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Book Review

Mike Zajko, *Telecom Tension: Internet Service Providers and Public Policy in Canada**

*Matt Malone*¹

The world of telecommunications, writes Mike Zajko in this timely analysis of internet service providers (ISPs), “is a world many of us have never wondered about, just as we are rarely curious about where our sewage goes or how the electricity grid is configured.”² Yet ISPs are not just conduits of fast-traveling light pulses that deliver the internet; they transmit, channel, form, and express a multitude of public policy issues, and they have an important level of agency in the construction and exercise of those policies, too.³ These dynamics have implications for a large bandwidth of topics relevant to Canadians, including the market, competition, education, socio-cultural development, and security. Applying a sociological framework interwoven with historical and legal analysis, Zajko’s *Telecom Tensions* describes the internet as contemporary society’s “connective tissue”⁴ and examines the ways in which ISPs serve as its “intermediaries,”⁵ constituting social relationships of control and power. He provides insight into an infrastructure that is often invisible (the banal façade of 151 Front St. West in Toronto serving as an illuminating metaphor for this lack of visibility), which nonetheless bears heavily on our broader social wellbeing.

A major focus of this book is the unique regulatory landscape in Canada governing ISPs. Since 1997, the Canadian Radio-television and Telecommunications Commission’s (CRTC’s) decision to mandate wholesale

* Mike Zajko, *Telecom Tensions: Internet Service Providers and Public Policy in Canada* (McGill-Queen’s University Press, 2021) [Telecom Tensions].

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² *Ibid.* at 14.

³ *Ibid.* at 7.

⁴ *Ibid.* at 3 and 72.

⁵ The term “intermediaries” is an interesting choice in this regard. It may have a wider application in the Canadian economy, since many of the largest corporations in Canada might also be considered “intermediaries” - for example, five of the largest Canadian companies by revenue are banks, which often describe themselves as serving a “middle” function. Canada’s three largest telecommunications companies are the 11th, 19th, and 21st most profitable corporations in the country, holding a significant position in terms of market capitalization compared with their equivalents in the United States. See “Global 500”, *Fortune* (retrieved 17 April 2021), online: <<https://fortune.com/global500/2019/>>. By comparison, in the United States a bank is only the 18th most profitable corporation and the two largest telecommunications companies - Verizon and Comcast - are the 21st and 28th largest corporations by revenue, respectively. *Id.*

access — a “transitional”⁶ measure, the CRTC stated at the time — has required incumbent ISPs like Bell to provide independent ISPs with access to their existing infrastructure. This regulatory intervention was designed to let independent ISPs compete in Canada by overcoming the barriers to entry (i.e., “invest[ing] billions of dollars to build facilities comparable to those of the incumbents”).⁷ The resulting commercial environment, Zajko illustrates, is a confused one. It contains a series of built-in “contradictory expectations”⁸ for incumbents, who are required not only to compete against independent ISPs but also to provide them with access to their networks. These conflicting impulses are often invisible to consumers — until they cause technical disruptions. As Zajko describes, technicians for incumbent ISPs are often required to resolve issues involving independent ISPs.⁹ To showcase the surrealism of this state of affairs, Zajko shares a revealing anecdote that the only “extended internet outage”¹⁰ that he has ever personally experienced resulted from a dispute between an independent ISP and an incumbent one.

The history portions of the book are helpful in providing context to the reader about the growth and development of the major Canadian telecommunication companies, in particular in understanding the role that the federal government played in fostering the growth of Bell. Zajko then recounts the turn toward liberalization in the 1990s that entrenched the power of existing juggernauts, leaving new entrants to face “monumental challenges.”¹¹ Zajko explains that the “reasons why there is often limited diversity among ISPs in a given ‘territory’ include the concentrations of power that were inherited from the monopoly era.”¹² For example, he discusses the early rise of Bell due to a grant that prohibited the provinces from “appropriating parts of Bell’s network[] or interfering with rights granted to Bell.”¹³ The proliferation of early private-public partnerships described by Zajko raises questions about what a historical accounting might reveal in terms of the credit Bell owes to the government for its success, size, and growth — and what responsibilities might be incumbent on it to provide service to certain areas or to keep prices within certain ranges.¹⁴

Zajko argues that the Canadian regulatory landscape, while tracking the liberalization approach in the United States and other liberal democracies since the 1990s, “has been more willing to intervene through policies to promote competition and regulate relationships between market actors,”¹⁵ in particular

⁶ *Supra* note 1 at 90.

⁷ *Ibid.* at 92.

⁸ *Ibid.* at 93.

⁹ *Ibid.* at 95.

¹⁰ *Ibid.* at 15.

¹¹ *Ibid.* at 84.

¹² *Ibid.* at 169.

¹³ *Ibid.* at 43.

¹⁴ *Ibid.* at 75.

through its policy of mandated wholesale access. Perhaps surprisingly, Zajko's assessment of the mandated wholesale access approach is far from scathing. He argues that "failure to effect change and the preservation of the existing order [which marks the outcome of Canadian regulatory efforts] can also be redefined as success."¹⁶ To Zajko's point, he notes that the market share for independent ISPs working against the main players has increased in the last decade.¹⁷ While perhaps true, Zajko's lack of examination of the explosive retail costs for consumers yielded by the current oligopoly — a word that does not appear in the book — is particularly notable, especially since the CRTC itself has stated that retail prices are higher in Canada than elsewhere due to "insufficient competition."¹⁸ Zajko demonstrates, however, that so-called independent ISPs' dependence on incumbents is an inherent and dangerous reality for competition.

Zajko's analysis also provides helpful insight with regard to the language that shapes the discourse and discussion of this topic. For example, at one point he describes the frequency of the word "deregulation" as "misleading and self-serving, since it suggests that regulation gives way to the ascendancy of the market," when, in fact, regulation may serve non-market values like service and affordability.¹⁹ Similarly, Zajko notes how the notion of the "digital divide," which has marked the discourse of ISPs since the earliest days of the internet, is an evolving concept, rather than a standard that might ever be met.²⁰ He also presents a fascinating discussion of public intermediaries, including an illuminating case study of Coquitlam establishing its own infrastructure to connect to internet exchange points (IXPs) and Tier 1 ISPs.²¹ At the end of the

¹⁵ *Ibid.* at 52.

¹⁶ *Ibid.* at 82.

¹⁷ *Ibid.* at 57.

¹⁸ Canadian Radio-television and Telecommunications Commission, *Telecom Regulatory Policy 2021-130* (Ottawa: CRTC, April 2021). Retrieved online on April 18, 2021 at < crtc.gc.ca/eng/archive/2021/2021-130.htm >. Incumbent ISPs provide many of the mobile services that Canadians use, since these services are often bundled with internet subscriptions. These services have among the highest monthly costs in the world. For example, one study found that "Rogers Canada had the highest monthly prices for smartphone and mobile broadband plans with 100 gigabytes," while "Bell Canada had the highest monthly prices for smartphone plans with 10 and mobile broadband plans with 50 gigabytes." Both times, "highest" is used in the context of comparison with the entire world. See "The State of 4G and 5G Pricing, 1H2021 - Operator Rankings" (April 2021) at 1, online (pdf): *Rewheel/research*, < research.rewheel.fi/downloads/The_state_of_4G_5G_pricing_15_release_1H2021_operators_PUBLIC_VERSION.pdf >.

¹⁹ *Supra* note 1 at 49.

²⁰ *Ibid.* at 73. Zajko notes that "[d]iscussions of the digital divide would not vanish as the majority of Canadians gained internet access, but the conversation would remain focused on the material preconditions of connectivity," which changed as standards and expectations of connectivity changed. This analysis suggests, perhaps, that the term will remain a moving target - a feature of the discussion about technology indefinitely.

²¹ *Ibid.* at 75-80.

manuscript, Zajko expresses a similar hope for the Connected Coast project unfurling down the British Columbian coast.²²

The sections on privacy and security show how ISPs have, seemingly inadvertently and with little effort — in fact, almost by accident — “redefined themselves as privacy custodians”²³ in opposing unlawful access requests by law enforcement. Zajko notes that ISPs — to the extent they have even acted to earn this reputation — have been generally motivated by cost factors rather than privacy concerns.²⁴ Many of the judicial developments that have enhanced this reputation, such as the holding in *R v. Spencer* (2014), which ruled that police could not request subscribers’ personal information without judicial authorization, have occurred without ISPs themselves actually doing anything to obtain these outcomes (the ISP in *Spencer* was not a party to the proceeding and did not even intervene, yet its reputation clearly benefitted from the publicity of the holding).²⁵

It may have been interesting to see a comparison with other areas of telecommunications, where the federal government struggles to foster competition (e.g., using spectrum auctions to reserve space for “new entrants”²⁶ to boost competition and options for consumers). It would also have been interesting to see other reforms put forward, such as facilitating targeted funding for peering networks²⁷ or even increasing the number of IXPs.²⁸ (While slow at first, Canada is generally doing better here, although Australia, with its population of 10 million fewer inhabitants, has 20 active IXPs compared with Canada’s 12).²⁹ The dimensions of such reforms for public policy when it comes to cybersecurity merit attention, in particular when it comes to maintaining service in the event of a critical infrastructure attack. Given lax Canadian attitudes toward network and data localization in general, largely due to Canada’s proximity with efficient “IXPs in neighbouring countries”³⁰ and its carefree attitude in signing data localization provisions in regional trade

²² *Ibid.* at 173-75.

²³ *Ibid.* at 138.

²⁴ *Ibid.* at 135-38.

²⁵ *R v. Spencer*, 2014 SCC 43.

²⁶ Industry Canada, News Release, “Harper Government to Release More Valuable Spectrum to Strengthen Competition in Canada’s Wireless Industry” (7 July 2014).

²⁷ Yann Berthier, “Q&A: IXP Managers Explain How COVID-19 Has Changed Internet Usage in Canada” (20 April 2020), online: CIRA < www.cira.ca/blog/corporate/qa-ixp-managers-explain-how-covid-19-has-changed-internet-usage-canada > .

²⁸ Jacques Latour, “Flip the Switch - Canada’s IXP Network” (17 October 2016), online: CIRA < <https://www.cira.ca/blog/cybersecurity/flip-switch-canadas-ixp-network> > .

²⁹ “Internet Exchange Point Growth by Country” (retrieved 16 April 2021), online: *Packet Clearing House*, < www.pch.net/ixp/summary_growth_by_country > .

³⁰ See OECD, “International Cables, Gateways, Backhaul and International Exchange Points” (2014) OECD Digital Economy Papers No 232 at 19-20, online: < doi.org/10.1787/5f338m9jf33wkl-en < char style = “gt” > .

agreements, the assumptions about security that inform public policy on this front would have been ripe for examination.

Ultimately, some of Zajko's theoretical framing feels unnecessarily abstract amidst the harder-hitting analysis he lays out for the state of the telecom industry today. Otherwise, his book is written in accessible and clear prose (and with very helpful illustrations). Although the book is strong on dissections of infrastructure, further exposition of the interaction between the tiers of ISPs in Canada and the historical growth of the specific players may have been appropriate. For example, the history is rather Bell-centric and does not explain how the other key players in the incumbent ISP oligopoly garnered their power. Also, Zajko's discussion about the adoption of commercial Tier 1 providers in the United States in 1995 — away from the National Science Foundation Network cables that were previously available only to government agencies and post-secondary institutions, a move that Zajko describes as “effectively privatizing the internet”³¹ — is cursory and could have used more Canadian-equivalent grounding.

While the book acknowledges the public attention captivated by dominant online service intermediaries (OSPs) like Google and Facebook, Zajko's focus is on the more oblique role of ISPs providing direct connection to the physical infrastructure of the internet.³² Perhaps optimistically, Zajko justifies this approach by noting that “a world without Facebook is not difficult to imagine,” whereas “the same cannot be said for the ISPs that act as the internet's ultimate go-betweens.”³³ I am not so optimistic, in particular given that Bell's market capitalization (\$42 billion) pales in comparison to Facebook's (\$720 billion). Additionally, many OSPs like Facebook are also attempting to expand their role into the traditional domain of ISPs, as are non-traditional companies like SpaceX, with its Starlink program — phenomena that are not discussed in the book.³⁴ Many OSPs also exert powerful pressure on telecommunications companies themselves to connect directly to IXPs to reduce network latency for their services, dynamics that are also out of the scope of the book.³⁵

Finally, while Zajko approaches the topic from a public policy perspective, international legal obligations might bolster the discussion around issues like access, connectivity, and affordability to supplement Zajko's discussion of mandated wholesale access, common carriage, net neutrality, and monopoly. These international obligations are particularly important as telecommunications

³¹ *Supra* note 1 at 70.

³² *Ibid.* at 10.

³³ *Ibid.* at 166.

³⁴ See Conner Forrest, “Could Facebook be your company's next internet provider?” (4 May 2018), online: *TechRepublic* <www.techrepublic.com/article/could-facebook-be-your-companys-next-internet-provider/> .

³⁵ Nikolaos Chatzis, Georgios Smaragdakis & Anja Feldmann, “On the Importance of Internet eXchange Points for Today's Internet Ecosystem” (2013), online (pdf): *arXiv*, <arxiv.org/ftp/arxiv/papers/1307/1307.5264.pdf> (retrieved 17 April 2021).

policy in Canada undergoes a shift that Prof. Michael Geist recently characterized as “anti-internet.”³⁶ Here, many international treaties that Canada has ratified remain of crucial importance. For example, the *International Covenant on Economic, Social and Cultural Rights*, which sets forth rights for economic, social, and cultural development,³⁷ notes in a General Comment that “[a]ccessibility also includes the right of everyone to seek, receive and share information on all manifestations of culture in the language of the person’s choice, and the access of communities to means of expressions and dissemination.”³⁸ Similarly, Article 19 of the *Universal Declaration of Human Rights* provides that “[e]veryone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.”³⁹ Human Rights Council Resolution 32/13 further requires “all States to consider formulating, through transparent and inclusive processes with all stakeholders, *national Internet-related public policies that have the objective of universal access and enjoyment of human rights at their core*”⁴⁰ (emphasis added). As the battle over the internet continues in its multifaceted dimensions, with ISPs playing a crucial role, these seemingly abstract obligations may become more pertinent than they now seem.

³⁶ Michael Geist, “Why the Liberals Have Become the Most Anti-Internet Government in Canadian History” (16 April 2021), online: < www.michaelgeist.ca/2021/04/why-the-liberals-have-become-the-most-anti-internet-government-in-canadian-history/?utm_source=rss&utm_medium=rss&utm_campaign=why-the-liberals-have-become-the-most-anti-internet-government-in-canadian-history > .

³⁷ 19 December 1966, 993 UNTS 3 (entered into force 3 January 1976).

³⁸ ECOSOC, Committee on Economic, Social and Cultural Rights, *General Comment No 21*, 43rd Sess, UN Doc E/C.12/GC/21, December 2009 at II.A.15.a.

³⁹ GA Res 217A (III), UNGAOR, 3rd Sess, UN Doc A/810 (1948) 71.

⁴⁰ *Promotion, Protection and Enjoyment of Human Rights on the Internet*, HRC Res 32/13, UNHRCOR, 32nd Sess, UN Doc A/HRC/RES/32/13 (2016) at para 12.