for having their data aggregated.

Even when the audience measurement systems for other media involve a census rather than a sample (think, for instance, of traffic audits for web sites), the scope of the user data that can be gathered through such an approach is infinitesimal compared to what can be gathered through social media platforms, given that this approach involves measuring activity through the prism of the site, rather than through the monitoring of actual users (Napoli, Lavrakas, &

Callegaro, 2014). Monitoring individual sites, and how users engage with them, provides dramatically less data about the users than monitoring users and their behavior directly.

It is also important to note that the data aggregation for other ad-supported media has traditionally been conducted not by the media outlets themselves, but rather by third-party measurement firms (Nielsen, comScore, etc.), in a long-standing “separation of powers” model (Napoli, 2003) that seems to have been dismantled in the social media context. These third parties, it should be noted, are overseen and audited by a quasi-governmental body (the Media Rating Council) created at the behest of Congress (Napoli, 2019). This model is largely missing from the data aggregation and monetization conducted by social media platforms.

Finally, and most obviously, the scale and scope of data gathering that can be undertaken by social media platforms dwarfs what can be achieved in almost any other mediated communication context, given the size of user bases and the breadth and depth of information users provide through the various means of interacting with the platforms. On this front, it is important to mention the additional data points that can be reliably imputed from these data when they are being extracted from such a large user base (Purtova, 2015). Other digital media entities, such as Internet Service Providers (ISPs) and web sites can not come close to matching the breadth and depth of user data that large social media platforms are able to accumulate. Facebook is reported to have over 29 thousand data points on the average user (McNamee, 2019). Only Google, through its cross-platform data gathering (search, email, YouTube, maps, etc.) extracts comparable amounts of user data (McNamee, 2019).

In drawing this parallel between spectrum and aggregate user data, it is also necessary to address the issue of licensing, given that the U.S. approach to the governance of the broadcast spectrum has involved the allocation of renewable licenses. First, it is important to emphasize

that the aggregate-user-data-as-public-resource argument being put forth here is not intended to support any kind of government licensing framework for social media platforms. Licensing is not part and parcel of a public resource regulatory rationale. The history of broadcast regulation shows that a government-run licensing system was just one of a number of options that Congress considered when devising a system of governance for this public resource (McChesney, 1993); and that “the seeds of the public trust model” were planted as far back as 1912, well before the licensing system was institutionalized (Corbett, 1996). In the case of user data, access to the public resource is granted not through a government allocation process, but rather through the aggregation of individual decisions made by the users of social media platforms, who consent (through each platform’s user agreement) to having their data gathered, aggregated, and monetized.

Conclusion

This paper has argued that the public resource rationale that has long justified government regulation, and affirmative public interest obligations associated with the use of the broadcast spectrum are transferrable to social media platforms, given the public resource character of the aggregate user data which serve as the foundation of the business models for most of these platforms. The proposal put forth here can be seen as simultaneously offering a resolution to the question of the appropriate property status of user data, strengthening the rational foundation for the information fiduciary approach to digital platforms (Balkin, 2016) and associated data rights (Tisne, 2018), and addressing the question of the constitutionality of content-based regulation of social media platforms. While this paper has focused on articulating and defending the logic of the application of the public resource regulatory rationale to aggregate user data and thus to the social media platforms that extract and rely upon those data, there are all sorts of implementation questions that would next need to be fleshed out.

For instance, reasonably explicit boundaries would need to be drawn to delineate when the public resource rationale does/does not apply. Some sort of user threshold might need to be established for triggering the application of this regulatory framework, not unlike the way that the provisions of Germany's Network Enforcement Act kick in once a social networking platform reaches a threshold of two million users. The determination of the appropriate user threshold would ultimately most likely be more of a political question rather than an empirical one; though whether a robust empirical approach could be devised to determining the appropriate threshold would be an intriguing avenue for future research. In addition (or perhaps instead), it might be necessary to approach the threshold question from a share of revenue standpoint. That is, perhaps the application of this regulatory framework needs to be triggered when a platform derives a certain proportion of its revenue from the direct or indirect monetization of aggregate user data.

A key implication of the proposal put forth here involves its compatibility with Section 230 of the Communications Decency Act of 1996, which grants online service providers such as ISPs and social media platforms wide-ranging (though not absolute) immunity from liability in relation to the third-party content disseminated on their platforms, while at the same time granting them the authority to engage in whatever forms of content moderation and curation that they see fit. If the aggregate-user-data-as-public-resource rationale is used to impose content-based regulations on social media platforms (in relation, for example, to content categories such as disinformation, hate speech, or violence), this would most likely represent a conflict with Section 230. However, given the growing recognition that Section 230 is in need of, at minimum, some degree of modification (see Feld, 2019), the proposal put forth here could potentially be brought to bear to facilitate and defend movement on that front. As Harold Feld

(2019) argues, the best approach going forward is for Congress to determine what an appropriate regulatory regime for social media platforms looks like, and then to modify Section 230 and its applicability accordingly. An aggregate-user-data-as-public-resource rationale could prove useful in justifying any such efforts.

Also, while this analysis has focused on the application of the aggregate-user-data-as-public-resource rationale to social media platforms, the arguments put forth here do open the door to the question of whether this is a regulatory rationale that could have broader applicability beyond the social media context. At minimum, it would seem potentially applicable to a diversified digital platform such as Google. To some extent (as was illustrated above), the arguments developed here are premised on the ways in which the gathering and monetizing of aggregate data have become increasingly central to the operation of media, and thus invite applying a traditional media regulation rationale to this emergent data dimension. Thus, the focus here has remained specifically on the media regulation context. To the extent that public resources other than broadcast spectrum have been subject to government oversight, one could imagine broader applicability of the aggregate-user-data-as-public-resource regulatory framework. This question, however, is beyond the scope of this analysis.

In the end, this proposal contributes to calls for establishing “a more positive relationship between social media data mining and public life” (Kennedy & Moss, 2015, p. 2), through a conceptualization of user data that makes explicit and concrete the nature of its character as a public resource, which, in turn justifies the application of affirmative public interest obligations that could impose upon the First Amendment rights of social media platform owners. What these public interest obligations look like would, of course, be the important next step. The goal

here has been not to address the question of what should be done in detail, but merely outline the possibility and address the important question of why it could be done.

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Endnotes

¹ As well as, to some extent, the public rights of way that cable systems utilizes for their systems.

² This rationale has also applied to the public rights of way utilized by cable systems; though, for simplicity, the analyses and arguments that follow focus on the broadcast spectrum context.

³ For thorough reviews of the range of critiques, see Berresford (2005) and Hazlett (1990).

⁴ However, it should be noted that the general deregulatory trend that has characterized the broadcast sector over the past three decades has diminished (but not eliminated) the extent to which broadcasters are governed as trustees of a public resource (see, e.g., Corbett, 1996).

⁵ Specifically, in relation to the use of user data in the workplace to protect employee or customer property; and in relation to provision requiring data aggregators to provide users with remote access to their personal data, but not in a way that would facilitate access to the aggregators' intellectual property (which is being treated as something separate from the aggregate user data).

⁶ For a discussions of the argument's migration from academia to the broader public sphere, see Khan and Pozen (2019).