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Olivier Sylvain

Fordham University School of Law, sylvain@law.fordham.edu

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INTEGRATIVE INFORMATION PLATFORMS: THE CASE OF ZERO-RATING

Olivier Sylvain*

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Zero-rated services provide an on-ramp to networked resources that are otherwise beyond many users' reach. Through such services, wireless service providers offer free access to a curated set of popular applications on the public Internet. Its proponents assert that zero-rated services provide an invaluable introduction to online applications and content, which, in turn, will increase adoption rates in the most neglected markets.

But zero-rating has split communications policymakers around the world. Proponents argue that it grows adoption rates.¹ Opponents argue that it violates the network neutrality norms of nondiscrimination and “innovation without permission.”² Other opponents assert that zero-rating dissuades governments from committing resources to alternative ways of deploying affordable service universally.³ The issue has been challenging for communications scholars to sort through, as it joins a variety of arguably incompatible regulatory norms.⁴ I argue here, instead, that zero-rating should only be evaluated in the way all communications technologies are: how does it enable all members of the community to contribute to and engage in public life on equal terms?

* Professor of Law, Fordham University School of Law.

¹ Arturo J. Carrillo, *Having Your Cake and Eating It Too? Zero-Rating, Net-Neutrality, and International Law*, 19 STAN. TECH. L. REV. 364, 424–25 (2016); Darrell M. West, *Digital Divide: Improving Internet Access in the Developing World Through Affordable Services and Diverse Content*, Ctr. for Tech. Innovation at Brookings, 10–11 (Feb. 2015) https://www.brookings.edu/wp-content/uploads/2016/06/West_Internet-Access.pdf [<https://perma.cc/4JDB-X2J7>].

² Barbara van Schewick, *Network Neutrality and Quality of Service: What a Nondiscrimination Rule Should Look Like*, 67 STAN. L. REV. 1, 9, 30 (2015).

³ See Carolina Rossini & Taylor Moore, *Exploring Zero-Rating Challenges: Views From Five Countries*, PUB. KNOWLEDGE (July 2015), <https://www.publicknowledge.org/press-release/public-knowledge-publishes-net-neutrality-paper-investigating-zero-rating-p> [<https://perma.cc/VG8A-GKT7>].

⁴ See, e.g., Rob Frieden, *The Mixed Blessing in Subsidized Internet Access*, 15 COLO. TECH. L.J. 269 (2017); Ellen P. Goodman, *Zero-Rating Broadband Data: Equality and Free Speech at the Network's Other Edge*, 15 COLO. TECH. L.J. 63 (2016).

There are undoubtedly ways in which zero-rated services present a cost-effective opportunity for communities who long to be online. But there are reasons to be skeptical about their ability to actually achieve this objective. I argue here that regulatory regimes, which permit zero-rating are troubling to the extent that they fail to redress disparities in users' engagement of the networked information economy.

The new attention to zero-rating creates an opportunity to revisit an essential aspect of communications law that in recent years appears to have been all but forgotten among policymakers and scholars. This essay attempts to resuscitate the longstanding but often overlooked objective of ensuring universal access to reasonably comparable communications services. The idea is simple: the main purpose of communications policy (in democracies, at least) is to ensure that all members of the polity have the meaningful opportunity to engage in commerce and participate in public life—that they have access to the full bazaar of resources on which citizenship in the given community is based. The concept is not new. It finds its earliest legal expression in the United States in the Postal Clause of the Constitution,⁵ a provision to which Justice Joseph Story devoted several sections of his opus on constitutional law. The post office, Justice Story explains,

circulates intelligence of a commercial, political, intellectual, and private nature, with incredible speed and regularity. It thus administers, in a very high degree, to the comfort, the interests, and the necessities of persons, in every rank and station of life. It brings the most distant places and persons, as it were, in contact with each other; and thus softens the anxieties, increases the enjoyments, and cheers the solitude of millions of hearts. It imparts a new influence and impulse to private intercourse; and, by a wider diffusion of knowledge, enables political rights and duties to be performed with more uniformity and sound judgment.⁶

This conception of communications policy has informed telecommunications policy for over a century, even if its implementation often redounded to monopoly service providers like AT&T.⁷ I have argued

⁵ U.S. CONST., art. I, § 8, cl. 7 (Congress has the power “To establish Post Offices and post Roads.”).

⁶ Joseph Story, *Commentaries on the Constitution* 3 § 1120.

⁷ See TIM WU, *MASTER SWITCH* (2012); RICHARD JOHN, *NETWORK NATION* (2010); PAUL STARR, *THE CREATION OF THE MEDIA: POLITICAL ORIGINS OF MODERN COMMUNICATIONS* (2005).

elsewhere that policymakers should reorient communications to promote deontological interests in universality, equality, and social integration.⁸ This paper picks up where that last project only gestured in the context of zero-rating. I propose here the foundations of a theoretical framework for evaluating communications policy outside of its ability to increase rates of new user adoption.

I. ZERO-RATING AS A REMEDY FOR ACCESS DISPARITIES

A. Disparities in Internet Use

The spread of wireless services around the world has helped to close the divide between those with access to the Internet and those without. But disparities in use persist largely because wireless service is generally not as fast, reliable, or immersive as wired connections.⁹ In the United States, for example, African-Americans and Latinos are equally as likely to access the Internet as Caucasians; however, the general online experiences between these groups are vastly different because the former rely on wireless devices at three times the rate at which the latter do.¹⁰ Similar patterns of disparity characterize the nature of online engagement between poor people and wealthier people on the one hand, and rural and urban residents on the other.¹¹

Such disparities are even more egregious around the world. Latin America has an average of forty-three percent Internet penetration.¹² Only eighteen percent of the population of Sub-Saharan Africa has access to the

⁸ Olivier Sylvain, *Network Equality*, 67 HASTINGS L.J. 443 (2016).

⁹ See Philip M. Napoli & Jonathan A. Obar, *The Emerging Mobile Internet Underclass: A Critique of Mobile Internet Access*, 30 INFO. SOC'Y: INT'L J. 323, 326 (2014); see also Eli Noam, *Let Them Eat Cellphones: Why Mobile Wireless Is No Solution for Broadband*, 1 J. INFO. POL'Y 470 (2011).

¹⁰ Sylvain, *supra* note 8, at 464–69 (2016); see also Boris Bartikowski et al., *The Type-of-Internet-Access Digital Divide and the Well-Being of Ethnic Minority and Majority Consumers: A Multi-Country Investigation*, 82 J. BUS. RES. 373, 374, <https://ac.els-cdn.com/S0148296317303260/1-s2.0-S0148296317303260-main.pdf> [<https://perma.cc/XD89-58R4>] (“Such type-of-internet-access differences are important because smartphones, as compared to regular computers, are less suitable for engaging in economic value creating online activities, such as brand- or price-comparisons, applying for a job, or following an educational program.”).

¹¹ Sylvain, *supra* note 8; Bartikowski et al., *A Multi-Country Investigation*, *supra* note 10.

¹² Between Latin American states, however, there is significant variation: as of 2011, only a few states had more than one-third of their population using information communicative technologies, and even wealthy states had only 10 percent internet penetration. See Tricia Gray et al., *Gender and the Digital Divide in Latin America*, 90 SOC. SCI. Q. 326, 329 (Mar. 2017).

Internet.¹³ And India, despite having “the third-largest Internet user base in the world,” has only ten percent Internet penetration, due to lack of access in its rural areas.¹⁴ Even as Internet access rates increase globally, lack of access remains a major issue.¹⁵

B. Redressing Disparity

Policymakers and scholars generally attribute disparities in online use to unequal patterns of infrastructure investment and development.¹⁶ Governments accordingly commit public funds or create incentives to reverse these inequalities. They have, among other things, directly invested in physical fiber-optic and wireless networks. State and local governments in the United States have supported the construction of citywide broadband networks and facilities, some of which they own or co-own and maintain in cooperation with commercial providers. National governments, including that of the United States, have provided means-tested subsidies directly to qualifying “underserved” users and communities.¹⁷ And, according to recent news reports, policymakers in the United States are entertaining a massive billion-dollar investment in next-generation wireless networks.¹⁸

¹³ For example, while 48 percent of the populations of Kenya, Nigeria, and South Africa have internet access, only 9 percent have access in Ethiopia, Malawi, and Tanzania. See Fenohasina Maret & Daiki Akiyoshi, *Turning Africa’s Digital Divide into Digital Dividends*, URB. INST. (May 9, 2017), <https://www.urban.org/urban-wire/turning-africas-digital-divide-digital-dividends> [https://perma.cc/ULZ8-U2S7].

¹⁴ Charu Malhotra, *Bridging Digital Divide: Special Emphasis on Rural India*, 55 PRODUCTIVITY 276, 278 (2014).

¹⁵ Broadband Commission for Sustainable Development, *The State of Broadband: Broadband Catalyzing Sustainable Development*, INT’L TELECOMM. UNION, at 10–13 (Sept. 2017), https://www.itu.int/dms_pub/itu-s/opb/pol/S-POL-BROADBAND.18-2017-PDF-E.pdf [https://perma.cc/9VEA-6EN2] (“In practice, it is virtually impossible to experience the Internet effectively via a 2G connection. Only 76% of the world’s population lives within access of a 3G signal, and only 43% of people have access to a 4G connection. Thus, the majority of the connected world remains under-connected, most of them in developing countries.”).

¹⁶ See Philip M. Napoli & Jonathan A. Obar, *The Emerging Mobile Internet Underclass: A Critique of Mobile Internet Access*, 30 INFO. SOC’Y J. 323, 326 (2014).

¹⁷ See, e.g., Federal Communications Commission, *Lifeline Program for Low-Income Consumers*, <https://www.fcc.gov/general/lifeline-program-low-income-consumers> [https://perma.cc/E243-5EGW].

¹⁸ Katie Collins, *Trump Team Mulls Nationalized 5G Network to Counter China*, CNET (Jan. 29, 2018, 7:30 AM), <https://www.cnet.com/news/trump-officials-reportedly-consider-nationalized-5g-network/> [https://perma.cc/2Y8A-HK55]; see also Press Release, Chairman Pai Proposes Over \$500 Million in Funding to Promote Rural Broadband Deployment, FED. COMM’N COMM’N (Jan. 16, 2018),

Government incentives for commercial investment also come in a variety of forms. One prominent view is that providers and application developers would invest more in infrastructure and new services if they were freed from the burdens of government oversight and enforcement.¹⁹ Proponents of this view believe that a laissez-faire approach to network management of residential broadband service, for example, would encourage private investment in that sector. This is among the principle reasons that Congress last year repealed Obama-era rules that imposed privacy restrictions on residential broadband providers' ability to, among other things, collect and monetize subscribers' web-browsing activity.²⁰

It is also the reason that the Federal Communications Commission (FCC) recently rescinded robust network neutrality regulations.²¹ The debate over the past decade and a half about network neutrality takes up the question of how federal communications regulation might best promote investment in state-of-the-art broadband service: should policymakers employ a "regulatory light touch" or should they forbid providers from blocking or discriminating against unaffiliated content, applications and services, or end-user devices. In any event, these rival approaches in the network neutrality debate both posit that, whatever the right policy approach, it ought to find the right mix of incentives to encourage innovation and investment. I have elsewhere called this prevailing approach among policymakers the "trickle-down theory of

https://transition.fcc.gov/Daily_Releases/Daily_Business/2018/db0116/DOC-348723A1.pdf [<https://perma.cc/J9PK-8G7N>].

¹⁹ See, e.g., Diana Carew, *Zero-Rating: Kick-Starting Internet Ecosystems in Developing Countries*, PROGRESSIVE POL'Y INST. (Mar. 2015), http://www.progressivepolicy.org/wp-content/uploads/2015/03/2015.03-Carew_Zero-Rating_Kick-Starting-Internet-Ecosystems-in-Developing-Countries.pdf [<https://perma.cc/H9A6-VWPJ>].

²⁰ Brian Fung, *Trump Has Signed Repeal of the FCC Privacy Rules. Here's What Happens Next.*, WASH. POST (Apr. 4, 2017), <https://www.washingtonpost.com/news/the-switch/wp/2017/04/04/trump-has-signed-repeal-of-the-fcc-privacy-rules-heres-what-happens-next> [<https://perma.cc/7WJ6-8Z44>].

²¹ Restoring Internet Freedom, FCC 17-166 (2018), https://transition.fcc.gov/Daily_Releases/Daily_Business/2018/db0223/FCC-17-166A1.pdf [<https://perma.cc/VX5T-SU93>]; see *What Is Network Neutrality?*, VOX (May 21, 2015, 5:07 PM), <https://www.vox.com/cards/network-neutrality> [<https://perma.cc/6E8T-4LQU>] ("Network neutrality is the idea that Internet service providers (ISPs), including cable companies like Time Warner and wireless providers like Sprint, should treat all Internet traffic equally. It says your ISP shouldn't be allowed to block or degrade access to certain websites or services, nor should it be allowed to set aside a "fast lane" that allows content favored by the ISP to load more quickly than the rest.").

innovation.” Under this view, potential users are the down-market “spillover” beneficiaries of private investment in applications and services.²²

C. Enter Zero-Rating

Zero-rating is a species of broadband networked service through which providers make a curated set of Internet-based applications or programs available to subscribers for free. Generally, through zero-rating, providers do not count participating subscribers’ use of certain applications against subscription data caps. But, in practice, zero-rated services come in different forms. A mobile service provider might give users free access to a stand-alone application like Wikipedia Zero, the crowd-sourced online encyclopedia. Or it might offer dozens of free applications through one zero-rated service such as Free Basics, Facebook’s zero-rated platform.²³

These services vary in other ways as well. Some zero-rated platforms, like Free Basics, impose technical standards that limit the number of eligible applications that may feature among those offered. Many zero-rated applications, moreover, are stripped down or limited versions of what their developers make available on the public internet to conventional paying subscribers. Others, like Wikipedia Zero, are stand-alone applications that make the “full Wikimedia experience” available to users.²⁴

Policymakers around the world often express enthusiasm about zero-rating on the theory that, whether or not the applications are curated

²² Brett M. Frischmann, *Infrastructure: The Social Value of Shared Resources* 336–37 (2012).

²³ Some observers include “sponsored data programs” among “zero-rated” services. Through these, content providers and application developers pay mobile carriers to provide users access to their services or content for free. *See Where We’ve Launched*, INTERNET.ORG by FACEBOOK, <https://info.internet.org/en/story/where-weve-launched> [<https://perma.cc/GK7Q-UEXL>]; *see also* Samantha Bates et al., *Zero Rating & Internet Adoption: The Role of Telcos, ISPs, & Technology Companies in Expanding Global Internet Access*, BERKMAN KLEIN CTR. FOR INTERNET & SOC’Y RES. PUBL’N (Jan. 2018), https://dash.harvard.edu/bitstream/handle/1/33982356/2017-10_zerorating.pdf [<https://perma.cc/JF6F-YKS2>].

²⁴ Wikimedia recently ended its zero-rated service, Wikipedia Zero, due to continued controversy and minimal use by its intended beneficiaries. *See* Cory Doctorow, *Wikipedia Discontinues its “Zero-Rating,” Will Focus on Research-Driven Outreach*, BOINGBOING (Feb. 19, 2018, 7:37 AM), <https://boingboing.net/2018/02/19/wikipedia-discontinues-its-z.html> [<https://perma.cc/XUU9-BYHP>]. Instead, Wikimedia is seeking to raise awareness and increase use of its services through community outreach. *See* Zachary McCune, *Raising Awareness for Wikipedia in Nigeria*, WIKIMEDIA (Sept. 21, 2017), <https://blog.wikimedia.org/2017/09/21/nigeria-wikipedia-awareness/> [<https://perma.cc/D7UA-ABKQ>].

or limited versions of those available on the public internet, simple access creates opportunities that do not otherwise exist for education, employment, and entrepreneurship. There is some merit to this claim. Research has shown that with greater access, historically disadvantaged communities are more likely to become active participants in the economy. For example, internet users are generally more productive with every incremental increase in broadband speed.²⁵ As I have written elsewhere, “even the smallest increases in broadband penetration rates are strongly correlated with significant increases in the number of jobs and aggregate household income in some areas.”²⁶ This is to say that there is a strong correlation between connection quality and a handful of important macroeconomic considerations.²⁷

The debate among entrepreneurs, policymakers, and scholars around the world about regulatory regimes that permit zero-rated services offers a fresh opportunity to reconsider what government regulation of broadband network management ought to look like. How, if at all, should regulators control the way in which providers and application developers offer zero-rated services?

Many have welcomed zero-rating services, arguing that they are cost-effective ways of introducing members of underserved communities to the online experience.²⁸ Investment in wired, land-based infrastructure is notoriously expensive; its high fixed-costs of development make providers and many governments tentative about investment. Traditional land-based telecommunications service, moreover, tends to be heavily regulated in most places around the world, largely because it encumbers local public and private land and other assets. This acts as further disincentive to private investment.

Policies that allow or encourage zero-rating services, proponents argue, directly confront the incentive problem. Regulations that allow

²⁵ MICHAEL MINGES, WORLD BANK, *Background Paper: Exploring the Relationship Between Broadband and Economic Growth* 11 (Jan. 2015), <http://pubdocs.worldbank.org/en/391452529895999/WDR16-BP-Exploring-the-Relationship-between-Broadband-and-Economic-Growth-Minges.pdf> [https://perma.cc/NTM5-DBKE].

²⁶ *Broadband's Economic Impact in Michigan*, CONNECT MICHIGAN (Mar. 2013), http://www.connectmi.org/sites/default/files/connected-nation/Michigan/files/mi_economic_impact_final.pdf [https://perma.cc/8AKY-4W6N].

²⁷ Cf. Susan P. Crawford, *The Internet and the Project of Communications Law*, 55 UCLA L. REV. 359, 390 (2007); Richard S. Whitt & Stephen J. Schultze, *The New “Emergence Economics” of Innovation and Growth, and What It Means for Communications Policy*, 7 J. TELECOMM. & HIGH TECH. L. 217, 263 (2009).

²⁸ Mark Zuckerberg, *Free Basics Protects Net Neutrality*, TIMES OF INDIA (Dec. 28, 2015), <http://blogs.timesofindia.indiatimes.com/toi-edit-page/free-basics-protects-net-neutrality/> [https://perma.cc/5658-4D7U].

providers and application developers to experiment with zero-rating services could trigger investment in network infrastructure for underserved communities for at least two reasons. First, the anticipated increases in online participation will create an incentive to invest in infrastructure to support the service. Second, providers and application developers will be more likely to offer zero-rated services and platforms on the knowledge that they, as the first among their rivals to enter the market on zero-rating terms, will effectively be the powerful gatekeepers (the proverbial “on-ramp”) to network services for new users. In this loss-leader position, providers and developers will collect fees and other material benefits from entrepreneurs who want to reach new users. They also will collect valuable data about users. The latter is particularly tantalizing for companies who have their sights on emerging markets in China, India, and Brazil. Developers of online services today covet user data, the currency of the networked information economy.

While there is great promise in zero-rating services in their potential to bring users online, there are good reasons to be skeptical. If allowed, zero-rated services give a significant competitive advantage to powerful providers and application developers who are eager to expand their reach and collect valuable user data. Regulators around the world also might be concerned about the way in which the vertical integration of transmission service with applications raises the threat of anticompetitive behavior. They might also be worried about the ways in which internet companies monetize user data in ancillary or secondary markets, with little benefit to those users.²⁹

Today, regulators generally turn to communications law, not antitrust or consumer data protection, to evaluate zero-rated services. Specifically, they assess whether the given zero-rated service is consistent with network neutrality regulations that forbid providers from privileging affiliated content or applications over others.³⁰ The argument is that zero-rating impedes innovation and free speech online by giving an advantage to some content and applications irrespective of consumer demand—that providers are effectively picking winners and losers not necessarily with regard to user interest.³¹

²⁹ Cf. Olivier Sylvain, *Intermediary Design Duties*, 50 CONN. L. REV. 203 (2018).

³⁰ See, e.g., Telecom Regulatory Authority of India, TRAI releases Recommendations on “Net Neutrality”, Press Release No. 100/2017 (Nov. 11, 2017), http://traai.gov.in/sites/default/files/PR_No.100of2017.pdf [<https://perma.cc/63T3-N9DC>]; Protecting and Promoting the Open Internet, FCC 15–24, 151–52 (Mar. 12, 2015).

³¹ A counterpoint is that these concerns are less relevant in competitive markets. Because developing countries have highly competitive markets, one report writes, “[a]s long as regulators mandate the publishing of operators’ traffic-management practices and ban negative discrimination of non-zero-rated traffic, market mechanisms can be sufficient to

Indeed, it is chiefly on these grounds that several regulators around the world have forbidden the practice. In 2014, for example, the Norwegian Communications Authority (Nkom) published an article stating that zero-rating programs would constitute a clear violation of its network neutrality guidelines.³² “[Z]ero-rating lead[s] to selected traffic from the Internet service provider itself or affiliated providers being favored above other traffic. And this is exactly the kind of situation net neutrality aims to avoid.”³³ The Norwegian parliament formally adopted net neutrality provisions in 2017, substituting binding law for Nkom’s voluntary agreement with stakeholders.³⁴

Chile, for its part, added network neutrality provisions to its General Telecommunications Law in 2010, and its communications regulator, Subtel, officially outlawed zero-rating practices in 2014 for violating these provisions.³⁵ Despite a significant digital divide and the popularity of “Free Social Media” mobile plans in Chile at the time, the country’s commitment to net neutrality principles required consideration of the potential long-term anticompetitive effects of such plans.³⁶

In 2016, the Telecom Regulatory Authority of India (TRAI) published additional net neutrality rules that prohibited zero-rating practices.³⁷ This ruling was the culmination of months of conflict between

prevent the most egregious harms.” See Helani Galpaya, *Zero-Rating in Emerging Economies*, GLOBAL COMM’N ON INTERNET GOVERNANCE 1 (2017), https://www.cigionline.org/sites/default/files/documents/GCIG%20no.47_1.pdf [<https://perma.cc/WTD6-RA5H>].

³² Frode Sørensen, *Net Neutrality and Charging Models*, NORWEGIAN COMM’N AUTHORITY (Nov. 18, 2014), <https://eng.nkom.no/topical-issues/news/net-neutrality-and-charging-models> [<https://perma.cc/U3LF-86K7>].

³³ *Id.*

³⁴ Nkom also acknowledges the Norwegian adoption of Regulation 2015/2120, which establishes European rules of net neutrality, but notes that the Regulation lacks clarity as to its zero-rating policy. See *Net Neutrality in Norway*, NORWEGIAN COMM’N AUTHORITY (Aug. 18, 2017), <https://eng.nkom.no/technical/internet/net-neutrality/net-neutrality-in-norway> [<https://perma.cc/6TZX-GY5G>].

³⁵ Lauren Walker, *How Is Net Neutrality Working for the Countries that Have It?*, NEWSWEEK (Sept. 10, 2014), <http://www.newsweek.com/how-net-neutrality-working-countries-have-it-269632> [<https://perma.cc/RN3N-PFWG>].

³⁶ See Daniel Lyons, *In Chile, Net Neutrality Widens the Digital Divide*, AEI (June 2, 2014, 6:00 AM), <http://www.aei.org/publication/chile-net-neutrality-widens-digital-divide/> [<https://perma.cc/6MRK-ECPU>]; see also David Meyer, *In Chile, Mobile Carriers Can No Longer Offer Free Twitter, Facebook or WhatsApp*, GIGAOM (May 28, 2014, 3:28 AM), <https://gigaom.com/2014/05/28/in-chile-mobile-carriers-can-no-longer-offer-free-twitter-facebook-and-whatsapp/> [<https://perma.cc/KS8X-YYMH>].

³⁷ Ingrid Lunden, *India Blocks Facebook’s Free Basics, Other Zero-Rated Mobile Services Over Net Neutrality*, TECHCRUNCH (Feb. 8, 2016), <https://techcrunch.com/2016/02/08/india-blocks-facebook-freebasics-net-neutrality/> [<https://perma.cc/UX3L-5EY7>].

the TRAI and zero-rating services, specifically Facebook's Free Basics, and immense public support for net neutrality.³⁸ In late 2017, TRAI published additional recommendations that would forbid data speed throttling, leading the BBC to suggest that India may have the world's strongest net neutrality rules.³⁹ The TRAI chairman explained, "The overarching thought that we had was for a country like India, [is that the] internet is an extremely important platform. . . . [I]t is important that this platform be kept open and free and not cannibalized."⁴⁰

Regulators in the United States have vacillated on the question. In 2015, the FCC declined to categorically prohibit zero-rating practices in its "Open Internet Order."⁴¹ Acknowledging that such plans had the potential to either benefit or harm consumers and competition, it elected to assess these practices on a case-by-case basis,⁴² and the Commission informed four internet providers that it would begin an investigation into such practices.⁴³ In 2016, Commission staff prepared a report⁴⁴ establishing a framework for evaluating zero-rating plans.⁴⁵ The report found that two programs, one offered by AT&T and the other by Verizon, "present significant risks to consumers and competition."⁴⁶ However, the agency terminated its investigations under the new Republican

³⁸ *Id.*

³⁹ Prasanto K. Roy, *India Net Neutrality Rules Could Be World's Strongest*, BBC (Nov. 30, 2017), <http://www.bbc.com/news/world-asia-india-42162979> [<https://perma.cc/YR92-MG66>].

⁴⁰ Ananya Bhattacharya, *India Is Upholding an Open Internet as the US Moves to Dismantle Net Neutrality*, QUARTZ (Nov. 29, 2017), <https://qz.com/1140558/net-neutrality-indias-trai-is-upholding-an-open-internet-as-the-fcc-moves-to-dismantle-it-in-the-us/> [<https://perma.cc/4UNC-7SQE>].

⁴¹ Protecting and Promoting the Open Internet, FCC 15-24, 151-52 (Mar. 12, 2015).

⁴² *Id.*

⁴³ Klint Finley, *The FCC OKs Streaming for Free—But Net Neutrality Will Pay*, WIRED (Feb. 3, 2017, 8:00 PM), <https://www.wired.com/2017/02/fcc-oks-streaming-free-net-neutrality-will-pay/> [<https://perma.cc/Q5CG-8Y4S>].

⁴⁴ WIRELESS TELECOMM. BUREAU, POLICY REVIEW OF MOBILE BROADBAND OPERATORS' SPONSORED DATA OFFERINGS FOR ZERO-RATED CONTENT AND SERVICES (Jan. 11, 2017), https://apps.fcc.gov/edocs_public/attachmatch/DOC-342987A1.pdf [<https://perma.cc/3348-6W99>].

⁴⁵ Specifically, "[i]n addition to whether a particular zero rating plan is a vehicle for discriminatory conduct, relevant considerations include the impact of data caps in connection with a zero rating plan; whether consumers are given the ability to opt into or out of a plan; and whether consumers are given sufficient information about a plan." FED. COMM'N. COMM'N., LETTER FROM CHAIRMAN WHEELER TO SENATORS MARKEY, FRANKEN, WYDEN, SANDERS, WARREN, BALDWIN AND BLUMENTHAL REGARDING THE POTENTIAL NEGATIVE IMPACT OF ZERO-RATING SERVICES ON CONSUMERS AND COMPETITION (Jan. 11, 2017), https://apps.fcc.gov/edocs_public/attachmatch/DOC-342982A1.pdf [<https://perma.cc/L7K6-M4EG>].

⁴⁶ *Id.*

administration's Chairman, Ajit Pai, who observed that "[t]hese free-data plans [under investigation] have proven to be popular among consumers, particularly low-income Americans, and have enhanced competition in the wireless marketplace."⁴⁷ The FCC later reversed the net neutrality guidelines that animated its zero-rating concerns with the implementation of the "Restoring Internet Freedom Order."⁴⁸

II. TOWARDS INTEGRATIVE INFORMATION PLATFORMS

A. Beyond Adoption

The rival approaches in the contemporary policy debate about network neutrality tend to abide by the same metrics that pervade so much communications policymaking today—focusing on whether a given intervention promotes user adoption, innovation, or investment in infrastructure. But, while such approaches are useful, they only partially account for the ways in which any given policy intervention ensures that all people are benefiting from the wide range of online resources.

Consider an example from outside of the heartland of communications policy: high-frequency trading (HFT). I described the phenomenon elsewhere in the following way:

Highly leveraged HFT firms design computer programs to execute high volume trades by the millisecond in order to achieve the firms' respective investment strategies. By doing so, the firms expect to gain a quantifiable advantage over competitors. The idea is that, even if any single trade yields an infinitesimally small margin of profit, in the aggregate, such efforts can prove profitable in even the most stable sectors of the economy.⁴⁹

On the one hand, regulators around the world have expressed enthusiasm about HFT because it arguably introduces more efficiency and liquidity to markets.⁵⁰ Others, however, worry about arbitrage, market manipulation, and general volatility.⁵¹

⁴⁷ Finley, *supra* note 43.

⁴⁸ Restoring Internet Freedom, FCC 17-166 (Jan. 4, 2018), https://transition.fcc.gov/Daily_Releases/Daily_Business/2018/db0223/FCC-17-166A1.pdf [<https://perma.cc/KHX8-98UX>].

⁴⁹ Olivier Sylvain, *Network Equality*, 67 HASTINGS L.J. 443, 471 (2016).

⁵⁰ See generally *How Does High-Frequency Trading Affect Individual Investors?*, WALL ST. J. (Aug. 19, 2014, 9:21 AM), <https://www.wsj.com/articles/how-does-high->

A further critique of the phenomenon is more intuitive and addresses the concern emphasized here: HFT is unfair to individual investors who cannot afford the sophisticated computers and software that enable such trades. That is, even if we assume that the craftiest or nimblest companies should thrive in competitive markets, there is also something glaringly unfair about a regulatory regime that makes it difficult for ordinary, non-institutional investors to keep up with firms that can afford HFT software.

It is that unfairness that I seek to elaborate on here, but in the context of zero-rating. Proposals for laws that permit or encourage zero-rating are unfair to the extent that they perpetuate structural inequalities that prevail in public life generally. Over time, there is, to put the point in slightly more concrete terms, a cumulative disadvantage in using inferior networked services while others have access to state-of-the-art or even conventional applications.⁵² To be sure, as a phenomenon, zero-rating is different from HFT in at least one notable way. The latter gives investors with the wherewithal an advantage over those without it; it widens the gap between those with the technology and those without. Zero-rating services meanwhile do not accelerate subscribers' connections to create a competitive advantage over those who do not subscribe to such services. Rather, they provide basic service where there was ostensibly none before, narrowing but not erasing the disadvantage between those with high-quality service already and those with just zero-rated service (never mind for a moment those without any networked access). This suggests that zero-rating may be useful in increasing adoption rates. But it also is very weak medicine for redressing disparity. This is especially true if, as studies suggest, the vast majority of users would prefer having a zero-rated free plan valid for a short time or with a data cap, with no restriction on the websites and applications that can be accessed.⁵³ Policymakers will

frequency-trading-affect-individual-investors-1408454495 [https://perma.cc/TTP8-NY39].

⁵¹ *Id.*

⁵² DARIA ROITHMAYR, REPRODUCING RACISM: HOW EVERYDAY CHOICES LOCK IN WHITE ADVANTAGE, 5–7, 59–60, 110, 133 (2014). *See also id.* at 88 (discussing work of Glenn Loury); WILLIAM JULIUS WILSON, THE TRULY DISADVANTAGED: THE INNER CITY, THE UNDERCLASS, AND PUBLIC POLICY, (1990); Loïc J. D. Wacquant & William Julius Wilson, *The Cost of Racial and Class Exclusion in the Inner City*, 501 ANNALS AM. ACAD. POL. & SOC. SCI. 8 (1989).

⁵³ ALLIANCE FOR AFFORDABLE INTERNET, *The Impacts of Emerging Mobile Data Services in Developing Countries*, at 3 (2016), http://1e8q3q16vyc81g8l3h3md6q5f5e.wpengine.netdna-cdn.com/wp-content/uploads/2016/05/MeasuringImpactsofMobileDataServices_ResearchBrief2.pdf [https://perma.cc/YH3K-3ZVL]. This suggests that users prefer a content-unrestricted to a time-unrestricted Internet experience.

need to implement far more dramatic reforms if they are to ensure that all users benefit from networked resources in ways that erase disadvantage.

B. Communications Law and the Infrastructure of Citizenship

Underlying my critique here is the assumption that communications policy can and should be radically redistributive. This is particularly true for a transformative general use technology like the internet, which affords access to a wide range of resources. My claim seizes on the insight, associated generally with republican speech theory, that communications law defines the metes and bounds of the community it regulates; it sets the terms by which people communicate and interact with each other.

Communications law either engenders or diminishes members' sense of inclusion.⁵⁴ Shared or public communications infrastructure is the foundation on which civic learning and social integration occur. This is because communicative acts do more than convey discrete concepts or articulate commercial transactions. They comprise the expressions and language of contemporary public life.⁵⁵ This is how communications policy determines citizenship. It does so, not so much in the technical ways by which immigration laws or naturalization processes do, but by structuring people's interaction with the cultural content of citizenship. In this way, communication policymakers might also make integration far harder for certain members of the community if networked communications resources are unequally distributed.

The great promise of the internet at the time of its commercial deployment over twenty years ago was that anyone with access could have something to offer, no matter their socioeconomic status, geographic location, or demographic characteristics. The Internet was thought to be comprised of a "great and gathering conversation" in which every willing user could join, free from offline biases or overbearing government content regulation.⁵⁶ But policies that permit zero-rating categorically

⁵⁴ Cf. BENEDICT ANDERSON, *IMAGINED COMMUNITIES* (1983).

⁵⁵ Language in International Covenant on Economic, Social, and Cultural Rights helps to elaborate the point to the extent it provides for a "right of everyone to take part in cultural life." This right connotes "the right of everyone to be involved in creating the spiritual, material, intellectual and emotional expressions of the community." INT'L COMM. ON ECON., SOC. AND CULTURAL RIGHTS, General Comment No. 21: The right of Everyone to Take Part in Cultural Life (Article 15, Paragraph 1(a), of the Covenant), UN Doc. E/C.12/GC/21 (Dec. 21, 2009), <http://www.refworld.org/docid/4ed35bae2.html> [<https://perma.cc/U2MC-GGLF>].

⁵⁶ John Perry Barlow, *A Declaration of the Independence of Cyberspace*, ELEC. FRONTIER FOUND. (Feb. 8, 1996), <https://www.eff.org/cyberspace-independence> [<https://perma.cc/UW89-F25A>]; see also YOCHAI BENKLER, *WEALTH OF NETWORKS*

violate this foundational concept insofar as they allow for the exclusion of underserved populations from the wide range of content and services online. They effectively perpetuate the uneven distribution of resources for communication and learning. This is one way, then, that just as communications policy might promote integration, it might also make it difficult for members of historically subordinated groups to participate in online activity in the same way that others can. The challenge for policymakers is to strike the right balance in, on the one hand, promoting expression but, just as importantly, encouraging opportunities for inclusion.

By adopting the conception that I sketch in this essay, policymakers would move away from thinking only about mechanisms that support the distribution of basic zero-rated content and information resources. Rather, the approach I propose posits that communications policymakers should take as their priority the integration of all community members into the full bazaar of information and content available online. Metrics of sustained growth in engagement would be one way to measure the success of a given communications policy intervention. But, more than this, the concept I argue for here starts from the intuition that opportunities for social integration are most robust when communications infrastructure is freely available to everyone on equal terms.

C. Evaluating Integrative Information Platforms

The stakes could not be higher for members of historically subordinated or underserved groups. For them, their inclination or ability to participate in public life generally turns on the ways in which law defines the terms of civic engagement or commercial participation. This insight underscores the essential role communications policymaking plays in shaping public life. But, as I suggest above, it is not new. It nevertheless remains underdeveloped in ongoing debates about communications policy in general and zero-rating in particular.⁵⁷

Pursuant to the conception I advocate here, policymakers might suspect that zero-rating is a good idea to the extent it promotes

(2006); ITHIEL DE SOLA POOL, *TECHNOLOGIES OF FREEDOM* (1983). Proponents of such a view argued, for example, against government content censorship on the theory that it would chill and corrupt authentic opportunities for innovation and speech. See *Reno v. American Civil Liberties Union*, 521 U.S. 844 (1997).

⁵⁷ We might suspect that, as I suggest above, this has something to do with the shift over the past thirty to forty years towards the “data-driven” analyses in policymaking across legislative fields today that the prevailing approach overemphasizes the quantifiable consequences of broadband deployment at the expense of qualitative communication values.

applications that keep users apprised of political affairs. Or they might require that zero-rating be applied to services that promote health and wellbeing for underserved communities. But such approaches are far more modest than they should be, at least because they discount the ways in which community members might engage the full bazaar of networked applications and services that facilitate learning, commerce, syncretic cultural forms, civic engagement, and more inchoate opportunities for social integration.⁵⁸ Instead, the driving assumption should be that all members have the potential to learn and contribute to the “great and gathering conversation”—and that they can only do so when they are engaged on reasonably comparable terms with all other members of the community. So, apart from focusing on whether communications policy increases adoption rates, policymakers could set their sights instead on the question of whether and how zero-rating could enable its subscribers to participate as fully in the public life of the community as all other users. It is on this basis that I sketch here an alternative framework of evaluating zero-rating services.

Even if we assume that zero-rated services bring new users online, policymakers should still want to know the extent to which new subscribers are integrated into the networked world. If, for example, users can engage internet applications and services in ways that are reasonably comparable to others, then zero-rating might very well help universalize internet access. It would suggest a way forward for policymakers who, through several public law mechanisms, could incentivize providers and application developers to expand zero-rated services.

Many zero-rated services, however, offer nothing more than a limited introductory online experience that does not take users beyond the “on-ramp.” Indeed, it appears that many subscribers around the world subscribe to zero-rated services as a temporary stopgap when, in any given month or pay period, their usage exceeds data caps.⁵⁹ Users who already have Internet access apparently often combine paid and zero-rated services to suit their connectivity needs.⁶⁰ Such usage patterns would not be a

⁵⁸ We might associate such policies with the “capabilities” approach to sustainable development. See, e.g., *The Internet and Sustainable Development*, INTERNET SOC’Y (June 2015), <https://www.internet-society.org/resources/doc/2015/the-internet-and-sustainable-development/> [<https://perma.cc/78K3-GSTP>].

⁵⁹ See, e.g., Toshiya Jitsuzumi, *Zero-Rating and Net Neutrality in the Mobile Market: The Case of Japan* (Mar. 12, 2018), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3138491 [<https://perma.cc/4GBY-BNKV>].

⁶⁰ Alliance for Affordable Internet, *The Impacts of Emerging Mobile Data Services in Developing Countries*, at 3 (2016), [http://1e8q3q16vyc81g8l3h3md6q5f5e.wp-](http://1e8q3q16vyc81g8l3h3md6q5f5e.wpengine.netdna-cdn.com/wp-)

success under the framework I propose here. Indeed, we should be skeptical of any service if it does not grow sustained interest among new subscribers. It would not be enough that users from time to time subscribe to zero-rated service.

Considering this, the alternative I propose here does not weigh a network service's success based on adoption rates. Instead, I propose policymakers assess whether networked information services generate sustainable growth in online engagement by unique users. Under the approach I propose here, new users would invariably be afforded the same or reasonably comparable access to the full bazaar of networked resources on the internet as all other users. That is, they would be able to learn from, interact with, and contribute to all networked resources in ways that all retail internet users can. At a minimum, only under such conditions would policymakers receive data or feedback on whether simple access to zero-rated services justifies governmental support.

Providers, application developers, and new users have a lot to gain from regulatory regimes that permit or promote zero-rating. But local application developers, too, might benefit to the extent they can partner with wireless providers or zero-rated platform developers. When deployed in unserved or underserved communities, zero-rating might create commercial opportunities for local entrepreneurs that did not exist before. For example, the administrators of Free Basics, the Facebook platform for zero-rated applications, could be particularly interested in cultivating locally generated applications or content that reflect local, cultural priorities and commercial opportunities. Of course, providers and developers might choose to replicate the same suite of applications and content around the world, irrespective of the local, cultural sensibilities in which they offer their service. One could imagine that such an approach would be more cost-effective insofar as the costs of scaling up or replicating are far lower than the aggregated expense of production and development for each community. On the other hand, national policymakers might make the production of local content a condition of providing the service. We should expect that, properly imposed, such a condition would influence the character of online offerings and increase local engagement of networked resources. And, in so doing, communications policy would come far closer to achieving its core democracy-enhancing objectives.