

Online Intermediaries: A Thematic Analysis of their Social Role and Functions

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Introduction

This literature review presents an analytical summary of recent academic literature on online intermediaries. The primary goal is to render the available scholarly research more accessible to a concerned and attentive public which includes, but is by no means limited to, policymakers, journalists, activists, and researchers. We present an interdisciplinary approach, that draws on legal documents and secondary analysis on research in the field of communication and information studies; science, technology, and society (STS); political science and economics; as well as social psychology and anthropology.

The review attempts to represent a selection of the disparate views available on online intermediaries in order to highlight areas where there is potential for conflict and where there is a potential for concurrence. There have been a number of technological innovations in social networking, such as Facebook and Twitter, that have particularly attracted media attention in recent years, but these only represent a small portion of the issues and concerns around online intermediary governance. We hope to extend the understanding of online intermediaries beyond that and to discuss some of the cultural, social, and economic implications of recent innovations in the online intermediary landscape.

In this review of current research, we have distilled our findings on online intermediaries into three main themes: 1) Free flow of information, civic life and participation; 2) Curation; and 3) Private ordering. The surveyed literature is organized along the lines of these three themes. In the first theme we analyze positive and negative implications of international developments regarding online intermediaries on the free flow of information, and its impact on civic life and participation. The second theme highlights the way in which a more interactive style of curating information by online intermediaries has begun to impact online activity in general. In the third theme we explore how online intermediaries privately regulate the flow of information and online activity and how that affects public interests. We explain each theme in more detail in separate sections below.

However, before going into the themes, we must first define an online intermediary. We were unable to discover one definition that was used interchangeably across disciplines. We therefore found it most helpful to showcase the difference between various perspectives to emphasize that what an online intermediary *is* and what an online intermediary *does* is at times fairly dependent on the interests of the party or viewpoint in question. A typical end-user of a social network, for example, is likely to have a very different definition of that network than an attorney or a government institution might.

As a final point, it is important to emphasize that this review is not designed to be an exhaustive, stand-alone document. Rather, it should serve as a supplement to case studies that analyze intermediaries in specific countries through the research objectives outlined above. We would like to emphasize that country-specific examples throughout the review were selected to reflect the countries represented by the Network of Centers and accompanying case studies. By reviewing the references, the reader should come away with a basic knowledge of online intermediaries, questions for further exploration, and potential suggestions for policy.

What is an Online Intermediary? Interdisciplinary Perspectives

Typically, intermediaries are understood as entities that act as a link between other entities. However the notion of a contemporary online intermediary is broader than just this linking capacity suggests in the *denotation* of the word. The *connotation* of the term online intermediary has come to represent more than simply the interests of two parties, linked by a “go-between.” Instead, online intermediaries now provide an infrastructure that allows people to access, create, share, or manipulate information on the Internet. Because of this, they have to balance the interests of many involved parties, like end-users, content-providers, buyers, sellers, advertisers, regulators, etc. Online intermediaries now occupy a more central place with expanded functions in social and economic processes than traditional intermediaries, who acted as more of a “go-between.” Finally, due to the increased potential for new functionality, online intermediaries may also possess their own political, economic, social, and technological interests, and are therefore no longer acting as “intermediaries” in the traditional sense of the term. The connotation of the term intermediary is changing in relation to the way it has evolved in the online world, which may ultimately result in a denotative change in use.

The typical form of an online intermediary has evolved beyond what legislators knew to be possible, when drafting the safe harbors in Section 230 of the Communications Decency Act and Section 512 of the Digital Millennium Copyright Act. These exceptions to liability are primarily based on intermediaries’ lack of active involvement with the content, which is exemplified in the notion of “conduits.”¹ Today, the more interactive nature of intermediary services often requires handling of user-generated content and hence an active curation role on behalf of the intermediary. “Curators” are entities that add value to pre-existing content and create “meaningful order” through curation.² The process of curation refers to a theme that has recently emerged as significant with regard to online intermediaries. This term was popularized during

¹ Gillespie, Tarleton. 2014. When Science, Customer Service, and Human Subjects Research Collide. Now What? Retrieved from <http://www.culturedigitally.org>.

² Hogan, Bernie. 2010. "The presentation of self in the age of social media: Distinguishing performances and exhibitions online." Bulletin of Science, Technology & Society.

the 1970s in archaeological anthropological work, as part of a discussion seeking to distinguish between those tools or resources that are in active use, and those that are passive or in storage.³ Furthermore, online intermediaries' business models are expanding beyond intermediation: Amazon is not merely an online market place, but a provider of cloud computing services and a maker of phones, which renders its economic interests more difficult to understand. This results in a more complex ecosystem of intermediaries than existed for earlier intermediaries such as telephone companies, and other actors such as regulators, corporations, and the public.⁴

Lastly, whenever attempting to draw generalizations at a global or international level, it is helpful to employ a culturally relativistic lens to emphasize the different cultural "norms" that may inform the environment where online intermediaries operate. For example, First Amendment protections are seen as a vitally important part of the democratic process in the United States, and Section 230 CDA protections for online intermediaries reflect this cultural norm. However, in Vietnamese culture, the idea of a free press is not viewed as integral to the Vietnamese democratic process. This difference becomes important when an online intermediary formed in the US operates outside of the country's geopolitical borders. The values embedded into a particular online intermediary may conflict with the values elsewhere.⁵ For instance, Twitter strongly embraces freedom of expression as part of its company values,⁶ yet has to police hate speech on its platforms when operating in France and Germany.⁷ In addition, international policies and regulations can shape the perception of what online intermediaries *are* and what they can *be*.⁸

We reviewed recent academic literature that includes research in the fields of law; communication and information studies; science, technology, and society (STS); political science

³ Binford, Lewis R. 1979. "Organization and formation processes: looking at curated technologies." *Journal of anthropological research*: 255-273.

⁴ Gillespie, Tarleton. 2014. When Science, Customer Service, and Human Subjects Research Collide. Now What? Retrieved from <http://www.culturedigitally.org>.

⁵ E.g. 'Canadian Judge Says Google Must Remove Links Worldwide' <http://bits.blogs.nytimes.com/2014/06/19/canadian-judge-says-google-must-remove-links-worldwide/>

⁶ See: <https://blog.twitter.com/2011/tweets-must-flow>

⁷ <http://www.chillingeffects.org/weather.cgi?WeatherID=779>

⁸ Footnote to trade agreement or other recent international development involving intermediaries.

and economics; as well as social psychology and anthropology. We identified the most frequently referenced topics in the surveyed literature, which revealed a pattern of *definition by perspectives*. Definition by perspectives means that a particular discipline outlines the key elements of online intermediaries that are the most salient to that discipline's interests, and that definition then dictates what an online intermediary *is* or *does* for that perspective. Therefore, because the meaning or definition of online intermediaries can vary significantly depending on the interests of the respective actors, we will provide short examples that illustrate the most salient viewpoints on online intermediaries.

We begin by outlining the basic *technological infrastructure perspective*, one that focuses on the underlying infrastructure⁹ of online intermediaries,¹⁰ and that refers to differences between a user-generated platform, for instance, and an Internet service provider (ISP). Starting from these potential forms, the *economic interest perspective* often defines an intermediary by the type of transactional service it facilitates or creates. Examples of intermediaries differing according to the type of transactional services they offer include Amazon or PayPal.¹¹ These underlying infrastructural and economic definitions then provide a grounding for the *social perspective*. The social perspective is meant to represent the way an end-user regards an online intermediary. It is likely that the average Internet user does not refer to social networking platforms, online markets, or other examples of online intermediaries by this terminology. The most attention appears to be given to social networking sites such as Facebook or Twitter.¹² All of these perspectives are increasingly being analyzed from a *social science perspective* that provides a critical look at the underlying principles and practices of various intermediaries. Social scientists are increasingly dedicating research time to online behavior made possible by various online intermediaries, often in comparison with pre-existing online behaviors or practices. Finally, the *legal perspective* attempts to incorporate all of the above in an effort to regulate and keep pace

⁹ Lessig, Lawrence. "The law of the horse: What cyberlaw might teach." *Harvard law review* (1999): 501-549.

¹⁰ EDiMA: Online Intermediaries: Assessing the Economic Impact of the EU's Online Liability Regime (2012), p. 10; OECD. 2011. *The Role of Internet Intermediaries in Advancing Public Policy Objectives*.

¹¹ EDiMA: Online Intermediaries: Assessing the Economic Impact of the EU's Online Liability Regime (2012), p. 10; OECD. 2011. *The Role of Internet Intermediaries in Advancing Public Policy Objectives*.

¹² Boyd, Danah M. and Nicole B. Ellison. 2008. "Social Network Sites: Definition, History, and Scholarship." *Journal of Computer-Mediated Communication* 13: 210-30.

with the ever changing landscape of online intermediaries. The following list draws on the definitions of online intermediaries that emerge from these perspectives:

- Infrastructure providers, including mobile network operators
- Internet access providers
- Third party hosting platforms (e.g. cloud computing services such as Amazon)
- Search engines (e.g. Google Search and Bing)
- Third-party platforms for e-commerce (e.g. eBay, Amazon and Craigslist)
- Financial intermediaries (e.g. Visa and MasterCard)
- Participative platforms (social networks, e.g. Facebook, LinkedIn)
- User-generated content (UGC) platforms (e.g. YouTube) as well as microblogging (e.g. Twitter or Tumblr)
- Content aggregators (e.g. Google News and Yahoo! News or reputation management platforms such as Yelp)
- Apple's App Store and Google Play
- Blogs and news websites with comments sections
- Cybercafes or Internet cafes

Theme 1: Free Flow of Information, Civic Life and Participation

This theme details the effects of online intermediaries on the quality of the digital public sphere. While online intermediaries provide new avenues for the free flow of information, government influence on intermediaries as well as intermediaries' actions as private entities have significant consequences for end-users' freedom of expression and for participatory democracy. The free flow of information is affected by governments' leveraging intermediaries towards political ends, cross-border legal differences, and Internet governance by private platforms with their own "Terms Of Service" (TOS) and/or community standards. The dynamics between these competing pressures is not always clear, and this theme focuses on the effects on end-users. In addition to providing examples of cross-border approaches to filtering content and discrepancies in liability regimes, with typically negative consequences for end-users' freedom of expression, this section also details the ways in which intermediaries provide economic benefits for end-users, and increases their ability to participate in democratic culture.

The Internet and the platforms provided by online intermediaries can be seen as a new form of public sphere where people can freely interact.¹³ The Internet, in the form of blogs, forums, social media and more, creates new avenues to share and access information, avenues that can bypass or act in parallel to traditional media channels such as newspapers, radio, television, and cable. Habermas wrote that the modern public sphere, plagued by forces of commercialization and compromised by corporate conglomerates, produces a discourse dominated by the objectives of advertising and public relations.¹⁴ Thus, the public sphere becomes a vehicle for capitalist hegemony and ideological reproduction. The Internet, on the other hand, with an infrastructure that seems to enable unlimited and unregulated discourse, and which operates beyond geographic boundaries, promised a new type of public sphere where such concerns might not exist. Yet, thus

¹³ Benkler, Yochai. 2006. *The Wealth of Networks*. New Haven and London: Yale University Press; Hindman, M. (2009). *Hindman, Matthew. 2009. The Myth of Digital Democracy*. Princeton and Oxford: Princeton University Press.

¹⁴ Habermas, Jürgen. 1991. *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*. Cambridge: MIT Press.

far that has not come to pass. While arguably many can speak on the Internet,¹⁵ research shows that few have the actual power to be heard.¹⁶ While the online versions of the *New York Times* and *Washington Post*, as well as the blogging behemoths such as the *Huffington Post*, gather thousands of readers, that is not often possible for smaller blogs.¹⁷

Obstacles to end-users' freedom of expression come not only in the form of an inability to be heard, but also from government intervention.¹⁸ While online intermediaries — and social networks in particular — have been heralded as vehicles for democratization of authoritarian regimes,¹⁹ most notably during the Arab Spring in 2010, they have also proven to be instruments for various governments' regulation of public discourse and as a way to stifle freedom of expression. Intermediaries are obliged to comply with local laws in order to continue operating in a designated country,²⁰ potentially resulting in censorship and the disclosure of end-user data, while authoritarian governments also use the intermediaries' platforms to counter democratic 'to enabling freedom of expression.²¹ For instance, while Facebook and Twitter portray themselves as platforms that strongly embrace the notion of free expression, they may still take content down in response to government requests because it is in their economic interest to continue operating in a given country.²² Instances of authoritarian governments' pressuring or forcing intermediaries into compliance is well documented²³ and the role of intermediaries' economic incentives in this struggle is not always clear.

Liability Regimes and Free Flow of Information

¹⁵ See: <http://www.itu.int/en/ITU-D/Statistics/Pages/facts/default.aspx>

¹⁶ Hindman, Matthew. 2009. *The Myth of Digital Democracy*. Princeton and Oxford: Princeton University Press.

¹⁷ Ibid.

¹⁸ Balkin, Jack M. 2014. "Old-School/New-School Speech Regulation." *Harvard Law Review* 127: 2296.

¹⁹ Gladwell, Malcolm. 2010. "Small Change: Why the Revolution Will Not Be Tweeted." *The New Yorker*. http://www.newyorker.com/reporting/2010/10/04/101004fa_fact_gladwell?currentPage=all.

²⁰ MacKinnon, Rebecca. 2012. *Consent of the Networked: The WorldWide Struggle for Internet Freedom*. New York: Basic Books; DeNardis, Laura. 2014. *The Global War for Internet Governance*. New Haven and London: Yale University Press.

²¹ Gillespie, Tarleton. 2010. "The Politics of 'platforms.'" *New Media & Society* 12 (3): 347–64.

²² See: <http://googleblog.blogspot.com/2010/01/new-approach-to-china.html>

²³ MacKinnon, Rebecca. 2012. *Consent of the Networked: The WorldWide Struggle for Internet Freedom*.

There are numerous legal reasons why online intermediaries are held liable for third party content, with defamatory material and copyright infringement being perhaps the most common examples. With some exceptions,²⁴ most western legislators recognize the importance of shielding intermediaries from liability in order to ensure their role as vehicles for freedom of expression. These liability exemptions are often referred to as “safe harbors.” Prominent examples of the safe harbors can be found in the United States Section 230 CDA shielding “interactive computer services” and Section 512 of the Digital Millenium Copyright Act (DMCA) protecting specific types of online intermediaries from liability for copyright infringements. Chander writes that, “Most of us have gained from our greater access to knowledge, and from our ability to speak directly to the world and to hear directly from it, and to engage and enlarge our social networks. Imposing strict obligations on intermediaries might well come at the price of both speech and innovation.”²⁵ However, not even the US Section 230 CDA — perhaps the most sweeping shield for online intermediaries — is a safeguard against liability. In this case, litigation costs, even in cases where the companies do not bear liability, can act as deterrents on intermediaries’ willingness to facilitate the free speech of others.²⁶

The plethora of local laws regarding intermediary liability and the failure to harmonize these laws internationally is a complicating factor in the global operation of intermediaries’, and they often seem to conflict with the inherently borderless nature of cyberspace.²⁷ Often, the lack of clear liability provisions leads to increased economic costs for intermediaries, which can impair technological innovation and put levers on cultural innovation resulting from the use of intermediary services.²⁸ In 22 out of 60 countries examined in one study, “the intermediaries were held to a disproportionate level of liability.”²⁹ This disproportionate level is exemplified in

²⁴ Lipton D., Jacqueline. 2013. “Cyberbullying and the First Amendment.” *Florida Coastal Law Review* 14 (99).

²⁵ Chander, Anupam. 2014. “How Law Made Silicon Valley.” *Emory Law Journal* 63 (3). Emory University School of Law: 639–94.

²⁶ Ardia, David S. 2010. “Free Speech Savior or Shield for Scoundrels: An Empirical Study of Intermediary Immunity Under Section 230 of the Communications Decency Act.” *Loyola of Los Angeles Law Review* 43: 373.

²⁷ Lemley, Mark. 2007. “Rationalizing Internet Safe Harbors.” *Journal on Telecommunications & High Technology Law* 681: 101–20.

²⁸ Kelly, Sanja, Mai Truong, Madeline Earp, Laura Reed, Adrian Shahbaz, and Ashley Greco-Stoner. 2013. *Freedom House: Freedom of the Net 2013 Report*.

²⁹ Kelly, Sanja, Mai Truong, Madeline Earp, Laura Reed, Adrian Shahbaz, and Ashley Greco-Stoner. 2013. *Freedom House: Freedom of the Net 2013 Report*.

criminal liability, such as the jailing of Google's CEO in Brazil;³⁰ or excessive fines, which can result in intermediaries' overcompliance with government requests.

What follows are examples from the literature of the ways in which intermediaries can act as either enablers or disablers of the free flow of information.

Positive (Enabling) Implications

When considering the positive (enabling) implications of intermediary activity, the following topics have emerged from our research and will be elaborated on below: self-expression; democratic culture; economic benefits of online intermediaries; and social recognition.

Self-expression

- Dutton observes that online intermediaries have gathered significant attention in the past five years, particularly with the advent of more interactive technology that focuses on “co-creation” or “co-production of information” and technology.³¹ Wikipedia provides the most illustrative example of this kind of collaborative behavior and technology. The benefits for the freedom of expression of remix culture, in terms of individual self-expression enabled through user-generated content (“UGC”) platforms, such as YouTube, are well documented in communication literature.³²

Democratic Culture

³⁰ See: <http://www.cnn.com/2012/09/26/tech/brazil-google/index.html>

³¹ Dutton et al. 2011. UNESCO- Freedom of Connection Freedom of Expression: The Changing Legal and Regulatory Ecology Shaping the Internet.

³² Jenkins, Henry. 2006. Convergence Culture: Where Old and New Media Collide. New York: New York University Press; Jenkins, Henry. 2006. Convergence Culture: Where Old and New Media Collide. New York: New York University Press. Aufderheide, Patricia, and Peter Jaszi. 2011. Reclaiming Fair Use: How to Put Balance Back into Copyright. University of Chicago Press. boyd, danah. 2010. "Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications." In Networked Self: Identity, Community, and Culture on Social Network Sites (ed. Zizi Papacharissi), pp. 39-58. Chicago University Press.

- Interactive online platforms are particularly important for democratic culture, which Balkin describes as one where “individuals have a fair opportunity to participate in the forms of meaning-making that constitute them as individuals.”³³ In Balkin’s view, democracy is not just the right to vote and participate politically; but is also the right to self-expression that leads to self-actualization.³⁴ Furthermore, he argues that “digital technologies alter the social conditions of speech and therefore should change the focus of free speech theory from [...] concern with protecting democratic process and democratic deliberation to a larger concern with promoting and protecting a democratic culture.”³⁵ Balkin emphasizes that this ‘meaning-making’ that constitutes humans as individuals, also includes self-expression. This is exemplified by the popular and remix culture taking place on UGC platforms. A good example can be seen in the phenomenon that came to be known as “Eastwooding”, wherein numerous YouTube videos parodying Clint Eastwood’s talk at the 2012 Republican National Convention were generated and uploaded by ordinary citizens. While these provide examples of personal self-expression, they were also testaments to public participation in, ongoing discussion of, and commentary on, a political event through active intermediation.³⁶

Economic Benefits

- A number of reports discuss intermediaries’ contribution to macroeconomy, and explain how intermediaries reduce costs for consumers, firms, and governments. Cost reductions are classified as reductions in search costs, transaction costs, communication costs and investment and operating costs.³⁷

³³ Balkin, Jack. 2004. “Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society.” *New York University Law Review* 79 (1): 1.

³⁴ Balkin, Jack. 2004. “Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society.” *New York University Law Review* 79 (1): 1.

³⁵ Balkin, Jack. 2004. “Digital Speech and Democratic Culture: A Theory of Freedom of Expression for the Information Society.” *New York University Law Review* 79 (1): 1.

³⁶ Jenkins, Henry. 2006. *Convergence Culture: Where Old and New Media Collide*. New York: New York University Press; Also see: Colbert, Annie. 2012. “Eastwooding! Clint’s ‘Invisible Obama Routine Inspires Meme.” *Mashable*. August 30. <http://mashable.com/2012/08/30/clint-eastwood-chair-meme/>

³⁷ Global Network Initiative. 2014. *Closing the Gap: Indian Intermediaries and Liability: System not Yet Fit for Purpose*.

- In the report for the European Digital Media Association (EDiMA), Copenhagen Economics states that online intermediaries' GDP contribution in the EU 27 is significant. The data for 2009 estimate EUR 160 billion per year of “direct GDP contribution” and “an indirect impact of EUR 150 billion through the positive impact they [intermediaries] have on other firms and sectors.”³⁸ This number is projected to rise by 2015.³⁹
- Less well-known examples of innovative benefits of intermediaries can be found in developing countries, which demonstrate that individual social media companies can have economic benefits that they may not typically be associated with in the developed world.
- Wyche, Forte and Schoenbeck explain that residents of a Nairobi slum use Facebook “to the exclusion of other online services” in what is termed “consolidated use.”⁴⁰ “To the exclusion of other online services,” means that to many residents of this slum, Facebook *is* the Internet. Access is so hard to acquire for residents, that these individuals have discovered using only Facebook — for social, economic, romantic, and other purposes — is the best way to capitalize on their limited time online. In particular, many people of Nairobi use the site to generate income. “Finding formal employment in the slums is rare and most people there adopt *pluriactivity strategies*, or ‘hustle’, to survive.”⁴¹ Facebook is now an embedded part of their hustle strategies. In this case, economic empowerment can be seen as an enabler of freedom of expression, if we understand “freedom,” not merely in the philosophical sense of “negative freedom” or absence of obstacles,⁴² and if we perceive economic resources as a vehicle towards attaining “positive freedom,” which allows individuals to take control of their lives and realize their fundamental purposes.⁴³
- According to Sell, the situation in Kenya seems similar to that in some Southeast Asian markets: as of 2012, Indonesia was the second largest market for Facebook and the third

³⁸ EDiMA. 2012. Online Intermediaries: Assessing the Economic Impact of the EU's Online Liability Regime: p. 5.

³⁹ Ibid. p.8.

⁴⁰ Wyche, S.P, Forte, A & Schoenbeck, S.Y. 2013. Hustling Online: Understanding Consolidated Facebook Use in an Informal Settlement in Nairobi. ACM SIGCHI conference proceedings (p. 2824).

⁴¹ Ibid. (p. 2825).

⁴² See: <http://plato.stanford.edu/entries/liberty-positive-negative/>

⁴³ Ibid.

largest market for Twitter globally, even though only 17 percent of the population has Internet access.⁴⁴ Interestingly enough, some industry consultants say that brands interested in capitalizing on social networks should consider investing in subsidized and heavily branded access to the Internet.⁴⁵ A business model dynamic between advertisers, social media, and Internet service providers that may emerge under such circumstances would be an interesting model to observe, especially in terms of its consequences for end-users. Such models are already being developed in the US for instance, where T-Mobile offers users access to music apps even if they do not have a wireless data plan.

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- Liew, Vaithilingam and Nair report that using social media for economic purposes is a key priority for policy-makers in developing countries, such as Malaysia, where religious and community organizations play a key role in educating users on the socio-economic benefits of Facebook.⁴⁷ “One of the key challenges faced by policy-makers and practitioners is to increase the use of social networking platforms such as Facebook from the traditional social use to a more advanced level of use that will enhance Facebook’s socio-economic benefits.”⁴⁸ It is still unclear, however, as to how this education plays into the interest of policy-makers. This goal is particularly challenging as research shows that patterns of adoption and continued use of social media differ between the developed and developing countries. Additionally, empirical data on social media, and internet use in developing countries is very limited.⁴⁹ Continued use, however, as present findings show, is predicted by users’ perceived economic benefits of the social media platform.⁵⁰

⁴⁴ Sell, Susie. “Indonesia Report: Online Affair.” Campaign Asia Pacific. (paragraph 1).

⁴⁵ Ibid.

⁴⁶ See: <http://www.cnet.com/news/t-mobile-unveils-unradio-service-offers-data-free-music/>

⁴⁷ Liew, Ewilly J. Y., Santha Vaithilingam, and Mahendhiran Nair. "Facebook and Socio-Economic Benefits in the Developing World." *Behaviour & Information Technology* 33, no. 4 (2013): 345-60. (cf. Venkatesh *et al.* 2008).

⁴⁸ Ibid (pp.356 & 357).

⁴⁹ Wyche, S.P, Forte, A & Schoenbeck, S.Y. 2013. Hustling Online: Understanding Consolidated Facebook Use in an Informal Settlement in Nairobi. ACM SIGCHI conference proceedings.

⁵⁰ Ibid.

Social Recognition

- Hitz's writing perhaps best describes the ways that social media use also signifies social recognition. Access to social media platforms is mandated even for populations that otherwise have restricted access to public discourse. State-level laws which banned former sex offenders (those who are no longer in custody or under any form of supervised release) from accessing social media have been found unconstitutional.⁵¹ However, in an effort to keep the perceptions of their networks as safe places, some social media companies, such as Facebook, still forbid sex offenders from accessing their platforms in their own TOS, thus arguably affecting the rehabilitation process by curbing this population's right to freedom of expression.⁵²

Negative (Disabling) Implications

When considering the negative (disabling) implications of intermediary activity, the following topics have emerged from our research and will be elaborated on below: anonymity; self-censorship; cultural relativism behind blocking and filtering; lack of accountability; and decision-making by private companies, which is also addressed in the other two themes from our analysis.

Anonymity

- Concerning activism in authoritarian regimes, literature shows that prohibitions on anonymity enshrined in TOS and community guidelines can work against activists. Some platforms portray it as part of their value system that everyone should represent their true

⁵¹ Hitz, Jonathon. 2014. "Removing Disfavored Faces from Facebook: The Freedom of Speech Implications of Banning Sex Offenders from Social Media." *Indiana Law Journal* 89 (3): 1327–63.

⁵² *Ibid.*

identities online.⁵³ It is unclear from companies' discourse whether liability protections are driving the trend away from anonymity and whether this trend is a result of government pressure. Platforms may prefer not to have anonymous users in order to be able to identify them and avoid liability. Youmans and York found that platforms have been successfully leveraged towards helping governments stifle pro-democracy activists.

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Self-censorship

- According to Freedom House's Freedom of the Net Report, in Vietnam, because of vague liability rules, bloggers and forum administrators self-censor and take down risky comments in advance to prevent controversy and potential liability. An ISP could lose its license if it does not block URLs identified by the government.⁵⁵ Likewise, in Korea, the Communication Standards Commission, whose members are appointed by the president, identifies obscenity, defamation, and national security threats, issuing recommendations to ISPs to take content down. Even though recommendations are not legally binding, ISPs tend to comply for the fear of "potential sanctions."⁵⁶
- According to OpenNet Initiative (ONI) 2009 report, liability laws in some countries have what might be considered in western countries to be chilling effects on freedom of expression. In Saudi Arabia, technology use laws include penalties of ten years in prison and a fine for website operators who advocate or support terrorism, and five years and a fine for those guilty of distributing pornography or other materials that violate public law, religious values, or social standards of the kingdom.⁵⁷

⁵³ See: <https://www.facebook.com/communitystandards>

⁵⁴ Youmans, Will, and J. York. 2012. "Social Media and the Activist Toolkit: User Agreements, Corporate Interests, and the Information Infrastructure of Modern Social Movements." *Journal of Communication* 62 (2): 315–29. MacKinnon, Rebecca. 2012. *Consent of the Networked: The WorldWide Struggle for Internet Freedom*. New York: Basic Books.

⁵⁵ Kelly, Sanja, Mai Truong, Madeline Earp, Laura Reed, Adrian Shahbaz, and Ashley Greco-Stoner. 2013. *Freedom House: Freedom of the Net 2013 Report*.

⁵⁶ *Ibid.* (p. 641).

⁵⁷ OpenNet Initiative (ONI) Report. 2009. *Internet Filtering in Middle East and North Africa*.

Blocking and Filtering: Cultural Relativism

- Bambauer's work testifies to the importance of considering cultural relativism in approaching intermediaries: while a number of countries use intermediaries to ban users from accessing some content, there is little agreement on what that content should be.⁵⁸ It is likely that many Americans for example, would object to the United Arab Emirates' (UAE) decision to block all sites with Israeli top level domain were such a ban to take place in the US, just as UAE citizens might object to being able to access US-based or other sites that endorse alcohol consumption or pornography. Britain and Canada are blocking child pornography and Australia is testing a similar practice. American government officials have criticized search engines when they help censor political speech in China but also when they fail to remove links to protect copyright in the US.⁵⁹ The long-lasting social consequences of content blocking in terms of access to knowledge and consequently freedom of expression can be more difficult to explain to a legal audience. An example of this is provided when Chinese citizens demonstrated against Japan because they are offended by the country's conduct in the Second World War. However most Chinese citizens are unaware that Japan has apologized multiple times because China blocks sites with this information.⁶⁰ In addition, Russia prohibits drug abuse advocacy websites and assisted suicide,⁶¹ and France⁶² and Germany⁶³ prohibit hate speech.
- Filtering content through intermediaries is also a major freedom of expression concern. Consider the most recent approach to filtering embraced in the UK, which stems from years of public debate over child safety online, especially in relation to sexual abuse and

⁵⁸ Bambauer, Derek. 2009. "Cybersieves." *Duke Law Journal* 59. (p.8) cf. Jack M. Balkin, Beth Simone Noveck, & Kermit Roosevelt, *Filtering the Internet: A Best Practices Model* 7, in *Protecting our Children on the Internet: Towards a New Culture of Responsibility* (Jens Waltermann & Marcel Machill, eds.) (2000).

⁵⁹ Ibid.

⁶⁰ Ibid. (p. 12).

⁶¹ See: <http://eng.kremlin.ru/acts/4246>.

⁶² See:

http://www.legifrance.gouv.fr/affichTexte.do?sessionId=1B09771D3B23D96B137C9169E86B67F4.tpdjo13v_2?cidTexte=JORFTEXT000000257363&dateTexte=&oldAction=rechJO&categorieLien=id

⁶³ See: http://www.gesetze-im-internet.de/englisch_stgb/englisch_stgb.html#p1200

grooming. While concern for child safety is the rationale for filtering, free speech advocates argue that legitimate content will be unduly inaccessible.⁶⁴ Furthermore, while the filtering is deferred to the parent, or adults in the household, the filtering still encumbers ISPs. The Family Online Safety Institute (FOSI) reports that the four largest ISPs in the United Kingdom BT, BSkyB, Talk Talk and Virgin Media, need to provide their customers with “pre-ticked” options regarding the content they wish to have restricted.⁶⁵ Restricted content includes sex-related material, pro-ana and pro-mia websites, and self-harm, certain forums and streaming sites, as well as web blocking circumvention tools.⁶⁶

- Filtering through intermediaries is often associated with abuse of political power, with clear consequences for free flow of information. According to Freedom House’s Freedom of the Net Report, in order to contain religious unrest in 2012 the Indian government ordered ISPs to block hundreds of websites and URLs. Moreover, misguided court orders blocked 163 websites in just three days in 2013. Likewise, corporate actors battling piracy order ISPs to block video sharing sites and ISPs that do not comply face criminal and civil penalties.⁶⁷ ISPs were also ordered to block entire platforms preemptively, such as Vimeo, to prevent infringement of a movie that had not yet been released.
- According to Bambauer, filtering laws sometimes do not mean much in practice: in Thailand, the government needs to have a court order to block websites. However, court orders rarely happen in practice, and a government official’s request often suffices.⁶⁸ In Vietnam, pornographic websites which are formally banned often remain uncensored, while political ones tend to be blocked,⁶⁹ with clear consequences for free flow of information.

⁶⁴See: <http://www.theguardian.com/technology/2014/jul/02/Internet-filters-blocking-popular-websites-guido-jezebel>

⁶⁵ See: <http://www.fosi.org/emailers/fosibriefs-mar2014.html>

⁶⁶ Ibid.

⁶⁷ Kelly, Sanja, Mai Truong, Madeline Earp, Laura Reed, Adrian Shahbaz, and Ashley Greco-Stoner. 2013. Freedom House: Freedom of the Net 2013 Report.

⁶⁸ Bambauer, Derek. 2009. “Cybersieves.” Duke Law Journal 59.

⁶⁹ Ibid. (p. 24).

Lack of Accountability

- Differences in local legislation regarding filtering can result in a lack of accountability for end-users. For example in 2008, the Attorney General of New York ordered the blocking of certain Usenet groups because of alleged child pornography content; however, only a number of the blocked groups turned out to contain illicit images. Further, not only were these legitimate sites blocked, but access to them was denied to citizens of other states. However, the New York attorney general is not accountable to citizens outside New York, leading this author to suggest that a bordered approach to regulating online intermediaries, especially as regards to AGs' involvement, is to be questioned.⁷⁰ Modeled after the NY example, the Californian Governor and AG in 2008 urged ISPs to block access to child pornography. While the state's request was not legally binding,⁷¹ The Californian ISP Association issued a statement confirming it was ready to cooperate.⁷²

Decision-making by Private Companies

- Kayda's article discusses how private decision making by intermediaries, coupled with government regulation, can curb freedom of speech and access to knowledge. In 2011, Facebook abruptly decided to terminate privileges reserved for pharmaceutical companies.⁷³ Until then, Facebook had blocked comments from pharma companies' Facebook pages in order to prevent these companies from having to report comments that relate to drug-side effects to the Food and Drug Administration (FDA), as mandated by law. Not all comments had to be reported; however, their content had to meet four conditions and unless it did, there was no obligation to report. Yet, it was easier for companies to cancel their Facebook pages, rather than sift through each comment

⁷⁰ Bambauer, Derek. 2009. "Cybersieves." *Duke Law Journal* 59.

⁷¹ See:

<http://www.dailytech.com/California+Wants+Official+Crackdown+Against+Child+Porn+by+ISPs/article12162.htm>

⁷² Ibid.

⁷³ Kayda, Norman. 2011. "Pharma Companies Lose Facebook Privileges." *Applied Clinical Trials* 20 (9): 19.

individually. Explaining the rationale behind its decision, Facebook said it wanted to “help encourage authentic dialogue” on its pages.⁷⁴ The decision was sudden and such a rhetorical explanation provides little insight into the economic motives behind such a move. With the exception of Facebook’s self-branding as a platform that values free and authentic speech, we cannot infer what else might lie behind such an action. Furthermore, this case is a good example of how complex regulation can impede capitalizing on technological development.

- In Oman, it is the private regulation of online intermediaries that impacts end-user freedom of expression. Internet use is regulated by the ISP Omantel’s Terms & Conditions, which mandate that users “not carry out any unlawful activities which contradict the social, cultural, political, religious, or economic values of the Sultanate of Oman or could cause harm to any third party” as any abuse and misuse of the Internet Services will “result in the termination of the subscription and/or in the proceedings of Criminal or Civil lawsuits against the Customer.”⁷⁵ Global Voices contributor Riyadh Al Balushi reports that the Internet in Oman is rarely censored by the government to block websites that criticize the authorities.⁷⁶ However, Omantel “occasionally, due to human or machine errors, blocks random websites.”⁷⁷ The author observes that while the problem might seem inane, “due to the black box nature of the censorship department, once a website is blocked, it is a nightmare to get it unblocked.”⁷⁸ When the author’s own blog where he writes about IT law was blocked, it took a month to unblock it, and that occurred only after the author had complained to Oman’s Telecommunication Regulation Authority. Al Balushi observes that having services such as Gmail blocked for more than a day by mistake has a serious impact on people’s everyday lives.
- While the following theme will be elaborated on, in the curation section, it is important to note that the decisions of online intermediaries have tangible consequences for end-users’

⁷⁴ See: http://allfacebook.com/facebook-drug-companies-to-open-walls_b5498

⁷⁵ Ibid. (p. 4).

⁷⁶ Al Balushi, Riyadh. “Oman: Random Internet Censorship.” September 4, 2009. *Global Voices*. Retrieved from: <http://globalvoicesonline.org/2009/09/04/oman-random-internet-censorship/>

⁷⁷ Ibid.

⁷⁸ Ibid.

freedom of expression. In deciding what photos are allowed on their websites, some social networks use app stores' guidelines as a rationale for banning some explicit content from their platforms.⁷⁹ However, an examination of what content is actually banned reveals that platforms are unwilling to acknowledge their own normative framework as a curation tool used to decide which photos are allowed and which are not.⁸⁰ Breast feeding photos were previously banned from Facebook, for instance.⁸¹ Also, the Apple App Store's decision-making is vague and often deflects from clearly stipulated developer guidelines. While none of its guidelines say that an app will be rejected on the basis of being "politically charged," this term has guided App Store's rules in the past.⁸²

⁷⁹ Roth, Yoel. 2014. "No Overly Suggestive Photos of Any Kind: Content Management and Policing the Self in Gay Digital Communities." Paper presented at the International Communication Association Conference, May 2014.

⁸⁰ Hestres, Luis E. 2013. "App Neutrality: Apple's App Store and Freedom of Expression Online." *International Journal of Communication* (19328036) 7. University of Southern California, USC Annenberg Press: 1265–80.

⁸¹ See: <https://www.facebook.com/help/340974655932193/>

⁸² Hestres, Luis E. 2013. "App Neutrality: Apple's App Store and Freedom of Expression Online." *International Journal of Communication* (19328036) 7. University of Southern California, USC Annenberg Press: 1265–80.

Theme 2: Curation

Curation has historically been understood in the archaeological tradition as a way to catalog tools that are in either “active” use, or those that are “passive” and in storage.⁸³ There are multiple disciplinary approaches to the term that also inform this theme, including library and museum studies that use the term in the more traditional sense, of cataloguing and selecting items for display. We use it in an attempt to describe the growing trend or pattern of online intermediaries towards more active contribution and content production than was previously possible prior to the advent of more “collaborative” online technologies.⁸⁴ The term often has a positive connotation for online intermediaries, who have found it to be helpful to their business model to organize, order, and add value to existing content in an innovative way. However, this active curation transcends the traditional intermediary role as simply a “go-between,” and may lead to narrowed content, a filter bubble, and an increased likelihood of liability for online intermediaries.

Curation emerges as a dominant theme when discussing online intermediaries. The term is not new and is likely known to those familiar with museum, information, or library studies. Archaeological anthropological work popularized the use of the word during the 1970s, as part of a discussion of technology, distinguishing between those tools or resources that are in active use, and those that are passive or in storage.⁸⁵ Each discipline uses the term in different ways, but lately for those studying online behavior it has become necessary to think about what curation means for online intermediaries. It appears from a survey of the available literature that the archaeological explanation and understanding of curation has become especially useful as the idea of “the contemporary keeping of old things for future use” becomes more and more a part of

⁸³ Binford, Lewis R. 1979. "Organization and formation processes: looking at curated technologies." *Journal of anthropological research*: 255-273.

⁸⁴ Dutton et al. 2011. UNESCO- Freedom of Connection Freedom of Expression: The Changing Legal and Regulatory Ecology Shaping the Internet.

⁸⁵ Binford, Lewis R. 1979. "Organization and formation processes: looking at curated technologies." *Journal of anthropological research*: 255-273.

interactive⁸⁶ technology and the way that people use the Internet.⁸⁷ As online intermediaries increasingly become viewed as entities that are no longer merely conduits, but more “active” content organizers, defining curation becomes more important, particularly for issues of liability. The reason for this is because as online intermediaries grow to include more “collaborative” modes of use, like Wikipedia,⁸⁸ they also begin to run the risk of incurring greater liability for the content that is created on, or with, their platforms.⁸⁹

Within the information social science discipline, Hogan writes that curation places information into a “meaningful order” in a process that adds “value” to existing content.⁹⁰ In the information sciences, curation seems to encompass a more contemporary understanding of an older artistic, library science, and archaeological anthropological approach to information storage. Rotman et al., focus on “content curation communities,” which are, “distributed communities of volunteers who work together to curate data from disparate resources into coherent, validated, and oftentimes freely available repositories.”⁹¹ The collaborative nature of sites like Wikipedia underscores the importance that interactive technology has for enabling collaborative forums for information aggregation, that does not occur at random, but instead in an organized and “meaningful” way.⁹²

This type of more active curation is intended to add value to information or content that already exists, but the “meaningful” way that it occurs also means that it is not apolitical or neutral. A recent example of this is provided by Facebook’s study on manipulating the newsfeeds of its

⁸⁶ William H. Dutton, Anna Dopatka, Michael Hills, Ginette Law, Victoria Nash 2011. UNESCO- Freedom of Connection Freedom of Expression: The Changing Legal and Regulatory Ecology Shaping the Internet.

⁸⁷ Shott, Michael J. "An exegesis of the curation concept." *Journal of Anthropological Research* 1996: 259-280.

⁸⁸ William H. Dutton, Anna Dopatka, Michael Hills, Ginette Law, Victoria Nash 2011. UNESCO- Freedom of Connection Freedom of Expression: The Changing Legal and Regulatory Ecology Shaping the Internet.

⁸⁹ *Fair Housing Coun., San Fernando v. Roommates.com*, 521 F. 3d 1157 (9th Cir. 2008).

⁹⁰ Hogan, Bernie. 2010. "The presentation of self in the age of social media: Distinguishing performances and exhibitions online." *Bulletin of Science, Technology & Society*: 0270467610385893.

⁹¹ Rotman, Dana, Kezia Procita, Derek Hansen, Cynthia Sims Parr, and Jennifer Preece. 2012. "Supporting content curation communities: The case of the Encyclopedia of Life." *Journal of the American Society for Information Science and Technology* 63, no. 6: 1092-1107, p. 1092.

⁹² Hogan, Bernie. 2010. "The presentation of self in the age of social media: Distinguishing performances and exhibitions online." *Bulletin of Science, Technology & Society* : 0270467610385893.

users for experimental psychological research on “massive-scale emotional contagion.”⁹³ There was a substantial amount of discussion on the ethical implications of such a study, and of Facebook’s newsfeed decisions generally, that ensued when the details of the methodology came to light. There are many angles to consider in the study, but perhaps one of the most overlooked is the issue of curation.

Gillespie points out on the blog Culture Digitally that Facebook’s operation of the Newsfeed and the way in which it algorithmically “curates our social connections” is the root of the issue.⁹⁴ Such data management may be seen as a positive for online intermediaries, but end-users may have a less positive view of the organization of their data and information. Facebook, in the way that Hogan discusses, views their curation process as a valuable and necessary part of the business model to retain users. Gillespie explains that their “Edgeranking” system was created to tailor one’s experience to make it more engaging and interesting. The more engaging the system, the more likely a user is to want to stay and come back to the service.

Gillespie points out that this curation is part of Facebook’s Terms of Service and its “Data Use Policy”. Facebook is therefore well, “within their rights to make whatever adjustments they want.” However Gillespie focuses not only on Facebook’s legal rights, but on the level of awareness regarding their curating algorithm, and how strange that may seem to most of the general public. “It’s easy for those of us who pay a lot of attention to how social media platforms work, engineers and observers alike, to forget how unfamiliar that is. I think, among the population of Facebook users — more than a billion people — there’s a huge range of awareness about these algorithms and their influence.”⁹⁵

Gillespie then provides a discussion of the ways in which algorithmically curated information dispensing is different and separate from older “conduit” forms of information sharing like the

⁹³ Kramer, Adam DI, Jamie E. Guillory, and Jeffrey T. Hancock. 2014. "Experimental evidence of massive-scale emotional contagion through social networks." *Proceedings of the National Academy of Sciences* : 201320040.

⁹⁴ Gillespie, Tarleton. 2014. When Science, Customer Service, and Human Subjects Research Collide. Now What? Retrieved from <http://www.culturedigitally.org>.

⁹⁵ Ibid.

telephone or post office, which were viewed as “trusted interpersonal information conduits.”⁹⁶ In those instances, they were trusted not to curate because curating what mail gets delivered to make the receiver have a more engaging experience would have been illegal. Gillespie also points out the way that participative platforms like Facebook are different and separate from “media content producers,” radio, film, and magazines, because they act as “curators” of that content and not “producers.”⁹⁷ The following points highlight the ways this *active* role can have implications for liability.

Active Curation

- This “producer” comment is of particular importance for online intermediary liability. If the trend is towards more active curation from online intermediaries, what does that mean for content production? When does the level of curation move past neutral and into acknowledged production or creation? Recent legal scholarship discusses this issue and the potential for liability.⁹⁸
- Kohl uses the example of Google News and Google Street View to discuss the more active role that Google takes in information sharing and disseminating, than was previously possible. Kohl sees both of these features as an issue of information creation instead of “aggregation,” because they “come, at the very least, close to the creation of new content and go beyond mere organization.”⁹⁹ The way the search engine finds and displays the search results indicates a more creative part than simply listing the results in Kohl’s view. Additionally, Kohl emphasizes the risk for online intermediary liability, by moving from content aggregation only, towards something that involves more creation. Roommates.com is an example of an online intermediary that lost its Section 230 CDA

⁹⁶ Gillespie, Tarleton. 2014. When Science, Customer Service, and Human Subjects Research Collide. Now What? Retrieved from <http://www.culturedigitally.org>.

⁹⁷ See: boyd, dana. “What does the Facebook Experiment Teach Us?” <https://medium.com/message/what-does-the-facebook-experiment-teach-us-c858c08e287f>

⁹⁸ Kohl, Uta. (2013). Google: The Rise and Rise of Online Intermediaries in the Governance of the Internet and beyond (part II).Article: International Journal of Law and Information Technology (Volume 21, No 2), p. 193; Also see: http://www.salon.com/2013/02/01/how_netflix_is_turning_viewers_into_puppets/

⁹⁹ Kohl, Uta. (2013). Google: The Rise and Rise of Online Intermediaries in the Governance of the Internet and beyond (part II).Article: International Journal of Law and Information Technology (Volume 21, No 2), p. 193.

immunity, essentially because of curation.¹⁰⁰ The reason the site wasn't afforded the normal liability protections for online intermediaries is because of the use of an "automated" form, which asked for information about sexual orientation.¹⁰¹

- Kohl points out that although the questionnaire used by Roommates.com was automated, in the same way that Google's search has been defined as automated, they were still held liable because they made changes to the content. Although this sounds perhaps different than the earlier description of passive tool use and active tool use, Kohl writes that it is still a move towards curation because it is not truly "neutral" behavior for an intermediary entity.
- Kohl is particularly concerned with the concept of "neutrality" and Google's search engine description as a neutral entity. Google's search was called an "opinion" "for the purposes of the First Amendment to the Constitution."¹⁰² Kohl finds this to be inaccurate because Google's search engine operates on an algorithm that is not truly "neutral." Kohl argues that the search is not simply providing a condensed version of disparate information in one place, but is instead programmed or embedded already with an agenda of sorts, echoing Mager's social constructionist critique of the "capitalist" nature of search engines.¹⁰³

Algorithmic Curation

The following section highlights the role that algorithms play in curation and the ways in which these algorithms impact the concept of "neutrality". Recent research has emphasized that proprietary algorithms that were previously regarded as neutral tools for curation are a potential liability concern for online intermediaries.

¹⁰⁰ *Fair Housing Coun., San Fernando v. Roommates.com*, 521 F. 3d 1157 (9th Cir. 2008).

¹⁰¹ Kohl, Uta. (2013). Google: The Rise and Rise of Online Intermediaries in the Governance of the Internet and beyond (part II).Article: International Journal of Law and Information Technology (Volume 21, No 2).

¹⁰² *Search King, Inc. v. Google Tech., Inc.*, 2003 W.L. 21464568 (2003).

¹⁰³ Mager, Astrid. "Algorithmic ideology: How capitalist society shapes search engines." *Information, Communication & Society* 15, no. 5 (2012): 769-787, p. 782

- Mager argues that algorithms operate on a “capitalistic ideology” and are not an objectively neutral way to discover information. She uses two concepts in particular to make this point; 1) “Consumer profiling” or the targeted advertising towards individuals by third-party advertisers; and 2) The notion that, “the need for search” has been in existence for decades, and that “we are to blame” for not creating a public search solution in that “neoliberal moment.”¹⁰⁴ Mager argues that this type of search could have been publicly funded, so that no one private company could effectively hold such a monopoly over what information results are yielded in a curated search.
- This lack of neutrality, is a function of the curation that search and other newer online technologies embody. For online intermediaries, like Google, it appears that search is not simply a neutral tool, but is, instead, an example of an “active” curation.¹⁰⁵ The risk, however, is not simply limited to liability, but also has implications for information access more generally.
- Another tool of curation that many online intermediaries currently employ are recommender systems. Recommender systems are essentially an automated recommendation tool that use a proprietary algorithm, that are becoming increasingly important to the business model of many online intermediaries, that will be explained below.

Recommender Systems as Tools of Curation

A recommender system is a computer-science technique that many current intermediaries employ and there is a vast amount of research available on recommender systems that cannot all be captured here. Recommender systems are essentially an automated recommendation tool that

¹⁰⁴ Ibid.

¹⁰⁵ Binford, Lewis R. 1979. "Organization and formation processes: looking at curated technologies." *Journal of anthropological research*: 255-273.

use a proprietary algorithm, that are becoming increasingly important to the business model of many online intermediaries.¹⁰⁶

- Recommender systems, and in particular, increasingly accurate ones, have become very important to e-commerce. Their semi-recent popularity seems to be indicative of Gillespie's description of curation; or curation with an economic or commercial motivation. "Due to their great commercial value, recommender systems have also been successfully deployed in industry, such as product recommendation at Amazon, music recommendation at iTunes, movie recommendation at Netflix, etc."¹⁰⁷
- "Web 2.0 applications facilitate collaborative actions of users in which informal dynamic groups of people cooperate or share common interests with one another."¹⁰⁸ Przemyslaw, Musial and Kajdanowicz emphasize the growing influence that recommender systems have come to have in the online market.
- Recommender systems can be adapted to accommodate many different types of products and social uses, and they are predicated on the social behavior of recommending a product or a service to another person. The systems attempt to replicate that behavior on a much larger scale than could be achieved by "word-of-mouth." An online intermediary could develop one for a social network to recommend contacts, to recommend songs or films, or to suggest new products for purchase.
- Search engines like Google's, and other contemporary platforms such as Amazon, Netflix, or Facebook, rely on recommender systems in their overall system architecture or infrastructure to function.
- "Amazon once reported that 35% of its sales came from its recommendation systems. Netflix in 2012 reported that 75% of what its users watched came from recommendations. Recommender systems have greater influence on users' choices than

¹⁰⁶ Ma, Hao, Dengyong Zhou, Chao Liu, Michael R. Lyu, and Irwin King. 2011. "Recommender systems with social regularization." In Proceedings of the fourth ACM international conference on Web search and data mining, pp. 287-296. ACM.

¹⁰⁷ Ibid.

¹⁰⁸ Kazienko, Przemyslaw, Katarzyna Musial, and Tomasz Kajdanowicz. "Multidimensional social network in the social recommender system." Systems, Man and Cybernetics, Part A: Systems and Humans, IEEE Transactions on 41, no. 4 (2011): 746-759, p. 746.

peers and experts.”¹⁰⁹ The authors of the referenced study worry that because the systems have become so commercially successful and are viewed as integral to the Web 2.0 business model, that businesses might not be considering the social “risks” of using such systems any more.

- There are also online intermediaries that provide platforms for individuals to sell their applications that have been greatly beneficial to innovative design.¹¹⁰ The Apple App store provides an example of “an online curated marketplace” where developers can sell their products, as well as keep track of other new innovations.¹¹¹
- Recommender systems sometimes rely on a computer science technique called “collaborative filtering,” that involves filtering and collaboration between large amounts of data, data points, and multiple “agents” to sort information accordingly.¹¹² By using recommender systems, many online intermediaries have been able to provide an innovative advantage in targeted advertising of their products that were previously unavailable to intermediaries in traditional markets.
- Jansen and Bloemendal emphasize the difference in the Apple App store as an online intermediary that differs from more traditional marketplaces. Jansen and Bloemendal observe that “the adjective curated introduces the concept of a curating party that organizes and selects the collection of apps in an app store, a task generally performed by the owner. The word of this element was added to distinguish the app store from brick and mortar stores” to emphasize the difference between an online space and a physical one.¹¹³
- The app store also relies on the basic underlying structure of a proprietary recommender system to operate, however, and some developers may find the curative aspect to be less than fair to their work and their products. Lim and Bentley note that an app’s success is

¹⁰⁹ Ibid, p. 746.

¹¹⁰ Basole, Rahul C., and Jürgen Karla. 2012. “Value Transformation in the Mobile Service Ecosystem: A Study of App Store Emergence and Growth.” *Service Science* 4 (1): 24–41.

¹¹¹ Jansen, Slinger, and Bloemendal, Ewoud. 2013. “Defining App Stores: The Role of Curated Marketplaces in Software Ecosystems.” In *Software Business. From Physical Products to Software Services and Solutions*, pp. 195-206. Springer Berlin Heidelberg.

¹¹² Terveen, Loren; Hill, Will (2001). “Beyond Recommender Systems: Helping People Help Each Other”. Addison-Wesley.

¹¹³ Ibid, p. 197.

“highly dependent” on the manner in which the app store presents the applications. “Even if the app has every feature that every user desires, if it never appears on an app store chart then it may be doomed to obscurity.”¹¹⁴

Personalization and Filtering through Recommender Systems

Using a recommender system as a tool allows an online intermediary to create a degree of personalization for an end-user. This personal aspect of curation, is part of what may make a particular online intermediary more engaging for an end-user, but some researchers view this as a negative filtering effect.

- In addition to the legal liability concerns for recommender systems and a more highly curated Internet, there is also the possibility of Pariser’s “filter bubble” effect to consider. “Eli Pariser coined the term ‘filter bubble’ to describe the potential for online personalization to effectively isolate people from a diversity of viewpoints or content. Online recommender systems — built on algorithms that attempt to predict which items users will most enjoy consuming — are one family of technologies that potentially suffers from this effect.”¹¹⁵
- However, Linden, one of the authors of Amazon's recommender system, offered a different opinion, and suggested that “narrowing user choices is not what personalization via recommender systems does.” He argued that, “users can't search for items that they are not aware of, therefore, personalization increases serendipity.”¹¹⁶ The innovative side of the software architecture of recommender systems, provide this idea of

¹¹⁴ Lim, Soo Ling, and Peter J. Bentley. (2013). "Investigating app store ranking algorithms using a simulation of mobile app ecosystems." In Evolutionary Computation (CEC), 2013 IEEE Congress on, pp. 2672-2679. IEEE.

¹¹⁵ Ibid., p. 747

¹¹⁶ Greg Linden. 2011. Eli pariser is wrong. <http://glinden.blogspot.com/2011/05/eli-pariser-is-wrong.html>.

“personalization” highlighted by Linden. That level of personalization is only really made possible in a system that employs curated third-party advertising.¹¹⁷

There are multiple angles to consider within the theme of curation, with emphases on e-commerce, social function, and software design such as recommender systems. There appears to be a trend towards more active contribution for online intermediaries that has implications for liability, and for policy. Additionally, this dominant thread shares some of the same core issues with the other two themes we have laid out within this work, such as private ordering, and government-mandated blocking and filtering.

¹¹⁷ Gillespie, Tarleton. 2014. When Science, Customer Service, and Human Subjects Research Collide. Now What? Retrieved from <http://www.culturedigitally.org>.

Theme 3: Private Ordering

Literature within this thematic organization addresses the issue of online intermediaries as they increasingly become decision makers in atypical cases, such as those that are traditionally directed by state actors like courts or government institutions. As such, online intermediaries privately order communication, transactions, and other facets of social life. This development is closely related to the idea of private corporations influencing the public sphere, which, in the context of the Internet, primarily consists of online intermediaries.¹¹⁸ These intermediaries may make decisions or implement policies that affect the right to freedom of expression, privacy rights, or other fundamental rights of Internet users, which relates to the first theme of free flow of information, civic life and participation. In such cases, the measures that would normally protect individuals from government institutions attempting to interfere with those rights may not be able to protect them when online intermediaries are involved. This theme also deals with how Terms of Service (TOS) are instrumental to the private ordering of online intermediaries.

Typically decisions on regulation are decided by state institutions, however, as the discussion in the theme on curation shows, the more active role played by online intermediaries also highlights a shift towards private companies' greater control over speech and activities on their platforms. This shift towards private ordering appears to involve more commercial involvement from intermediaries¹¹⁹ which individual users must also rely on to participate in online discourse.¹²⁰

¹¹⁸ DeNardis, Laura. 2012. "Hidden Levers of Internet Control." *Journal of Information, Communication and Society*, 720.

¹¹⁹ Mager, Astrid. 2012. "Algorithmic ideology: How capitalist society shapes search engines." *Information, Communication & Society* 15, no. 5: 769-787.

¹²⁰ Laidlaw, Emily B. 2012. *Internet Gatekeepers, Human Rights and Corporate Social Responsibilities*.

Terms of Service as Instruments for Private Ordering

Private ordering by online intermediaries primarily takes place through the enforcement of Terms of Service (TOS). Online intermediaries determine what is allowed and what is not allowed through the use of their services. In particular, when an online intermediary has a centralized control over its service, TOS can become a powerful tool to govern the information that is communicated through the intermediary's service to its liking. While TOS primarily determine the relationship between the online intermediary and the parties that use their services, enforcement of TOS may in some cases transcend the level of the individual user and affect a larger group of people or the public as a whole.

- DeNardis explains that when WikiLeaks started releasing sensitive diplomatic cables in 2010, some online intermediaries stopped providing their services to WikiLeaks because the website allegedly infringed those intermediaries' TOS.¹²¹ Amazon, for instance, terminated its hosting services for the websites wikileaks.org and cablegate.wikileaks.org, because it claimed that WikiLeaks infringed its TOS.¹²² Financial intermediary PayPal restricted the use of WikiLeaks' account because WikiLeaks violated its Acceptable Use Policy stating that its payment service cannot be used for any activities that encourage illegal activity.¹²³
- Hestres points out that Apple's infrastructure that requires all apps to be channelled through its App Store, combined with Apple's vague and inconsistently applied terms, have turned Apple "into the final arbiter of freedom of expression within the iOS ecosystem for both users and developers."¹²⁴ There is, however, little transparency about

¹²¹ DeNardis, Laura. 2012. "Hidden Levers of Internet Control." *Journal of Information, Communication and Society*, 720.

¹²² See: <http://aws.amazon.com/message/65348/>.

¹²³ DeNardis, Laura. 2012. "Hidden Levers of Internet Control." *Journal of Information, Communication and Society* 15 (5): 720, 733.

¹²⁴ Hestres, Luis E. 2013. "App Neutrality: Apple's App Store and Freedom of Expression Online." *International Journal of Communication* (19328036) 7. University of Southern California, USC Annenberg Press: 1265–80.

the decisions Apple makes as this “final arbiter of freedom of expression.” Apple’s goodwill is vital to app-developers as it curates its App Store and decides whether an app lives or dies. Zittrain explains the reinforcing effect this power of Apple has on the transparency of its decisions: “a gag order in the license agreement demanding that software authors not discuss codewriting for unreleased software is taken very seriously among app developers. Apple doesn’t need to bring a lawsuit against a developer who violates license terms; it already has the power to destroy the iPhone-based livelihood of anyone disfavored, for any reason.”¹²⁵

Terms of Service as Proxies for Government Control

An online intermediary’s TOS may become a proxy that governments can use indirectly against users of the intermediary’s service. In such a case, the user of a service may not have the recourse she would otherwise have if it were a government institution directly affecting her fundamental or constitutional rights.

- Fradette writes that if governments ask online intermediaries to enforce their TOS and remove certain content, under U.S. law, a court’s analysis may be limited to a contractual analysis, and will fail to consider the user’s constitutional rights normally relevant if state agent had acted directly against the user. Transparency is at issue here as well. If online intermediaries do not report on government institutions contacting them about a possible infringement of TOS, a government institution can use this form of private ordering by the intermediary unbeknownst to its constituents.¹²⁶
- Nathenson describes how in the case of the controversial Innocence of Muslims video on YouTube, the U.S. government suggested YouTube to remove the video.¹²⁷ However,

¹²⁵ Zittrain, Jonathan. 2009. “Law and Technology. The End of the Generative Internet.” *Communications of the ACM* 52 (1): 18–20, 19.

¹²⁶ Fradette, Jacquelyn E. 2014. “Online Terms of Service: A Shield for First Amendment Scrutiny of Government Action.” *Notre Dame Law Review* 89: 947.

¹²⁷

Google as the owner of YouTube, determined that the video did not violate its TOS with regard to hate speech, and decided not to remove the video.

- In the aforementioned WikiLeaks case, in which PayPal placed severe restrictions on WikiLeaks' account, PayPal's General Counsel clarified that while PayPal was not contacted by any U.S. government organization, the statement released by the Department of State, that WikiLeaks may have been in possession of documents that were provided in violation of U.S. law, was of influence in deciding over WikiLeaks access to its account.¹²⁸

Public Policy Effectuated Through Online Intermediaries

There is much discussion at both the national and international levels regarding the role that online intermediaries can play in addressing issues such as intellectual property infringement, fraud reduction, child online protection, or cyber-security.¹²⁹ In such cases, the decisions of intermediaries may also be the result of government pressure, government obligations, or an assessment of the risks of liability arising from the content they help to communicate.

A fine-tuned system of liability and safe harbors, which creates incentives for online intermediaries, may help governments in reaching their public policy goals.

- Balkin explains that the imposition of liability, and the promise of immunity for compliance, can be used to have online intermediaries cooperate in regulation of speech: "Intermediary liability is also a strategy for promoting public/private cooperation in speech regulation. For example, states might want intermediaries to flag and delete suspicious content, develop or finance effective filtering technologies (which the state can then use), shut down accounts, or hand over private user information. These tasks may be resource intensive and governments may be unable to perform them easily on their own. Threats of intermediary liability — coupled with promises of immunity for

¹²⁸ DeNardis, Laura. 2012. "Hidden Levers of Internet Control." *Journal of Information, Communication and Society* 15 (5): 720, 733.

¹²⁹ OECD. 2011. *The Role of Internet Intermediaries in Advancing Public Policy Objectives*, 3.

compliance — help states persuade owners of private infrastructure to work with them and for them.”¹³⁰

- With regard to cybersecurity, Rowe et al. argue that “[a]ssuming most ISPs would investigate such options where additional revenue could be generated, it is likely that offering security services has never been an easily justified investment determination.”¹³¹ If one wants ISPs to take the problem of cybersecurity upon themselves, alternate strategies are needed to motivate them to do so. Lichtman and Posner suggest that the imposition of liability upon ISPs for the lack of cybersecurity is what is needed to have ISPs deal with the problem.¹³²
- In order to work against cyberbullying, Edwards argues that the duty to prevent cyberbullying should fall on hosting services, including Facebook, because these service providers “are best positioned to cure the surmounting issue of online abuse upon the person of another.”¹³³

Online intermediaries are often put in a position where they have to decide what information flows are lawful or not. In that regard, their role is changing from one of a traditional “middleman” to one that more closely resembles that of a government or court. This form of instituted private ordering may be particularly problematic from the perspective of freedom of expression, examples of which were discussed in the first theme.

- Online intermediaries are assigned greater responsibilities in the enforcement of intellectual property rights.¹³⁴ Online intermediaries may also need to decide on the legality of certain content. Notice-and-takedown systems for copyrighted content are an

¹³⁰ Balkin, Jack M. 2014. “Old-School/New-School Speech Regulation.” *Harvard Law Review* 127: 2296.

¹³¹ Rowe, Brent, Dallas Wood, Douglas Reeves, and Fern Brain. 2011. *The Role of Internet Service Providers in Cyber Security*, 7.

¹³² E.g. Lichtman, Doug, and Eric Posner. 2006. “Holding Internet Service Providers Accountable.” *Sup. Ct. Econ. Rev.* 14: 221.

¹³³ Jaffe, Elizabeth M. 2013. “Imposing a Duty in an Online World: Holding the Web Host Liable for Cyberbullying.” *Hastings Communications & Entertainment Law Journal (Comm/Ent)* 35 (2): 277–302. *Cf.* Lipton D., Jacqueline. 2013. “Cyberbullying and the First Amendment.” *Florida Coastal Law Review* 14 (99).

¹³⁴ Edwards, Lilian. 2011. *Role and Responsibility of Internet Intermediaries in the Field of Copyright and Related Rights*. Glasgow; Ignacio Garrote Fernández-Díez, *Comparative Analysis on National Approaches to the Liability of Internet Intermediaries for Infringement of Copyright and Related Rights*.

example. Online intermediaries then need to decide on the lawfulness of the use of copyrighted material communicated through their services. Some authors have argued that intermediaries may not be in the best position to decide over what content can and what content cannot be communicated on the Internet. For instance, researchers studying the US's Digital Millennium Copyright Act's notice-and-takedown system have argued that the copyright takedown system has a chilling effect on freedom of expression as it incentivizes risk-averse intermediaries to take content offline when they are notified about infringement, without examining the propriety or legality of the underlying request for removal.¹³⁵

- The recent European Court of Justice decision in *Gonzales v. Google Spain* is an example of a court decision imposing governance duties, as well as associated costs, on an online intermediary.¹³⁶ The decision referenced Google's responsibility under EU data protection law¹³⁷ to remove search results from a website containing personal data that were not accurate, although the decision did not offer specific guidance on how to comply with it. In response, Google chose to set up what was effectively a notice-and-takedown system, one that allowed EU citizens to request the removal of certain results for the European versions of Google's search engine. The removed search results will still be available through non-EU versions of Google Search, such as google.com. In deciding whether to remove certain search results, Google has to balance a person's rights under EU data protection law with others' right to access information and freedom of expression. Google has set up an advisory council to help strike the right balance between "one's person's right to be forgotten [and] the public's right to know."¹³⁸ Google has also consulted the general public and stakeholders to gather input that helps inform the company's evolving policies in this area. This process of gathering input from the public,

¹³⁵ For example, Jennifer M Urban, Efficient Process or Chilling Effects - Takedown Notices under Section 512 of the Digital Millennium Copyright Act, Santa Clara Computer & High Tech. LJ 631 (2005); and Wendy Seltzer, Free Speech Unmoored in Copyright's Safe Harbor: Chilling Effects on the DMCA on the First Amendment, 24 Harvard Journal of Law & Technology 171 (2010).

¹³⁶ Case C-131/12 *Google Spain SL and Google Inc. v Agencia Española de Protección de Datos (AEPD) and Mario Costeja González*.

¹³⁷ <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31995L0046:en:HTML>

¹³⁸ See: <http://www.google.com/intl/en/advisorycouncil/>.

governments, businesses, academics and others, mimics government policy and decision-making.

Concluding Remarks

This literature review identified three themes that emerged from our research: 1) Free flow of information, civic life and participation; 2) Curation; and 3) Private ordering. Through the lens of perspectives outlined in the introduction (technological infrastructure perspective; economic interests perspective; social and social science perspectives as well as legal perspective), the review sought to paint a broad overview of issues that inform the discussion about online intermediaries that are of relevance for policy-makers and other interested audiences. It is important to note that there is significant overlap between the themes and that they are not intended to be mutually exclusive; rather, this overlap testifies to the difficulty of disentangling multiple factors that influence online intermediary behavior and consequences for end-users.

The first theme analyzes the ways in which intermediaries can enhance the quality of the digital public sphere, but also provides examples of ways in which intermediary liability and cross-border differences in legislation concerning liability can affect end-users' freedom of expression and innovation that stems from freedom of expression. Furthermore, the theme ushers in the discussion on privatization of the online public sphere and the consequences for free flow of information. The second theme provides context for using the term "curation" to analyze online intermediaries, identifying the consequences of greater curation enshrined in the more active model for intermediary liability and economic innovation. Curation, like online intermediaries, has several different denotative meanings across disciplines, and this review attempts to highlight a newer, emergent use of the term as it relates to those same online intermediaries, and what the implications are for the average end-user's access to knowledge and freedom of expression. Finally, the third theme outlines the cases where online intermediaries

tend to overtake roles traditionally assumed by state actors, analyzing the possible reasons behind such a state of affairs as well as the implications for end-users.

In addition to a number of phenomena that online intermediaries are faced with, that there is not sufficient space to fully address here, e.g. net neutrality and internet governance concerns, revenge porn and cyberbullying emerge as two of the more salient issues currently garnering the attention of the news media and legal community. They illustrate how online intermediaries' curating actions have implications for the free flow of information in the public sphere; for end-users' freedom of expression; their psychological and even physical well-being. All of these issues will provide fruitful areas for further exploration and research.

Further inquiry should examine the macro and microeconomic impacts of online intermediary activity as well as the consequences of liability regimes in different countries on economics of intermediaries with possible implications for innovation. What seems to be missing in the literature thus far is an analysis of the economic incentives behind online intermediaries' move towards more active curation and the role that this factor plays in business decisions, as well as the ultimate consequences for end-users' freedom of expression. A clear gap exists in the literature on end-users' understandings of just what an online intermediary is, and what it means for their use of the Internet. A more situated understanding, in plainer language, perhaps provided by attorneys who work in this area, might provide a level of transparency that appears to be currently missing in the relationship between an average end-user and the online intermediaries they rely on in their daily lives. Thus far there has not been much, if any, research devoted to bridging this kind of elite legal, and technical knowledge to a more common audience.

