
DIS/CONNECTION: THE CO-EVOLUTION OF SOCIOCULTURAL AND MATERIAL INFRASTRUCTURES OF THE INTERNET IN INDONESIA

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It was 9:00 PM on a Thursday in Jakarta. The 7-Eleven convenience store at the Epicentrum Pasar Festival was packed with young people. There were four groups of two to six persons each who were occupying the store's outdoor seating area. Two people were sitting in the corner and holding hands while taking a selfie. Inside, sitting on high stools behind a large glass window, were two more groups. All of these people were looking at their smartphone screens. Occasionally, they showed each other their screen and chatted or laughed together. (Unlike at Starbucks, no one used a laptop here.) My chat with some of them revealed that Sevel—which is what Indonesians call a 7-Eleven—was a common hangout for high school and university

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students.¹ For some, Sevel was ideal because the store provided free Wi-Fi and allowed people to stay as long as they wanted without ordering a meal. Also, hanging out at Sevel, they said, would not make them go broke, because the prices were affordable. For low- to middle-class urban youth in Jakarta whom I met during my fieldwork in December 2015, Sevel provided “affordable luxury”—a low-cost hangout and chatting place.

The internet was made available commercially to the Indonesian public in the mid-1990s. More than two decades later, in Jakarta and other cities, such as Bandung and Surabaya, urbanites can experience near-seamless online–offline sociality by logging in and out of social-media accounts on their mobile phones and via free Wi-Fi access at school, work, cafés, restaurants, and even convenience stores. From the mid-1990s to mid-2000s, the main point of internet access for most Indonesians was the Indonesian-style internet café, which was commonly called *warnet*, an abbreviation for “*warung* internet.”² During those years, it was common to see people in a *warnet* collectively browsing the web through one computer screen. By contrast, in 2018 urban Indonesia, going online is synonymous with the act of browsing social media through the small, personalized screen of a smartphone.

From *warnet* to mobile social media (social-media platforms accessed through mobile devices), from researchers and hobbyists of the 1990s to Indonesia’s urban youth of the twenty-first century, the Indonesian internet has evolved socially, culturally, and materially. In this article, I tell a story of the Indonesian internet by looking at the historical development of its infrastructure, especially the internet’s access points. My goals are two-fold. First, by teasing out the technical properties of the Indonesian informational network, I aim to materialize the ephemera of sociocultural practices in relation to internet access points. Second, by focusing my attention on the everyday vocabulary of the internet infrastructure, I intend to reveal how the infrastructure *works*, in relation to spaces and places, access and uses, and connection and disconnection, among others. Rather than simply being a backdrop of technological and sociocultural practices, the infrastructure is an active dimension that shapes and is shaped by these practices. There are multiple ways to conceptualize the relationship between the internet and society. Studying the infrastructure of the Indonesian internet is one of the new ways to unpack the complexity of this relationship. Furthermore, I also demonstrate the value of investigating and disassembling the elements of internet infrastructure as a method of understanding the internet and society in Indonesia and, possibly, elsewhere.

To trace the co-evolution of the infrastructure of Indonesia’s internet access points, methodologically, I relied on a longitudinal study involving repeated observations spanning a period of sixteen years, from 1999 to 2015. Research for this article was primarily built on three fieldwork sessions in Indonesia focusing on three different access points: (1) *warnet* (1999–2001); (2) the emergence of mobile social media and

¹ As noted toward the end of this paper, in 2017 the owner of Jakarta’s master franchise for 7-Eleven stores abruptly closed all of those shops. See <https://www.reuters.com/article/us-seven-i-hldgs-indonesia/7-eleven-indonesia-where-popularity-wasnt-enough-idUSKBN19L1ZE>, accessed April 17, 2018.

² To follow an Indonesian convention, I use the same term, *warnet*, for both singular and plural forms of *warnet*. “*Warung*” refers to a small café, restaurant, or store; these are often modest, family-owned enterprises.

coffee shops (2009–10); and (3) convenience stores with free Wi-Fi, such as Sevel (2015). My fieldwork took place in Jakarta, Bandung, Semarang, Yogyakarta, and Surabaya, and consisted of observations (by hanging out and taking notes at various access points, such as *warnet*, Starbucks, and Sevel), and user interviews. By researching the infrastructure of internet access points in urban areas, which strategy largely excludes the poor, my research focuses on upper- and lower-middle-class Indonesians. To augment my research, I also conducted online observations by hanging out online on Indonesian blogosphere and social-media (Facebook and Twitter) networks. Field notes were written as narratives of observations and the texts of relevant online communications were recorded electronically.

Studying the Internet as Infrastructure

The prefix “infra” means “below,” a term that applies to many facilities that are physically located or hidden below the surface (e.g., water pipes and gas lines). Other forms of technological infrastructure, however, may be said to be “below,” not in a physical sense, but in their tendency to “reside in a naturalized background, as ordinary and unremarkable to us as trees, daylight, and dirt,”³ to withdraw to pass below a surface of saliency.⁴ Studying the internet as infrastructure is not a common type of internet study. Internet studies tend to be “virtualized,” with research predominantly about what happens in virtual space or in the cloud rather than on the ground. While internet study can be a field that addresses the relationship between the internet and society, the focus is mostly on *what people do* with the technology, rather than about the material artifacts that constitute the internet and which are *below* what people do with the internet.

Scholars of technology studies provide some useful insights on the importance of studying technological infrastructure. For example, Bowker et al. argue that “a theoretical understanding of infrastructure is crucial to its design, use, and maintenance.”⁵ They further argue that understanding a thing’s infrastructure is important for deepening the understanding of how the technology works, is used, and is appropriated. The study of infrastructure also allows technology and its associated emergent roles to be visible.⁶ Studying the infrastructure of the internet, according to Sandvig, “involves turning away from the topics that motivate a great deal of writing about the internet” and “turning away from the symbolic and investigating the structural.”⁷ Studies of infrastructure, indeed, predominantly revolve around technological aspects: the structural and the material. Yet technology represents only

³ Paul N. Edwards, “Infrastructure and Modernity: Force, Time, and Social Organization in the History of Sociotechnical Systems,” in *Modernity and Technology*, ed. T. J. Misa, P. Brey, and Andrew Feenberg (Cambridge: MIT Press, 2003), 185–226.

⁴ Edwards, “Infrastructure and Modernity,” 185.

⁵ Geoffrey Bowker, Karen S. Baker, Florence Millerand, and David Ribes, “Towards Information Infrastructure Studies,” in *The International Handbook of Internet Research*, ed. Jeremy Hunsinger, Matthew Allen, and Lisbeth Klasrup (Berlin: Springer, 2010), 97–117.

⁶ See: Edwards, “Infrastructure and Modernity”; and Helena Karasti, Karen S. Baker, and Florence Millerand, “Infrastructure Time: Long-term Matter in Collaborative Development,” *Computer Supported Cooperative Work* 19, 3 (2010): 377–415.

⁷ Christian Sanvig, “The Internet as Infrastructure,” in *The Oxford Handbook of Internet Studies*, ed. William H. Dutton (Oxford: Oxford University Press, 2013), 9.

one of multiple ways to conceive and analyze infrastructures.⁸ It is important to note, as Larkin also points out, that some infrastructures, such as electricity, are highly symbolic.⁹

Understanding the nature of Indonesia's internet infrastructure, as demonstrated in this article, necessitates "going backstage"¹⁰ to unfold the political and social choices that have been made throughout its development. Here, I do not see digital-media content or platforms as being the most important factors for determining social outcomes. I also do not see the infrastructure of internet technology as determining or impacting individuals, culture, or society as an external force, but rather as embodiments of social and cultural relationships that, in turn, shape and structure the possibilities for social actions and cultural expressions.¹¹ In this context, I approach the sociocultural and material as resources that can reveal what dominant structures influence, shape, and govern social practices on and of the internet. The infrastructures of access are important for the shaping of internet use and the social relationships around it. By narrating the story of Indonesia's internet infrastructure, which essentially is the story of access points, I show how the spaces and places of access have changed over time. These changes come with different meanings and uses. As technology shifts, and new access points become available, practices and meanings shift, too.

A Brief History of Indonesia's Internet Infrastructure

The history of Indonesia's internet infrastructure can be traced back to a short-lived project in the early 1980s when several universities, led by the University of Indonesia, established an inter-university network that connected to the UNInet (Inter UNiversity Network).¹² A connection to the World Wide Web, however, was not established until 1994, with the establishment of the IPTEKNET (Ilmu Pengetahuan and Teknologi Network, Science and Technology Network), a World Bank-funded project initiated in 1986 by then-technology czar B. J. Habibie (later to be Indonesia's president, 1998–99), which linked universities and research institutions to the World Wide Web using TCP/IP technology.

⁸ Brian Larkin, "The Politics and Poetics of Infrastructure," *Annual Review of Anthropology* 42 (2013): 327–43.

⁹ Electricity was a central symbol of state modernity in Mongolia, for example. See David Sneath, "Reading the Signs by Lenin's Light: Development, Divination, and Metonymic Fields in Somalia," *Ethnos* 74 (2009): 72–90.

¹⁰ Susan Leigh Star, "The Ethnography of Infrastructure," *American Behavioral Scientist* 43, 3 (1999): 377–91.

¹¹ See: Wiebe Bijker, Thomas Hughes, and Trevor Pinch, eds., *The Social Construction of Technological Systems: New Directions in the Sociology and History of Technology* (Cambridge: MIT Press, 1987); and Peter N. Edwards, "From 'Impact' to Social Process: Computers in Society and Culture," in *Handbook of Science and Technology Studies*, ed. Sheila Jasanoff, Gerald E. Markle, James C. Petersen, and Trevor Pinch (Thousand Oaks: Sage, 1995).

¹² For a more detailed history of the early internet in Indonesia, see: Joshua Barker, Merlyna Lim, Arie Rip, Teti Argo, and Sonny Yuliar, "Social Construction of Technology in the Indonesian Context nr.95-CS-03" (final research report submitted to Royal Netherlands Academy of Arts and Sciences, Universiteit Twente, 2000); and Merlyna Lim, "@rchipelago Online: The Internet and Political Activism in Indonesia" (PhD dissertation, Universiteit Twente, 2005).

The internet entered Indonesia's public domain in 1995 with the arrival of private commercial Internet Service Providers (ISPs), followed by a boom of ISPs at the end of 1997. The mushrooming of ISPs, however, did not lead to a significant growth of internet users, as the high costs of devices, subscription fees, and telephone connections were prohibitive for most Indonesians. It was *warnet*, or internet cafés, a grassroots form of commercial internet connection that developed without government intervention, which played a significant role in popularizing internet use in society at large. *Warnet* emerged in 1996 as an alternative point of access for the public, and in the next decade, became the main access point to the WWW for more than 50 percent of Indonesian internet users.

In 1996, the national postal service, PT Pos Indonesia, entered the *warnet* business by establishing its own ISP, Wasantara-Net, with the aim of bringing the internet to every corner of the archipelago by transforming post-offices into "*warposnet*" (an abbreviated of *warung internet pos*), or cyber and postal cafés. The Wasantara-Net project, on one hand, reflected the nation-state's desire to be part of the global information society and emerging digital economies. On the other hand, it could also be seen as a continuation of one of the New Order's most important national infrastructural projects, Palapa Satellite, which was "viewed instrumentally as a tool that could be used to shape the Indonesian national consciousness by promoting what was called a *Wawasan Nusantara* [lit. "archipelagic concept"; abbrev. *wasantara*], or archipelago worldview."¹³ Barker argues that *wasantara* resembled, yet fundamentally differed from, Ben Anderson's idea of the "imagined community,"¹⁴ in that while *wasantara* promoted "an imaginary and experiences of homogenous space and universal time in new communication media," it also filled in "the space of a national imaginary with the imagery of centralized control and political docility."¹⁵ Until the early 2000s, connecting to the internet from *warposnet* was the only way to go online in many small towns outside of Java. Nevertheless, *warposnet* failed to generate profits, and Wasantara-Net went out of business in 2002.¹⁶

In 2003 I argued that "to understand the Indonesian internet is to understand the social dynamics of ... *warnet*."¹⁷ At a glance, the way *warnet* operate is not dissimilar from internet cafés in other countries. For an individual, the use of the internet at *warnet* does not necessitate computer ownership or an ISP subscription, and access may be rented by the hour or minute. However, beyond being a point of access, *warnet* is also a result of the transformation, adaptation, and localization of internet technology. *Warnet* fits Daniel Miller and Don Slater's conception of the internet as

¹³ Joshua Barker, "Engineers and Political Dreams: Indonesia in the Satellite Age," *Current Anthropology* 46, 5 (2008): 708.

¹⁴ Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism* (London: Verso Press, 1983).

¹⁵ Barker, "Engineers and Political Dreams," 708–9.

¹⁶ In 2001, Wasantara-Net was relaunched as PT. Bhakti Wasantara Net, a joint venture of PT. Pos Indonesia and PT. Quantum Aksesindo, with share ownership of 51 percent and 49 percent, respectively. The company currently focuses on providing internet network services, payment systems, and information technology solutions.

¹⁷ Merlvna Lim, "The Internet, Social Networks, and Reform in Indonesia," in *Contesting Media Power: Towards a Global Comparative Perspective*, ed. Nick Couldry and James Curran (Lanham: Rowman & Littlefield, 2003), 276.

“continuous with and embedded in other social spaces, that they happen within mundane social structures and relations that they may transform but they cannot escape into a self-enclosed cyberian apartness.”¹⁸

Typically, *warnets*' appearance is substantially adapted from traditional *warung*—simple places where people buy snacks or meals, eat, and hang out.¹⁹ Even the physical features of *warung*, such as bamboo screens and *lesehan* (“sitting on the floor”) layout, are heavily incorporated in the design of *warnet*.²⁰ Beyond its physical form, *warnet*, too, embodies the social function of *warung* in the traditional information network. Just like *warung*, *warnet* is where people meet to chat and to gain and spread information. *Warnet* is a place to discuss a wide range of topics, from romance to politics. Humor, rumors, news, and gossip are carried to and between *warnet* by their patrons. Collectively, the interconnected web of *warnet* forms Indonesia's network of information about urban life.

During the late 1990s and early 2000s, *warnet* thrived especially in cities such as Jakarta, Bandung, Surabaya, Yogyakarta, and Semarang. During those years, Jalan Dipatiukur, a street near two prominent universities in Bandung (Padjajaran University and Bandung Institute of Technology), was suitably dubbed “*Warnet Street*,” as it was dotted with dozens of *warnet*.²¹ The *warnet* business, however, has always been ephemeral, even during the peak of its growth. From 1997–2002, *warnet* seemed to follow a certain pattern, inasmuch as most *warnet* had a short life cycle. Every time a new *warnet* was established, it would attract users because of its novelty; but then these users would quickly leave once they encountered a problem, such as a slow connection. As soon as one *warnet* went out of business, another *warnet* was born. As there was no license needed to own and operate the business, many *warnet* were managed unprofessionally. Some were owned by students who did not work full time, in which case the *warnet* was predisposed to being mismanaged. *Warnet* that managed to survive a little longer than most were those located near campuses. Even then, most *warnet* did not live beyond their fourth or fifth year. By 2002, many of the *warnet* on *Warnet Street* that were popular from 1997 to 1999 were mostly gone. Similarly, *warnet* near Semarang's University of Diponegoro—such as Sentral Java Internet and Adibas-Net, which were popular in 1999–2000—only existed until 2003.

There was an exception to the rule, however, at least up to 2008. For years, Pointer-branded *warnet* seemed able to survive longer than any other *warnet*. “Pointer” is short for “*pojok internet*,” meaning “internet corner.” Pointer was a chain of *warnet* established in 1997 by Onno Purbo, considered by many as the father of Indonesia's internet, and his colleagues and friends at CNRG.²² The chain emerged with the ambition of getting as many Indonesians connected to the internet as possible, which

¹⁸ Daniel Miller and Don Slater, *The Internet: An Ethnographic Approach* (Oxford: Berg, 2000), 5.

¹⁹ Lim, “The Internet,” 278.

²⁰ Lim, “The Internet,” 278.

²¹ Merlyna Lim, “From Walking City to Telematic Metropolis: Changing Urban Form in Bandung Indonesia,” in *Critical Reflections on Cities in Southeast Asia*, ed. Tim Bunnell, Lisa B. W. Drummond, and K. C. Ho (Singapore: Brill Academic Publisher and Times Academic Press, 2002), 90.

²² CNRG (Computer and Network Research Group) is a hobbyist group of Bandung Institute of Technology (ITB) faculty and students who share interests in computer and network technologies. CNRG emerged out of ITB's amateur radio club and was established in 1993 by Onno Purbo, who at that time was a faculty member of ITB's electrical engineering department, and his students.

was consistent with what CNRG did in its on-campus network at Bandung Institute of Technology. Initially, the technology used by this chain to connect to the internet was a combination of radio and VSAT (Very Small Aperture Terminal, a satellite-based networking system). Those connections allowed Pointer *warnet* to work around the telephone network, thus making Pointer's internet connection faster than others' and independent of the quality of a landline. This technological workaround, in turn, made Pointer more competitive than other *warnet*. Pointer operators also had access to chain-provided business and management training, making their operations less susceptible to insolvency. Through a makeshift form of franchising and with financial support from a domestic venture capital firm, Sarana Jabar Ventura, Pointer established *warnet* throughout Bandung and Jakarta in 1996–97 and expanded the coverage to other cities, such as Semarang, Yogyakarta, and Solo, in 1998–99. Apart from any profit motive, Pointer vigorously attempted to raise awareness (*sosialisasi*) about its *warnet* model all over the country. This *sosialisasi* project was part of a nationwide expansion of internet networks, which also included self-organized neighborhood networks and community radio. Pointer's key persons, such as Purbo and Zilmy Zamfarra, held free workshops on the *warnet* business model and wrote and disseminated articles online about creating *warnet* beyond the state's control. As a result, Indonesia experienced extensive growth in the number of *warnet*, particularly in Java's and Bali's urban areas. In 1997 there were approximately one hundred *warnet* across the country. By the end of 2001 the number exceeded twenty-five hundred,²³ and by early 2008 the number had quadrupled to around ten thousand.²⁴ Purbo and his friends' guerilla-style, bottom-up internet networks were disruptive. They challenged the state imaginaries of controlled, centralized, and capital-intensive networks of communications.²⁵ By disseminating how-to knowledge on creating a low-cost grassroots network free from state control, such as *warnet*, Purbo and his friends offered an alternative "sociotechnical imaginary that linked the technology to a politics of freedom."²⁶

Warnet business peaked in 2008, and since then the number of *warnet* has been dwindling. In 2011, there were only five thousand running *warnet*.²⁷ Also, many of the *warnet* that remained in business eventually had to be transformed into gaming centers or incorporate some kind of gaming facilities into their business to survive. The reasons for *warnet*'s decline are manifold. First, the exponential growth of mobile-phone users along with a steady growth of mobile internet penetration in the country replaced the need for *warnet*'s internet connections. Second, internet connection rates became more affordable over time for individuals. Third, an increasing number of wireless internet hotspots became available in public and private establishments, such

²³ Hardjito, "Internet untuk Pembelajaran," *Jurnal Teknodik* 6, 10 (2002): 1.

²⁴ Ardhi Suryadhi, "2008, Jumlah Warnet Bisa Tembus 12 Ribu," *Detik.com*, January 28, 2008, <http://inet.detik.com/read/2008/01/28/121533/885338/319/2008-jumlah-warnet-bisa-tembus-12-ribu>, accessed September 19, 2016.

²⁵ Joshua Barker, "Guerilla Engineer: The Internet and the Politics of Freedom in Indonesia," in *Dreamscapes of Modernity: Sociotechnical Imaginaries and the Fabrication of Power*, ed. Sheila Jasanoff and Sang-Hyun Kim (Chicago: Chicago University Press, 2015), 208.

²⁶ Barker, "Guerrilla Engineer," 200.

²⁷ Merlyna Lim, "@crossroads: Democratization and Corporatization of Media in Indonesia," October 1, 2011, http://participatorymedia.lab.asu.edu/files/Lim_Media_Ford_2011.pdf, accessed September 19, 2016.

as schools, universities, parks, cafés, restaurants, and convenience stores (e.g., Sevel). Even Pointer *warnet* were not immune to the disruption caused when internet users changed the ways they went online.

After the collapse of *warposnet* in 2002, there was no internet infrastructure project on a national scale until the government launched its nationwide Desa Pinter project in 2010. Abbreviated from *desa punya internet* (“the village has internet”; “smart village”), Desa Pinter is Indonesia’s USO (universal service obligation) funded program to provide internet access to all villages in Indonesia by 2025 by developing some 5,750 district internet service centers. As of April 2018 there is no data available regarding the completion of this project. This program is a continuation of the troubled Desa Berdering (“ringing village”) project, which was launched to provide telephone access to all Indonesian villages by 2010.²⁸ National infrastructure projects such as *warposnet* and Desa Pinter embody sociotechnical imaginaries, which are collectively imagined forms of “social life and social order” reflected in the state’s “advancement of science and technology.”²⁹ They were imagined as part of controlled and centralized networks of national information and communication systems.

Until 2010, *warnet* was still the most popular means to access the internet, with 64 percent of internet users reportedly using *warnet*.³⁰ In a 2014 survey of Indonesian internet users, conducted by APJII and the University of Indonesia,³¹ only 11.6 percent of respondents reported using *warnet* as a point of internet access. The majority of respondents (85 percent) went online using their smartphones. Despite the decline of *warnet*, the number of internet users in Indonesia continues to rise dramatically—from only 0.26 percent of the total population in 1998 (about 550,000 users) to 51 percent (132 million) in 2017.³² Prospects for broadband subscription growth, however, continue to be constrained by the country’s existing economic and technological structure. In 2016, there were only 1.89 fixed broadband subscriptions per hundred people.³³ In the same year, only 19.1 percent of all households had personal computers.³⁴ It is clear that most internet users are not internet subscribers and do not connect from personal computers. Of the country’s 132 million internet users in 2017, 92 million of them went online using smartphones. With a mobile penetration

²⁸ Desa Berdering does not seem to be equally sustainable among different villages. In some places, villagers stopped using the service as soon as the subsidized credit ran out. Four months after the deadline, in April 2011, the program had served only 32,800 out of 43,000 targeted villages. See Dedi Sinaga, “Tahun ini Desa Berdering dan Internet Kecamatan Rampung,” *Tempo Interaktif*, April 11, 2011, <https://m.tempo.co/read/news/2011/04/11/072326703/tahun-ini-desa-berdering-dan-internet-kecamatan-rampung>, accessed September 19, 2016.

²⁹ Jasanoff and Kim, *Dreamscapes of Modernity*, 4.

³⁰ Lim, “@crossroads.”

³¹ Puskakom (Pusat Kajian Komunikasi Universitas Indonesia, The Center of Communication Studies at the University of Indonesia) and APJII (Indonesian Internet Service Provider Association), “Profil Pengguna Internet Indonesia 2014,” March 2015, <https://beta.apjii.or.id/download/file/PROFILPENGGUNAINTERNETINDONESIA2014.pdf>, accessed September 19, 2016.

³² We Are Social, “Digital in 2017: Southeast Asia,” <https://www.slideshare.net/wearesocialsg/digital-in-2017-southeast-asia/>, accessed April 2, 2018.

³³ The World Bank, “Fixed Broadband Subscriptions (per 100 People),” <https://data.worldbank.org/indicator/IT.NET.BBND.P2?locations=ID>, accessed April 2, 2018.

³⁴ ITU (International Telecommunication Union), “Core Household Indicators,” <https://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2018/CoreHouseholdIndicators%20-%20Jan2018.xls>, accessed April 2, 2018.

rate of over 90-percent and the total number of mobile phones exceeding the actual population, mobile internet has become an obvious choice for most Indonesians.³⁵ While smartphones have become more and more affordable over time, they remain prohibitively expensive for many Indonesians, especially the low-income population. As such, the poor remain relatively digitally excluded from internet access despite the proliferation of public Wi-Fi and other access points, such as *warnet*, cafés, and Sevel, that make access to the internet more inclusive for middle-class Indonesians, especially in urban areas.

It is important to note here that “connecting to the internet” in an Indonesian context mostly means accessing social media, such as Facebook and Twitter. In fact, many people do not know about other sites besides social-media sites. Facebook is tremendously popular among Indonesian internet users. It shows more than 40 percent growth every year. In mid-2008, when Indonesians just started to recognize the availability of this social networking platform, there were only 209,760 users.³⁶ In September 2011, the total number of Facebook users in Indonesia reached 40,418,860, or 16.46 percent of the country’s population, making it the second largest national group (in actual number of users) on Facebook after the United States.³⁷ In 2015, there were 69 million Facebook users in Indonesia and 92.4 percent accessed the platform via mobile phone, compared to 79.1 percent in the United States and 82.9 percent in India.³⁸ Facebook, in fact, is more popular than the internet. Many Indonesian Facebook users do not even know that they are using the internet.³⁹ During my 2015 fieldwork in Jakarta, I repeatedly found out that many Facebook users never used Google search. What we are witnessing in Indonesia is the rise of mobile social media, with Facebook as the most dominant social-media platform, followed by Twitter, WhatsApp, Instagram, and others.⁴⁰

With the growth of mobile social-media use, using a stationary device (such as a personal computer) at an internet-connection site (such as *warnet*) has become less relevant. With the availability of portable mobile devices, however, people still use free Wi-Fi as much as possible. Everyone I spoke with told me that they automatically switch to Wi-Fi, when available, to conserve their data usage.

Meanwhile, the global “smart city” concept has reached Indonesia, under the banner of “smart initiative.” Cities such as Bandung, Surabaya, and Jakarta compete to

³⁵ We Are Social, “Digital in 2017.”

³⁶ Lim, “@crossroads,” 7.

³⁷ Lim, “@crossroads,” 7.

³⁸ eMarketer, “Facebook Users in Indonesia Have Highest Mobile Usage Rate Worldwide: Indonesia Is Home to the Third-largest Facebook Mobile Phone Audience,” January 22, 2015, <http://www.emarketer.com/Article/Facebook-Users-Indonesia-Have-Highest-Mobile-Usage-Rate-Worldwide/1011896>, accessed September 19, 2016.

³⁹ Leo Mirani, “Millions of Facebook Users Have No Idea They’re Using the Internet,” February 9, 2015, <https://qz.com/333313/millions-of-facebook-users-have-no-idea-theyre-using-the-internet/>, accessed September 19, 2016.

⁴⁰ Indonesians especially embrace Twitter as one of their favorite social networking tools. In August 2010, at 20.8 percent of 93 million internet users, Indonesia had the highest proportion in the world of its home and work internet audience visiting Twitter.com. See ComScore, “Indonesia, Brazil, and Venezuela Lead Global Surge in Twitter Usage,” August 11, 2010, https://www.comscore.com/Insights/Press-Releases/2010/8/Indonesia-Brazil-and-Venezuela-Lead-Global-Surge-in-Twitter-Usage?cs_edgescape_cc=US, accessed April 17, 2018.

provide more hotspots of free public Wi-Fi. Providing free Wi-Fi symbolically marks a municipality's first step towards becoming a smart city. By providing Wi-Fi on city property and in third spaces (i.e., those away from individuals' workplaces and homes), and as an alternative to corporate-owned free internet services, not only does the city treat public access as necessary, it also delineates a practical and spatial definition of public Wi-Fi. The city presumes that accessing the internet in a public space carries different social implications than accessing it from spaces that are less public.

Spatial and Cultural Infrastructure: Dis/Connection, *Kopdar*, and *Nongkrong*

The old *warnet* is a spatial artifact that embodies a new type of space I have termed "cyber-urban space," namely, "the fluid and complex spatial landscape [...] with its blurred boundaries between cyber and physical space."⁴¹ Cyber-urban space is where the digital and the material are enmeshed and our hybrid existence acknowledged and coded. The word "urban" is used, instead of "physical," to reflect the twin processes of rapid urbanization and rapid digitization—expansion of digital information networks—all over the world. Information and communication networks are urban, less for the location of their access points than the interactional spaces created. They are mobilized using an urban imaginary.⁴²

Here, the term "cyber-urban space" is also used to challenge the concept of spatial dualism that views cyberspace as being separate from real space. Early work on the internet and computer-mediated communications tended to perceive "cyberspace" as distinct and essentially different from "real space," the actual physical and material world.⁴³ The internet and digital world was once thought to be revolutionary, a place where one could shape identities, relationships, and socialities in a world apart from the material one.⁴⁴

Much of the early work on the internet dichotomized life as online–offline, cyber–real, and virtual–physical. One is "real," that is, connected to reality and the existence of time, space, and geographical boundaries, and bound to corporeal constraints and social inequalities. The other is "virtual," asserting that the internet has caused "the death of distance" and one is free from physical and social constraints. My research on the spatiality of *warnet* reveals the way cyber worlds and the real world are interconnected. More than just a point of access, *warnet* are technosocial spaces offering access not only to technology, but also to social spaces centered on internet technology.⁴⁵

The rise of mobile social media pushes the interconnectedness of the digital and material world even further. The everyday use of mobile social media shows that the

⁴¹ Merlyna Lim, "A Cyber–Urban Space Odyssey: The Spatiality of Contemporary Social Movements," *New Geographies* 07 (2015): 118.

⁴² Mike Crang, "Public Space, Urban Space, and Electronic Space: Would the Real City Please Stand Up?" *Urban Studies* 37, 2 (2000): 301–17.

⁴³ Sherry Turkle, *Life on the Screen: The Identity in the Age of the Internet* (Cambridge: MIT Press, 1995).

⁴⁴ Howard Rheingold, *The Virtual Community: Homesteading of the Electronic Frontier* (Cambridge: MIT Press, 2000).

⁴⁵ Lim, "The Internet."

digital realm is rooted and embedded in, and entangled with, the material one. In the case of *warnet*, the cyber-urban spatial experiences are emplaced in various nodes in the city landscape, interrupting bodily experiences. In the overlapping networks of mobile social media and places such as parks, cafés, and convenience stores, we are seeing new ways in which the digital realm is interweaving with the material one. These networks facilitate an almost uninterrupted cyber-urban-space experience as individuals maintain their online lives through their private data network and public Wi-Fi with but a diminutive interruption that happens as one's phone is switched from one network to another. Here, I can explicitly call for the rejection of spatial dualism and advocate for a non-essentialized understanding that the boundaries of digital and material are blurred and indistinct. These boundaries are only revealed in times of breakdown and blackout, such as when phone users encounter out-of-coverage areas or when mobile devices' batteries run out of power.

From *warnet* to mobile social media, there is an apparent shift of connectivity. In my face-to-face interviews with *warnet* users, interviewees would detach and disconnect from their screen in order to have conversations with me, thereby marking a distinct moment of disconnection and, later, (re)connection. Of course, the more casual face-to-face conversations among friends that take place in a private room or a *warnet* cubicle might have less distinct moments of disconnection and (re)connection. Still, once people decide to continue their conversations outside the *warnet*, a moment of disconnection occurs. Connecting and disconnecting are very much part of *warnet* vocabulary.

Mobile social media offers a new, different type of connectivity. It allows individuals to stay in constant and habitual interaction not only with other individuals, but also with the devices and platforms themselves. Mobile social-media users "dis/connect" with their smartphones, applications, and (social media) interfaces in a perpetual technosocial connectivity with no tangible moment of connecting or disconnecting. Whether it is congregating or eating together, corporal events do not necessarily disrupt users' technosocial connectivity. At the same time, this perpetual connectivity makes it impossible to be fully connected to either offline or online channels of interaction. Rather, individuals are dis/connecting. They are embracing the interplay of being simultaneously both connected and disconnected.

In the various interviews I have conducted, the practice of dis/connection was evident. Interviewees checked their mobile screens during the interview. Some made a display of putting their phones away, but most retrieved them for a quick check at some point and everyone did so at the end of the interview. While speaking with me, some interviewees held their phones in one hand or put them on the table, thereby exhibiting a desire to be connected and poised for potential interaction at all times. Some were conscious of this perpetual connectivity via their phones and tried their best to maintain a face-to-face presence, and yet they could not help but check their phones anyway. In one interview, a twenty-one-year-old university student constantly apologized for checking her mobile phone, which was placed on the table between us. Conversation tones of WhatsApp, one of most popular social networking platforms among Indonesians, were heard around us all the time. The tones, which are sounds that a phone emits when one sends and receives messages, bothered me a lot at first. However, eventually they became normal, retreating into the background and merging

with other ambient sounds of the urban setting. Instead of causing a nuisance, those tones serve as a reminder that “we are still connected.” In the absence of the tones, one might question their online connectivity.

In cities such as Jakarta, Bandung, and Surabaya, there has been an expansion of cyber-urban spaces where networked communication has become the nexus of everyday activities. Multiple overlapping and networked spaces for interaction are made possible through the availability of mobile devices, public Wi-Fi, social-media platforms, and urban meeting places (public, semi-public, and private) that have subsumed traditional domains of activities within “a relational domain of communication activity.”⁴⁶ Through the practice of dis/connection, the relational domain not only extends the interactional spaces of activity, but also interweaves interpersonal communication practices into the temporality and embodied practices of everyday life.

From *warnet* to coffee-shops to convenience stores, networked communication practices in the Indonesian context cannot be separated from the collective practices of sociality that are culturally entrenched, especially those of *nongkrong* (“hanging out”) and *kopdar* (an in-person meet-and-greet).

The term *nongkrong* is used to describe two or more people who get together without a discernible purpose or outcome, usually in public areas. Because public places intended for the young are rare in Indonesian cities, consumption spaces such as shopping malls, fast-food restaurants, and the like are, unsurprisingly, commonly used by Indonesian middle-class youth for *nongkrong*. The emergence of *warnet* in the late 1990s provided an alternative space for *nongkrong*, in both online and offline settings. The rise of coffee shops and cafés (such as Starbucks) and convenience stores (such as Sevel) with free Wi-Fi has expanded the sites for online and offline *nongkrong*. By conversing with friends in a café or a convenience store while posting, sharing, liking, commenting, tweeting, and retweeting, individuals can be *nongkrong* both offline and online—mutually connected and personally engaged, rather than distinctly and separately.

Kopdar describes the physical meeting of people who knew each other first through online interactions.⁴⁷ While facilitating online social relationships, *warnet*, cafés, and convenience stores are also places for creating offline relationships through *kopdar*. In the old days, young people might meet in person at a *warnet* following their online chats. Mobile social media reinforces the importance of *kopdar* even further, primarily to sustain and solidify social relations. All the members of a Facebook group might meet in person at a Starbucks or a café to make their online solidarity tangible, to take a number of so-called “wefies” (group selfies), and to post the photo(s) to the group’s page to reinforce the online community even further.

⁴⁶ Kenzie Burchell, “Tasking the Everyday: Where Mobile and Online Communication Take Time,” *Mobile Media and Communication* 3, 1 (January 2015): 36.

⁴⁷ *Kopdar* (from *kopi darat*) was originally used by amateur-radio (citizens’ band, CB) operators in the 1980s for in-person meetings following on-air interactions. The word *kopi* originates from “copy,” which is a standard, on-air way to acknowledge received information through radio transmissions (“Copy that. Over”). The word *darat*, meaning “ground,” is used in opposition to “air” (on-the-air).

Nongkrong and *kopdar* might be perceived as playful, frivolous, pointless, and a waste of time. However, these social activities are productive in the sense that they generate, define, and secure the social relations through which Indonesians, especially urban youth, manage their places in society as social beings as well as citizens, members of the nation-state, and participants in global-culture flows.⁴⁸

The Geography of Infrastructure: Social Class and Inequality

The development, expansion, shift, and change of internet infrastructure is dependent on physical spatial bounds, the geographical position of access points, and the quality of preexisting technological networks (such as telephones, satellites, and fiber-optic cables), as well as other infrastructural components. Furthermore, I argue that the infrastructure of the internet is not simply a technical matter, it is also entrenched in the spatiality of social, cultural, and economic differences. Hence, the internet's infrastructures, like all other urban infrastructures, are subject to structural dynamics, divides, and inequalities.

While *warnet* were developed as one of several different attempts to democratize people's access to computers and the internet, *warnet* are, admittedly, neither a fully egalitarian nor classless social space. As a commercial entity, *warnet* operate in the market to attract a range of diverse consumers. *Warnet* are also social spaces targeting a particular social group or geographical community. They are more than the physical spaces or products provided, inasmuch as they include the people who use them and work there. Their physical appearances and designs, the drinks and snacks they offer, the prices, and the speed of access are available not only to mediate, facilitate, and lubricate the experience and activities of their users, but also to cater to different consumer groups. Despite these differences, however, *warnet* allow subtle transgressions of traditional boundaries of class and other social groupings that otherwise keep society compartmentalized.

The decline of *warnet* and users' move to mobile social media suggest a shift from a collective to an individualized use of technological devices—from the shared use of personal computers at *warnet* to an individual's use of her or his own mobile phone or laptop. While some social-media practices are still performed collectively, such as taking and posting group photos, sharing photos, or watching a video together, the economic burden associated with internet use has become individualized, as every user seemingly needs a personal and individually owned device to participate in both individual and collective endeavors. While not overtly disallowing anyone from using their services, private establishments such as up-scale shopping malls, hotels, restaurants, and coffee shops that serve as access points are, as a practical matter, not inclusive. In comparison to the *warnet*, these access points are much more exclusionary. Rather than democratizing access, this shift away from *warnet* has pushed the infrastructure of access to reflect the existing inequalities and social divisions that already permeate the physical urban geography.

⁴⁸ See Alexandra Crosby, "Festivals in Java: Localising Cultural Activism and Environmental Politics, 2005–2010" (PhD dissertation, University of Technology, Sydney, 2013). Crosby asserts that while *nongkrong* is unproductive in terms of financial gain, it produces "many ideas and social relations, including those that define the *kampung*" (p. 36).

In big cities, *warnet* still exist near universities and in fringe areas where there are no alternative points of access. *Warnet* have generally disappeared from the centers of big cities, such as Jakarta and Bandung, and upper-class residential areas, such as Pondok Indah of South Jakarta, where Starbucks and other up-market cafés proliferate. These cafés have a Wi-Fi connection and are used by expatriates, the affluent, and upper-middle-class Indonesians who go there with their laptops and mobile phones to connect to the internet while communicating with friends over a cup of coffee. Starbucks and the like occupy the urban space of premium users. It serves as a “third space” relative to their offices and homes, a place where professional and/or private interactions remain uninterrupted or simultaneous. Starbucks is popular not only among executives and white-collar workers, it is also a preferred meeting and hang-out place for university students, housewives, and even activists, (ironically) including so-called “leftist” activists. A sign at Starbucks cafes simply says, “Enjoy great coffee and the Internet at your fingertips.” And yet, connecting at a local Starbucks is not just a simple connection to the internet while sipping a cup of coffee. It also reflects a complex material and symbolic process whereby urban middle-class consumer culture, online connectivity, and an engagement with a global brand are fused and grounded in local spatiality.

People who have a laptop and the means to purchase US\$2–\$3 cups of coffee can easily go to any upscale café that has free Wi-Fi. These cafés, however, are too expensive for most. With the exclusion of the lower-middle class from the connections offered by premium spaces, places such as Sevel and other convenience stores become important. At Sevel, one could spend less than one US dollar for a Big Gulp fountain drink, a Big Bite hot dog, or a Slurpee drink, and stay for hours. The firm Sevelin (Seven Eleven Indonesia) saw this new social function as a marketing opportunity and decided to equip all of its stores with free Wi-Fi and a “mini resto” (restaurant), where customers could hang out. Unlike typical 7-Eleven stores in the United States and Canada, which generally serve people on the go who need a one-stop shop to quickly buy everyday products, Indonesia’s Sevel resembled street markets, or *warung*, where people gathered to share stories and eat. Sevel were open 24 hours, had air-conditioning, offered hassle-free parking, and featured indoor and outdoor seating areas and wireless connectivity. Some of the most popular Sevels in Jakarta also offered leisure activities, such as concerts featuring local artists and live bands.

Triggered by the growing popularity of Sevel stores in big cities, other chains, such as Circle K, Indomaret, and Family Mart, started to install Wi-Fi in their stores. With such an increase in competition, in the near future convenience stores might not be the most popular hangout places. In fact, in June 2017, Indomaret stores were becoming increasingly popular and Sevel Indonesia closed all of its stores permanently.⁴⁹ However, there will always be a need for such places in any urban area of Indonesia, regardless of what they are called. Combining two of Indonesian

⁴⁹ There is no official reason provided on why Sevel closed its business permanently. Observers cited increased competition, regulations (especially the 2015 ban on sales of alcoholic beverages from minimarkets and small shops), and a sluggish economy as multiple causal factors (see Resty Woro Yuniar, “Why Did All 7-Elevens in Jakarta Suddenly Disappear?” *This Week in Asia*, July 17, 2017, <http://www.scmp.com/week-asia/business/article/2102307/why-did-all-7-elevens-jakarta-suddenly-disappear>, accessed April 2, 2018).

urbanites' favorite things—offline and online hangouts—hybrid spaces, such as convenience stores, have become one of the key technosocial spaces for Indonesians in urban areas and, in doing so, have made the modern café experience accessible to lower-middle class individuals. In other words, this type of urban infrastructure expands consumers' array of retail choices as well as the spaces for networked communication activities and urban youths' sociocultural practices.

While catering to lower-middle-class youth, convenience stores' placement strategy follows the logic of the market. In Jakarta, these stores are centrally located. The stores can be found in commercial and office areas, but not in low class residential areas or near public transport stations, because those are not considered premium locations. Also, convenience stores are predominantly located in big cities in Java, a situation that contributes to the deepening gap of internet access between (urbanized areas of) Java and other islands.

Society, from a relational perspective, is understood as a process. It is “not a ‘substance,’ nothing concrete, but an *event*: it is a function of receiving and effecting the fact and development of one individual by the other.”⁵⁰ Society is, thus, about how people interact and communicate to create society. Sociologically, a society should be described not as a system that exerts power upon individuals, but in terms of how it is created by a collection of people and how people associate and relate to one another.⁵¹ In other words, understanding societies and how phenomena such as inequality and segregation emerge, change, and remain, necessitates studying relations among individuals and between social sites. Indonesian cities appear as a succession of networks of places appropriated by classes and other social groups that create differences and are segregated. Sociotechnical systems of the internet's spatial infrastructure, such as Starbucks and Sevel stores, do not necessarily create new inequalities. However, they do augment existing class and social inequalities that are embedded in the networks of places, and possibly even reinforce them. The expansion of the internet infrastructure through the rise of mobile social media facilitated by private providers and the flourishing of Starbucks, Sevel, and other privately own establishments demonstrates the expansion of urban capitalism and the infrastructure of consumption.

Infrastructure of Control/Freedom: Privacy, Autonomy, and Morality

The shift from one access point to another may also change how technology and its use is associated with social values such as privacy, autonomy, and morality. The *warnet* is a public access point to the internet. However, besides its public-ness, *warnet* is also private. There is a structural similarity between *warnet* and the chat room, as described by Martin Slama: moving from public to private spaces in *warnet* finds its equivalence in the chat room, with its switching between public and private

⁵⁰ Georg Simmel and Kurt H. Wolff, *The Sociology of Georg Simmel* (New York: Simon and Schuster, 1950), 11 (emphasis as in the original).

⁵¹ Bruno Latour, *Reassembling the Social: An Introduction to Actor-Network-Theory* (Oxford: Oxford University Press, 2005).

channels.⁵² During the peak of the *warnet* business in the 2000s, many *warnet* offered partitioned cubicles for customers who wanted personal privacy. In these private spaces, users could have private conversations in a chat room, access politically controversial information, or download pornographic materials.⁵³ Besides physical privacy, the new form of privacy made possible by early chat rooms, such as MIRC, ICQ, and YahooChat, was of particular importance. It enabled young people to gain more autonomy from their parents and elders than they had in offline spaces, especially concerning social relations between the sexes. In the particular case of online chats in Indonesia, it was the possibilities for privacy that made the internet such an appreciated tool of communication.⁵⁴

Alan Westin defines privacy as “the claim of an individual to determine what information about him or herself should be known to others,” and involves “when such information will be obtained and what uses will be made of it by others.”⁵⁵ Only when this claim is recognized by law or social convention, Westin continues, can we speak of “privacy rights.”⁵⁶ In Indonesia, privacy is not a familiar concept and is not fully recognized at the political, sociocultural, or personal levels. The internet thus facilitates a right to privacy that is mostly not accommodated in any other spaces or places in Indonesian society. *Warnet*’s association with privacy reflects a particular “media ideology,” namely, people’s unique “beliefs, attitudes, and strategies about a single medium”⁵⁷ that is developed through interaction with other *warnet* users, and influences how users believe the internet should be properly used. This ideology cannot be separated from early sociotechnical imaginaries of the internet as a technology of freedom.

The privacy created on the internet and in *warnet* sometimes generates generational friction between the old and the young and causes dilemmas for the authorities. While being acknowledged by Indonesians in general as a positive tool for learning and gaining knowledge, the internet also engenders fear and anxiety, especially among the older generation, about the apparently amoral sexuality with which it is discursively associated. The recent development toward a more public access infrastructure has real consequences for ideas about privacy. “Going online” is no longer associated with being alone in a *warnet*’s private cubicle, but rather using a mobile phone in a more open space in the presence of others. Political and religious leaders constantly portray *warnet* as harmful to public order, social stability, and morality. They consider going to *warnet* inappropriate.

In his campaign for Bandung Juara (Bandung the Champion), the mayor of Bandung, Ridwan Kamil, promised to install five thousand hotspots in open public spaces, city parks, streets, community meeting halls, and mosques. To launch this initiative, Kamil inaugurated a Wi-Fi installment at Jami Muhajirin mosque in Ujung

⁵² Martin Slama, “The Agency of the Heart: Internet Chatting as Youth Culture in Indonesia,” *Social Anthropology* 18, 3 (2010): 316–30.

⁵³ Lim, “The Internet.”

⁵⁴ Slama, “The Agency of the Heart,” 323.

⁵⁵ Alan F. Westin, “Social and Political Dimensions of Privacy,” *Journal of Social Issues* 59, 2 (2003): 431.

⁵⁶ Westin, “Social and Political Dimensions of Privacy,” 431.

⁵⁷ Ilana Gershon, “Email My Heart: Remediation and Romantic Break-ups,” *Anthropology Today* 24, 6 (2010): 13–15.

Berung, at the eastern end of Bandung, in 2013. In his inauguration speech, Kamil emphasized the importance of public internet access for the new generation, adding, “Children no longer need to go to *warnet* to access the internet. By accessing the internet from the mosque, I hope the behavior and ethics of our children can be protected, because the internet is controlled by the Mosque Council.”⁵⁸ Kamil’s speech suggests a certain media ideology that deems *warnet* use as morally undesirable and legitimizes public access as respectable. In this case, making internet access public by providing free Wi-Fi hotspots cannot be seen merely as a technical undertaking to challenge the digital divide or to make the internet more inclusive. It can also be seen as a symbolic act that embodies the authorities’ claim of control over the behavior of youth. By so doing, the authorities endeavor to substitute the notions of autonomy and freedom associated with individual privacy with the notions of ethics and morality associated with “being in public,” albeit only figuratively.

The internet’s influence has extended beyond the confines of online space and has shaped various aspects of Indonesians’ lives, especially those of urban youth. On one hand, many of the aspects brought up by networked communication practices facilitated by the internet are simply an extension of the moral life individuals lead in the real, physical world. On the other hand, some changes, such as the possibilities that arise from privacy and autonomy, are not always familiar and consistent with preexisting cultures, values, and moral standards, and, moreover, signify the possibility of agency (of youth) and resistance that may challenge existing power relations.

Practicing the Sociality of Everyday Life

Studies and discussions about the Indonesian internet, or the internet in general, rarely concern the full suite of sociotechnical systems that characterize modern societies. In this article, I demonstrated that the development of internet infrastructure reflects technological, spatial, and historical processes, and embodies social and cultural relationships that shape and structure social actions and cultural expressions.

In Indonesian cities, cyber-urban spaces have expanded, thus allowing networked communication practices to become an intrinsic part of everyday activities. Multiple overlapping and networked spaces for interaction are made possible through the availability of technosocial spaces that interweave interpersonal communication practices within the temporal and embodied practices of everyday life. The infrastructure of internet access points is a resource for individuals, especially urban youth, to express who they are and to identify with whomever they wish. As a technosocial act, “dis/connecting” in cyber-urban spaces, simultaneously online and offline, engenders a social process that can connect and disconnect, draw people together or keep them apart. For Indonesian urban youth, dis/connecting is not a matter of choice, but is how they practice the sociality of everyday life.

⁵⁸ “Asik, Ada Masjid dengan WiFi Gratis di Ujung Berung,” *Detik News*, November 16, 2013, <http://news.detik.com/berita-jawa-barat/2414898/asik-ada-masjid-dengan-Wi-Fi-gratis-di-ujung-berung> (author’s translation), accessed September 19, 2016.

By tracing the co-evolution of its social and material infrastructures—from collectively used personal computers to individualized mobile social media, from *warnet* to convenience stores—it is understood that power, contestation, and inequality always inscribes the internet and its relationship with society. Within this contested realm, urban youth continue to use this infrastructure of sociality, enriching it with *nongkrong* and *kopdar*, to find ways to relate with the global world, the nation-state, and one another. Just like *warnet*, Sevel's popularity, too, was ephemeral. Any new technosocial spaces of internet infrastructure will eventually become outmoded, decline, and disappear, and be replaced by the next ones. In this ever-changing landscape, sociocultural practices of *nongkrong* and *kopdar* are possibly the only constant. They are emblematic of how Indonesians respond to the construction of modernity and technological projects that aim to construct themselves as modern.