

The Politics of Media Infrastructure: Mobile Phones and Emergent Forms of Public Communication in Papua New Guinea

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ABSTRACT

Recent work in anthropology proposes that the ethnographic study of infrastructure offers a productive way to think about how states and corporations, citizens and consumers, all define their relations and obligations to each other. This article considers the politics of media infrastructure in Papua New Guinea (PNG) by tracing the moral economy of mobile phones. It focuses on (1) how mobile phone users have taken to social media to express dissatisfaction with the dominant mobile network operator, Digicel, a privately owned foreign company; and (2) how the PNG state has attempted to regulate the use of mobile phones and social media through cybercrime legislation and registration of Subscriber Identity Modules (SIM cards). Consideration of these two issues – matters of concern that gather publics around them – enables an assessment of the promise of improved telecommunications and social media, in particular, to make government in PNG more accountable and transparent.

Keywords: Papua New Guinea, politics, infrastructure, telecommunications, mobile phones, social media, Digicel.

INFRASTRUCTURE AND THE MORAL ECONOMY OF MOBILE PHONES

In 2005, the Papua New Guinea (PNG) National Executive Committee decided to introduce competition in mobile phone services (for details, see Duncan 2014, Watson 2011). Digicel Group Ltd., a private company chartered in Bermuda and headquartered in Jamaica, secured one of the two licences issued (for more on Digicel's presence in Oceania, see Foster and Horst 2018). In 2007, Digicel began offering inexpensive handsets and low-cost operating rates throughout PNG. Telekom, PNG's state-owned service provider, was unable to compete against Digicel's aggressive marketing practices or to match Digicel's expanding coverage in rural areas. Within just a few years, Digicel effectively controlled the fast-growing mobile market.

Since its launch, Digicel has at times achieved market share in PNG of 97% (Digicel Group Limited 2015). The company claims that its 'bigger and better network' of over 1100 cell towers covered 86% of the population in 2018 (James 2018b). The penetration rate of mobile phone subscriptions has been estimated to be 48%, representing some four million subscriptions, compared to 1.6% in 2006 (Wansink 2018). (A 2019 report by Highet et al., however, put the penetration rate much lower at 30% representing some 2.5 million unique subscriptions). By contrast, the current penetration rate of fixed-line telephony is about 2%

(Wansink 2018).¹ What was once an inefficient state monopoly that serviced a small number of urban residents became the monopoly of a foreign company that was embraced as a champion of the people. The promise of development so closely associated with the post-independence PNG state had been redeemed, as it turned out, by a firm 94% owned by one billionaire, Digicel's Irish founder and chairman, Denis O'Brien, who resides in Malta for tax purposes.

How do Digicel officials tell the story of the so-called mobile or digital revolution that followed upon the liberalization of the telecommunications sector in PNG? O'Brien himself often attributes the company's success to its infrastructure. Digicel's rural cell towers made it possible for wage-earners in town to call relatives in the village, who could also receive airtime credits from kin through an innovative and cheap phone-to-phone transfer. In a 2018 interview with *Business Advantage PNG*, O'Brien reflected on his company's US\$850 million investment:

We launched in 2007. It was our most challenging network build because the (electricity) grid does not go everywhere. We have 1100 towers, of which only about 300 are on the (electricity) grid. We have to fuel our towers (ourselves) and provide fuel with helicopter drops every week. So, from a build point of view, it was the most difficult network that we have done. (James 2018a)

Compelling images of cell towers standing on remote mountaintops and colour-coded maps depicting coverage of almost the entire country's population appear in corporate promotional materials. These images, along with heroic accounts in business magazines of the hardships involved in keeping the network running (Condon 2008), testify to Digicel's undeniable accomplishment in making telecommunication services more accessible in PNG.²

In explaining Digicel's success, Denis O'Brien's story of market triumph and engineering prowess erases much that an anthropology of infrastructure seeks to make legible. Recent studies, in addition to their renewed emphasis on the materiality of stuff and the liveliness of non-human things, urge us to think of infrastructure as more than pipes, cables and roads.³ These studies, ethnographically rich and conceptually diverse, invite us to understand infrastructure as 'that assemblage of people, objects, practices and institutions on which both the realization and distribution of patterns of connectivity, movement, flow and presence are dependent' (Di Nunzio 2018). Similarly, the infrastructural turn in media and communication studies seeks to show how 'the material transport of information' in the form of audiovisual signals 'reframes traditional questions of media production, circulation, access, consumption, and policy and regulation' (Plantin and Punathambekar 2019:165). Such an approach attends to 'the myriad ways people encounter, perceive and use media infrastructure' (Parks and Starosielski 2015:7); and it highlights the contingency and unruliness of infrastructures – features that seem manifestly relevant to apprehending not only the technical and logistical challenges Digicel faced, but also the political circumstances in which mobile phones have become part of everyday life for many Papua New Guineans.

As Appel et al. (2018) persuasively argue, infrastructural assemblages furnish a stimulus and vantage point for looking anew at politics (see also Knox 2017b; Venkatesan et al. 2018). Their crucial role in distributing social goods that many people take for granted as the basis of everyday life – water, electricity, information – renders infrastructures peculiar

instruments of governance. On the one hand, infrastructures by definition imply connectivity to an extensive network; that is, infrastructures recede into the distance – a long and winding road or a line of telephone poles disappearing beyond the horizon at the ‘vanishing point’ (Knox 2017a). At any moment, attentiveness to and curiosity about powers, so to speak, that lie beyond the horizon – a distinctive feature of Oceanic, especially Austronesian, cosmographies (Sahlins 2012) – can bring infrastructures into view as matters of concern and public inquiry (Latour and Weibel 2005). Such moments of ‘infrastructural rupture’ (Knox 2017b) generate questions that can compel political modes of engagement. Does 5G technology pose unknown health risks? Are there more equitable alternatives to how infrastructures distribute the benefits of networked connectivity?

On the other hand, infrastructures extend into the private and intimate spaces of mundane existence – our kitchens and toilets and even, with mobile phones, our palms and pockets. This very immediacy and intimacy define infrastructures as sites of resistance and disruption, especially when they break down or become inaccessible. The capacity of infrastructures to deliver the prerequisites for everyday living is a measure of ‘the morality and ethics of political leaders’ (Appel et al. 2018:22). Misuse or neglect of infrastructures as well as breakdowns can precipitate crises of political authority and the unmaking and redefinition of political subjects (Appel et al. 2018:20).

Accordingly, I heed the suggestion to regard infrastructures as ‘unfolding over many different moments’ (Appel et al. 2018:17) – as never fully completed processes. As Simone (2012) cautions, ‘While infrastructure attempts to suture, articulate, or circumvent, its proficiency of engineering, substance of investment or institutional support does not guarantee that it will accomplish what it sets out to do’. This observation is particularly pertinent to many under-resourced Pacific Islands countries where failed infrastructure projects often materialize the state’s broken promise to its citizens (Ketterer Hobbs 2018:69). A processual view of infrastructure thus highlights the uneasy and contested relations among various human and non-human elements within the infrastructural assemblage. I ask, specifically, what are the political effects of these relations? That is, ‘how do infrastructures participate in and produce changing forms of the public and the private, of states and corporations, of citizens and consumers?’ (Appel et al. 2015).

Rather than assume the displacement of the state by the market, public interests by private ones, I seek to demonstrate how the provisioning and uptake of mobile phones in PNG obviate the binary distinctions upon which such an assumption rests (Collier et al. 2016; Park and Donovan 2016; Taylor and Horst 2018). I ask, then: How do citizens and consumers, states and companies (both private and state-owned) define the terms of their obligations to each other? How does the work of sorting out who owes what to whom – not to mention who is who – continually reshape the infrastructural assemblage (and thus the possibilities for communication) that enables and results from the proliferation of mobile phones?

In addressing these questions, an ethnographic approach to media infrastructure in PNG or elsewhere is likely to make visible the disputes, improvisations, and negotiations entrained by the sale, maintenance and use of mobile phones (Horst 2013). An ethnographic approach to infrastructure is perforce an account of a moral economy in the sense famously discussed by Thompson (1967, 1971; cf. Carrier 2018). Specifically, the moral economy of mobile phones implies a field of shifting relations among *consumers*, *companies* and *state agents*, all of whom have their own ideas about what is good, proper and just. These ideas inform the ways in which, for example: consumers acquire and use mobile phones; companies market and sell voice, SMS (text messaging or ‘Short Message Service’) and data subscriptions; and state agents regulate both the everyday use of

mobile phones and the market activity of licensed competitors. Ambivalence, disagreement and ongoing discussion about who owes what to whom are integral features of the moral economy of mobile phones.

MATTERS OF CONCERN AND THEIR PUBLICS

Companies, consumers and state agents impinge upon each other in ways that make it difficult to consider any one actor apart from the others. Telecommunications companies may not operate without state-issued spectrum licences; consumers cannot operate their mobile phones without registering their subscriber identity modules (or SIM cards), a requirement that states oblige companies to enforce; states count on the revenue of taxes and fees collected from companies; and so on. I therefore propose to highlight the various interfaces (company/consumer; state/consumer; state/company) of the moral economy of mobile phones in PNG by taking up two different matters of concern, each of which configures and produces socio-material relations with specific political effects. These matters of concern highlight how Digicel's infrastructure has provided a new medium of public address or, more precisely, a new medium for calling potential publics into being (Warner 2002).

Publics, understood as affiliations performed by attempts to hear themselves and make themselves heard on a particular subject (Warner 2002), often emerge around negative corporate externalities, the costs of a company's doing business passed on to third parties who have no control over the creation of these costs (see Foster 2008). Accordingly, I first consider the relationship between Digicel and its mobile phone customers, most of whom purchase the company's services through prepaid subscriptions that are renewed more or less frequently when credit runs out. Many users purchase scratch (or 'flex') cards from street vendors, enter the code associated with each card in order to recharge or 'top up' their balance, and then buy bundles of data or other services which can be accessed for periods of time ranging from one hour to one month (see Foster 2018). Digicel customers worry about not only the rates they are charged for airtime and data, but also the accuracy with which Digicel keeps track of a customer's usage and deducts credit from a customer's balance. In effect, users voice concern over what Maurer (2017:170) calls the 'infrastructure of value transfer' or payment, 'the portals, rails and plumbing, and fee-based business of relaying value through that plumbing'. Infrastructure thus becomes an object as well as a medium of public address. This matter of concern manifests itself in concentrated form on a Facebook page called Digicel Complaints Group (DCG).

The second matter of concern foregrounds the role of state agents in media infrastructure and the moral economy of mobile phones. Mobile phone users question the ways in which the PNG state has required Digicel and other mobile network operators to enforce registration of SIM cards, legislation for which was enacted in 2016. They also question the ways in which the PNG state has attempted to regulate the online speech of citizens through the introduction of cybercrime legislation. Critics view such legislation as a thinly veiled attempt on the part of the government to quiet and inhibit dissent. Social media platforms – Facebook first and foremost – have become the preeminent means for disseminating these critical views.

By considering matters of concern that gather publics around them (Latour and Weibel 2005), it is possible to assess the promise of improved telecommunications to make government in PNG more accountable and transparent (see Cave 2012; Logan 2012). The publics called into being reveal how media infrastructure-in-process entails struggles over both market reform and political reform in PNG. They also reveal the limitations of new forms of

communication *via* social media for political change. On the one hand, these limitations derive from material constraints – including financial ones – on access to social media in PNG. Digicel Complaints Group is a reminder of the challenges faced by people in developing countries ‘after access’ (Donner 2015), namely, the frequently unmet basic conditions (such as a charged phone battery) that must be secured in order for people to use social media even when inexpensive smartphones and 3G networks are available.

On the other hand, these limitations derive from the uncertain prospects of translating grievances posted online into direct action, that is, of enacting a kind of consumer-citizenship in which people in their roles as market actors appeal to both companies and state agents for justice. This uncertainty is reflected in the rhetorical style of DCG contributors who, for example, often remark ironically on the pointlessness of making complaints that are not even addressed to Digicel, which maintains its own Facebook page. Nor is the bad joke of purchasing data from Digicel in order to complain about Digicel’s services lost on anyone. The cynicism and black humour expressed on the DCG page might thus lead one to conclude that the only political effect of mobile telecommunications and social media in PNG is resignation (Benson and Kirsch 2010). The evidence, however, of digital activism elsewhere on Facebook suggests the possibility of a more transformative politics incubating within PNG’s emergent media infrastructure. It would be premature if not plain wrong to assert that increased access to networked media has resulted in the ‘foreclosure of politics’ (Dean 2005).

This discussion of the political effects and affects of media infrastructure in PNG draws upon collaborative multi-sited ethnographic research carried out intermittently between 2014 and 2018 in PNG (Port Moresby and Goroka) and Fiji (Suva), where Digicel also operates.⁴ The research involved interviewing company executives from Digicel and its competitors; consulting with government officials, including telecommunications regulators; and surveying ordinary consumers in order to elicit their diverse perspectives on the use, sale and regulation of mobile phones. Our specific methods generated materials for analysis that include: notes from semi-structured and open-ended interviews; diaries of mobile phone usage; observations made in retail shops and other public places; print and digital marketing materials from mobile phone companies; policy documents; newspaper stories; photo essays; and samples of social media use, especially with regard to public criticism of mobile network operators, on the one hand, and the government agencies responsible for regulating these companies, on the other. Our project documents the social circumstances and consequences of the spread of mobile phones after the governments of Fiji and Papua New Guinea – like other governments in the region (Meese and Chan Mow 2016) and elsewhere in the global South (Doron and Jeffrey 2013) – moved to liberalize their telecommunications sectors.

DIGICEL COMPLAINTS GROUP: THE OPACITY OF INFRASTRUCTURE

The rapid uptake of smartphones in PNG marks the latest development in the evolution of media infrastructure. A Digicel official in 2016 (personal communication) reported that approximately 800,000 mobile subscriptions were for smartphones; it was almost one million two years later (Highet et al. 2019). Significantly, these smartphones are the primary means for most people to access the Internet. Hence the remarkable growth in the last several years in the number of Internet users in PNG – from under 2% in 2010 to 11.75% at the end of 2018 (Highet et al. 2019).

The ability to use social media has been found in Kenya to be an incentive for acquiring a smartphone (Wyche et al. 2013). In PNG, Digicel and its only effective competitor, the state-owned enterprise bmobile-Vodafone, have stimulated demand for both

smartphones and social media in several ways. For example, in 2015 Digicel introduced social media passes that came with free access to Facebook and Twitter even after one's data had been used up. In 2016, Digicel introduced Facebook Free Mode while bmobile-Vodafone began offering subsidized smartphones at attractive prices for members of the savings and loan society attached to the National Superannuation Fund.⁵

Accordingly, there has been a steady rise in the number of registered Facebook users in PNG, estimated at 750,000 people in a country of some 8 million (Highet et al. 2019). Digicel PNG's Managing Director Mobile Shivan Bharagava claimed in 2016 that an astounding 98% of Internet traffic to Facebook is from Digicel customers (More people use Digicel to access Facebook 2016). Some of these users put the new media in service of recognizably old purposes. Take, for example, the handsome portrait of a pig that my friend Cletus, a senior government bureaucrat, wished to sell: genuine enquiries only. (Fig. 1) (Pigs are of course valuable throughout the country for use in marriage payments, homicide compensations, and mortuary feasts.) But many Facebook users in PNG do much the same thing that people everywhere do – post selfies and baby pictures; send birthday greetings, prayers and jokes; keep up with friends and news; and so forth (see Logan and Suwamaru 2017). That is, they use social media for entertainment and leisure rather than anything that resembles 'development' as imagined in Information and Communications Technology (ICT) policy circles (Arora 2019).

All of this restless activity presumes that one's connection to Digicel's network is operating as expected. Indeed, Digicel's success story hinges on the assumption of frictionless relations between consumers and the mobile network operator – a harmonious infrastructural assemblage blissfully brought about by the end of the state's monopoly on providing telecommunications services. This assumption brings us back to the Digicel Complaints Group (DCG), a public Facebook group that functions as a forum for mobile phone users who purchase airtime from Digicel, the dominant mobile network operator, to register dissatisfaction with the services for which these users are paying. In 2016 – just as smartphone sales began taking off in urban areas – the group claimed more than 43,000 members. These members, judging by their posts in both English and Tok Pisin, are largely school-educated urban men

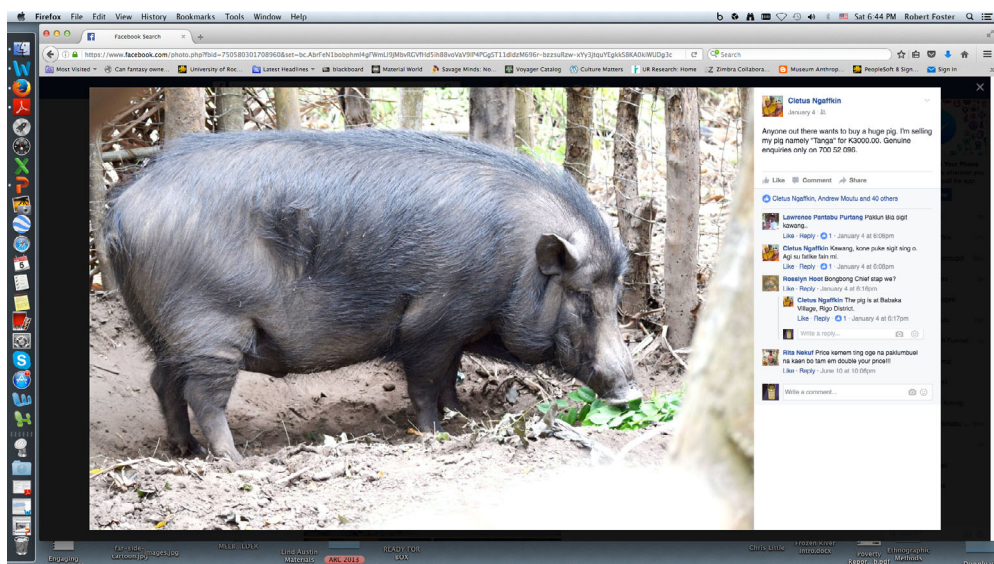


Figure 1: Cletus's pig for sale, 2016. [Color figure can be viewed at wileyonlinelibrary.com]

and women with the financial resources required for regular use of a smartphone. They constitute an important public in PNG, but certainly not ‘the public’ in a country where the majority of people are rural and poor, and the literacy rate for people aged 15 years and above was about 62% in 2010 (United Nations Development Programme 2019).

DCG was established in order to record complaints that might be brought to the attention of not only Digicel but also various regulatory agencies of the PNG state, such as the National Information and Communication Technology Authority (NICTA) and the Independent Consumer and Competition Commission (ICCC). Its mission statement (<https://www.facebook.com/groups/616553288483026/>) exhorts followers: *Air all your complaints in this group so we can keep a track of complaints against Digicel (PNG). Also to get their attention and that of responsible regulatory bodies such as ICCC, NICTA and the PNG Government to take action on unethical and unfair business practices.* The group has also functioned as a place to share tips and advice on mobile phone use, including news about promotions and ideas about how to work around the constraints of managing prepaid subscriptions (see Foster 2018).

DCG members are particularly concerned about the conversion of prepaid airtime into data and the allegedly dubious ways in which Digicel adds and subtracts data from an individual’s balance. Complaints often address the failure of credits to appear on a person’s phone after a purchase has been made or the disappearance of data from a person’s balance even when the phone is not in use. Cletus’s February 27, 2016 complaint to the group is fairly typical:

At exactly 11am today, I entered two K5 flex numbers: 01 7249 490 5910 & 16 2662 659 3637. At exactly 11:14am, Digicel sent me two messages - 1. Advised that I have used up my data and 2. Asked whether I need airtime of K13 advance. I immediately checked my balance only to see K5.03. I texted Digicel and 5 minutes I was reimbursed [sic] K3 and not the whole K4.77. What a day light robbery!

A 25 November, 2019 post from Maggie Begava similarly complains:

Digicel, please give my credit back. This is not fair. I already paid for social pass n yet you took away all my remaining credits (K9.00) in my phone. Give it back 😊. Sick off [sic] this. This is not tge [sic] the first time.

Maggie’s post elicited 22 comments, ranging from ‘I am experiencing the same. That is stealing’ to exhortations to switch to bmobile or Telikom.

Group members sometimes post screenshots of the before-and-after balances on their phones as evidence of stolen data. Martyn Namorong, a prominent PNG netizen (Capey 2013), even created a YouTube video in 2015 titled ‘Watch how Digicel PNG is ripping us off’, in which he demonstrates the mysterious disappearance of both data and credit from his phone within minutes of topping up (<https://www.youtube.com/watch?v=W5e3Hds4IIM>, accessed 5 July 2019). Such accusations of robbery and theft, of being ‘ripped (off)’, are frequent reminders of Thompson’s (1971) well-known account of the protests that erupted as a moral economy of food provision gave way to practices and principles associated with ‘free trade’ in eighteenth century England. These protests, which often led to direct action, appealed to notions of a just price in the face of concerns that the poor suffered at the hands of those with ‘command of a prime necessity of life’. Much like the folks about whom Thompson wrote, DCG members express intense feelings over ‘weights and measures’ and beseech the authorities – NICTA and ICCC – to regulate business transactions.

More generally, complaints signal a failure on the part of the company to meet its obligation to treat its customers fairly. For example, many group members made it clear that they thought Digicel's announcement in September 2016 that the company was now charging voice calls at 1 toea per second at all times to be deceptive. While the new rate lowered the previous peak rate of 79 toea per minute, it actually raised the off-peak rate from 49 to 60 toea per minute. In 2018, one complaint to the group focused on the wide disparity between data prices in PNG and Fiji. (Fig. 2) One commenter on this post speculated darkly that Digicel is 'able to go cheap in other markets because their PNG business makes enough money to subsidize and support their operations in the rest of the Pac[ific] islands'.

A high-ranking marketing executive confirmed that Digicel is aware of the Facebook complaints and in fact worried about the mistrust that they evince (personal communication). Digicel employees (and bmobile-Vodafone employees, too) have posted to the DCG page on occasion, directing complaints to Digicel's own official Facebook page. One Digicel manager shared a comment that reminded the group of what life was like before the company entered PNG:

We complain too often about charges and services but how would your life be if Digicel had never come to PNG? What was the Governments blueprint in developing connectivity with the remotest of parts in PNG and using that as an instrument to deliver lifesaving services to remote parts of PNG??

But the company's primary response has been to encourage personal responsibility for monitoring data usage, issuing newspaper advertisements that instruct mobile users on how to save data by turning off the auto sync function and restricting background data. In 2015, Digicel established 'smartphone clinics' at select retail outlets in order 'to ensure customers are equipped with the best tips and tricks for saving their data' (Clinics providing tips for



Figure 2: Comparison of data plans in Fiji and Papua New Guinea, 2018. [Color figure can be viewed at wileyonlinelibrary.com]

smartphone customers 2015). The fact that there appeared to be less activity on the DCG page in 2018 than in 2016 suggests that such consumer education, however acquired, might have helped to reduce the volume of accusations made against Digicel.

Nevertheless, some group members go to considerable lengths to demonstrate that the real problem is corporate irresponsibility bordering on consumer fraud. For example, in a widely circulated 2015 blog post, Bryan Kramer, an attorney and founding administrator of the DCG page, discussed one the company's billing practices to which I myself fell victim: out-of-bundle charges. (Fig. 3) Most users at the time purchased a bundle of data valid for a

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[Is Digicel Stealing From Its Customers?](#)

Digicel

The Bigger, Better Network.

Or Stealing from its Customers??

By BRYAN KRAMER

I have observed countless comments on social media over the past twelve months by individuals accusing Digicel stealing from them. However they couldn't really explain why or how it was being done. I also noted a number of ir where credits on my own phone seemed to vanish into thin air. So I decided to take time out from my rather busy : exposing and deposing corruption of public funds to look into whether there was any truth in the allegations that D

Figure 3: Bryan Kramer's 2015 post about Digicel's billing practices. <https://news.pngfacts.com/2015/10/is-digicel-stealing-from-its-customers.html> [Color figure can be viewed at wileyonlinelibrary.com]

specified period – for example, 300 MB for 72 hours. When that bundle expired, however, a user would be charged at the very expensive out-of-bundle rate of 49 toea per MB. It was up to the user to keep track of when the bundle expired; many users did not, and as a result saw the entire balance of airtime on their phones disappear. In his post, Kramer noted that Digicel had ended this practice, instead now warning a customer that their bundle would soon expire and that, unless the customer had opted out, the data bundle would automatically renew. Kramer insisted, however, that Digicel refund customers whose consumer rights were violated and he threatened to initiate a class action lawsuit if his demand was not met.

Kramer's post points to one of the problems that beset users of pre-paid data subscriptions (that is, pay-as-you go arrangements for purchasing data), namely, 'the lack of transparency about units and experiences' (Donner 2015:127). As Donner (2015:127) notes: 'With voice calls and SMS messages, on the one hand, users can pay by the minute or message, and have a sense of how their behavior maps to expenses. With data, on the other hand, prepay users purchase some aggregation of mysterious bytes'.

There is another layer of opacity here, apart from the general confusion and murkiness associated with online payment systems (see Maurer 2017). In Papua New Guinea, Digicel contracts with Oceanic Communications Ltd, a privately-owned New Zealand-based firm, for services that include 'sales and distribution of mobile top-up scratch cards, SIMs, and mobile phones' and 'electronic Voucher Distribution of mobile top-up' (<http://www.oclgroup.co.nz/our-brands/>, accessed 15 July 2019). That is, Oceanic is responsible for the payment platforms on most mobile phones in PNG. Hence the comment made in 2014 by Oceanic's director, Locky Holland:

If you are in Papua New Guinea and you see a guy in the middle of the jungle selling a single cigarette, a can of coke and a top-up card – he's our guy. We get right down to that distribution level. That is what Oceanic does. (<https://www.stuff.co.nz/technology/60084439/>, accessed 15 July 2019)

Although the street vendors who sell electronic top-up and scratch cards know Oceanic well because they must purchase their supplies at discount directly from the company's agents (see Foster 2017), few mobile users in PNG, including those who complain to fellow DCG members, are aware of Oceanic's existence. The company's pivotal position in PNG's media infrastructure is hidden in plain sight (*cf.* Parks 2009).

The opacity of data charges contributes to what Benson and Kirsch (2010) call a politics of resignation in which group members largely express an inability to change things – their agency constrained by the terms and conditions of their online lives. Some DCG members do appeal for help to NICTA and ICCC – agents of the state that initially failed in meeting its obligations to provide an efficient and affordable telecommunications service to the people of PNG. But many other posts take up a position of ironic distance and communicate a 'general feeling of disempowerment' (Benson and Kirsch 2010:460) – a sense of resigned inevitability of the sort conveyed with a shrug by the American term 'whatever': 'The everyday politics of resignation implies recognition not only that things have gone awry but also that one is practically unable to do anything about it' (Benson and Kirsch 2010:468). For example, after claiming that Digicel is not monitoring the DCG page and referring complainers to the company's own Facebook page, posters drolly liken the group to a *haus krai*, the Tok Pisin phrase for a wake or gathering of mourners.

To be sure, Digicel Complaints Group often resembles a community of suffering to which members vent their frustrations with zero expectation of redress. But it is worth noting, as Benson and Kirsch (2010:468) remind us, that resignation is not the same as

conformity or compliance. Complaints about disappearing data and miscalculated balances, as Maurer and Swartz (2017:xx) observe, can raise bigger questions:

Opening up payment opens up questions of the unit of account, of how accounts are reconciled, of the authority authorizing account reconciliation. Is it the state? A private entity? The people or a community?

That is, resignation implies a withholding of consent to the status quo, which implies, in turn, that the media infrastructure in PNG might generate other political effects and affects besides insouciant complacency.

CONSUMER CITIZENSHIP, DIGITAL ACTIVISM AND POLITICAL CHANGE

What can we infer from Digicel Complaints Group about how media infrastructure functions as both a vehicle for and object of political contestation? First, the public that DGC brings into being is a public of affiliated individuals who gain access to social media only as private consumers. By contrast, other media such as state-run broadcast radio might configure a public differently as, for example, an imagined community of national citizens (Anderson 1991). Bryan Kramer's intervention, however, suggests that social media also fosters a kind of citizenship. The mobile phone in PNG – certainly the most expensive widely owned commodity in the country – has become an instrument for a politics of consumer-citizenship in which people invoke and engage the state as their protector from unfair business practices. When the state fails in its duties, then consumer-citizens take it upon themselves to find alternative remedies for their complaints, including not only lawsuits, but also non-governmental or market remedies such as boycotts (see Foster 2008). Conversely, corporate actors can engage consumer-citizens through philanthropic initiatives and other forms of corporate social responsibility (CSR) (see Dolan and Rajak 2016). In PNG, the Digicel Foundation offers health and education services of the kind usually associated with the state. Corporate citizenship and consumer citizenship are thus mutually entailed by the moral economy of mobile phones.

Consumer-citizenship, however, was not what some observers had in mind when they spoke of the promise of mobile phones for political change. Instead, researchers cautiously envisioned a more transparent and accountable form of democratic governance due to more expansive and inclusive information flows (Cave 2012; Logan 2012). Social media, in particular, would presumably give private citizens and non-state actors the capacity to shed light on ineffective service delivery and rampant corruption. Are there any signs of this promise being fulfilled?

As early as 2009, with the launch of the Namorong Report (Capey 2013), Facebook groups and blogs reported and circulated news about alleged government malfeasance and failure of service delivery (see Logan and Suwamaru 2017).⁶ The rapid spread of smartphones since the launch of Digicel Broadband in 2011 has accelerated the velocity of circulation and made news more accessible to more people. Social media in PNG abounds with posts and tweets that, although not always accurate, criticize both government policy and individual politicians. Even some users of basic handsets – government officers working in provincial and district treasuries – can anonymously report cases of corruption through a text-messaging service set up by the PNG Department of Finance with the support of the Australian Government and the United Nations Development Program (Watson and Wiltshire 2016).

The use of social media to organize, witness and document political protest first occurred in a big way in 2012 when for a brief, strange and tense period two different men claimed to be the prime minister of Papua New Guinea (see Cave 2012:12; Cranston 2013;

Logan and Suwamaru 2017). In 2016, a public protest that led to a tragic confrontation with police and the shooting of several university students was well documented on Facebook and other social media platforms. International news reports now re-circulate images grabbed from social media in PNG, thus amplifying their effects as testimony to current events in a country where few foreign correspondents are based. The Twitter handle of a PNG woman I had met the year before appeared on a video of the 2016 shooting that accompanied a *Guardian* article describing the incident. This woman, an attorney educated in Australia who works and resides in Port Moresby, regularly uses her Twitter account and two iPhones to comment provocatively on local politics.

It is, however, important to note again the limitations that temper the promise of social media as a tool for political change and legal reform. First, the material preconditions for using social media in PNG can be difficult to meet; that is, inclusion in the infrastructural assemblage is unevenly available. A charged battery and reliable connection to the network can hardly be taken for granted by everyone. Most people, moreover, have to pay to use social media in PNG, which remains one of the most expensive places on the planet for purchasing data – a fact often noted in the sometimes vulgar comments on the DCG page. Even Facebook Free Mode, it turns out, was not free for long. Having introduced the service in July 2016, Digicel announced in October that Facebook Free Mode would henceforth only be available to users who top up their airtime balance by three kina – and then it would only be valid for two days. Some complainers speculated that Digicel introduced Free Mode in order to get people addicted, at which point the company began charging fees for access.

There are discursive limitations as well. Social media, as previously noted, can format political expression as a genre of resigned, often ironic, commentary. For example, in July 2016 a photo of the Speaker of Parliament, distracted by his smartphone in the middle of an unsuccessful vote of no-confidence against Prime Minister Peter O'Neill, was posted to one of the popular Facebook news groups. (Fig. 4) It elicited more than 800 comments responding to the question 'What was he doin?'. The responses included: checking his balance, texting the prime minister, phone banking, watching porn, and playing Pokemon Go. Finally, after four days, one commenter called for an end to the commenting and suggested that people stop wasting their time and wait until the next election when they could vote for a change of government.⁷

This sort of intervention is not uncommon on news groups, and it is certainly a familiar feature of the Digicel Complaints Group that calls attention to the uncertain relationship between online and offline action. Sooner or later, after a long string of complaints about missing credits, someone will remind the group not only that Digicel is not listening, but also that Digicel is actually making money from all these complaints. (Fig. 5) And this sort of comment is inevitably followed by the suggestion that everyone quit spending their time complaining about Digicel and simply switch to bmobile-Vodafone. Such is the slippery slope of consumer-citizenship, whereby collective political initiatives devolve into individual market decisions (or yet one more moment in the politics of resignation). Appeals to the state to act on behalf of its citizens shade into an effort on the part of these citizens to regulate a company by means of a lawsuit that, in turn, shades into a plea to change mobile network providers.

Logan (2012) has suggested that when the increased transparency afforded by social media is coupled with a continued lack of government accountability, the net result is cynicism. Thus, for example, social media was useful during the 2017 national elections in documenting the failure of officials to turn up at polling stations, the inability of voters to find their names on the electoral rolls, and the practice of clearly underage 'voters' casting ballots. All these acts of witnessing were not enough, however, to prevent the return of the same government and the same politicians so regularly and roundly decried online in forums



Figure 4: Commentary on speaker holding mobile phone, 2016. [Color figure can be viewed at wileyonlinelibrary.com]

such as Digicel Complaints Group. Nevertheless, it has become increasingly apparent that certain state agents in PNG perceive the promise of social media as an instrument of political change to be a clear and present danger.⁸ The resignation of Prime Minister Peter O'Neill in May 2019, called for and celebrated by many online critics, suggests that this perception is not unwarranted. O'Neill's resignation and the response to it by some of PNG's most prominent Facebook warriors cast doubt upon the efficacy of recent state actions in controlling the political effects of an evolving infrastructural assemblage.

BEYOND RESIGNATION:
GOVERNING THE INFRASTRUCTURAL ASSEMBLAGE

The explosive growth in use of social media in PNG in recent years has not been accompanied by an obvious proportional increase or qualitative change in offline political activity. Martyn Namorong, when I spoke with him in 2015, wondered about the connection

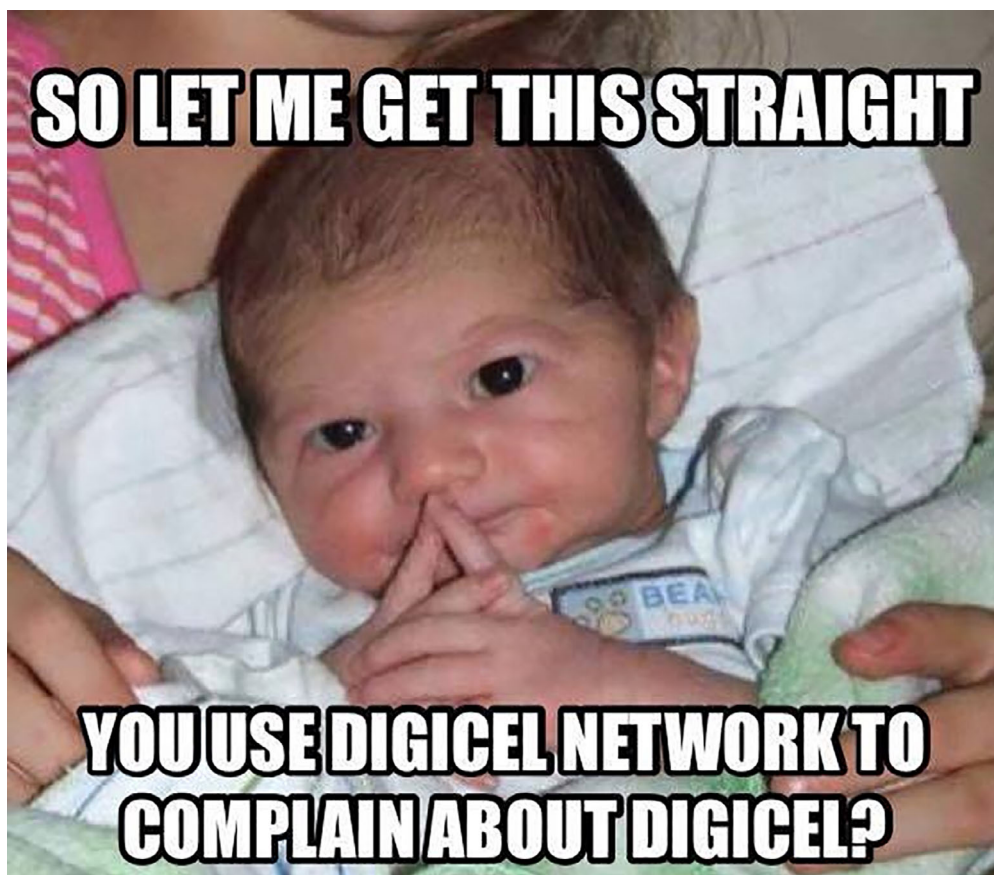


Figure 5: Ironic post to Facebook page of Digicel Complaints Group, 2016. [Color figure can be viewed at wileyonlinelibrary.com]

between the online and offline worlds. He felt that the capacity of online communication for organizing offline protest – what he initially saw as the promise of social media – was actually greater in 2012. Back then, mobile phones were used to organize and coordinate offline action through text messaging and voice calls. After just a few years, Namorong proposed, social media had become an end in itself rather than an organizational tool for activists.

It is worth noting that Namorong, whatever his doubts in 2015, has continued to be an outspoken critic on social media in PNG. His online activity, moreover, has caught the attention of major international news outlets such as *Al-Jazeera* and *The Guardian*, to which he has supplied interviews. Despite the emergence of a species of resigned political discourse à la Digicel Complaints Group, it would be wrong to make an invidious distinction between a hermetically sealed online pseudo-politics and a ‘real’ on-the-ground politics. Indeed, Bryan Kramer, who helped launch DCG, was able to use social media as a platform upon which to run successfully for election to parliament in 2017 as a representative from the town of Madang. His Kramer Report on Facebook claimed 100,000 followers in July, 2018. Nor did his election as member of parliament precipitate a turn away from strategic consumer-citizenship. In 2018, Kramer used social media to mobilize a public around the boycott of PNG’s two major newspapers on the grounds that the country’s print media has failed to report truthfully and effectively on government malfeasance. Kramer has continued

to use social media as a vehicle for challenging government policies, and he was both an important online witness to and engaged participant in the opposition that led to the resignation of Prime Minister Peter O'Neill.

In short, politics as usual has been enmeshed in and reconfigured by the changing media infrastructure in PNG. Gary Juffa, Governor of Oro Province and, like Bryan Kramer, a vocal critic on social media of the former prime minister and his policies, could thus proclaim in a post to his Facebook page:

Social media and especially FB has allowed the masses to influence political outcomes.

I do believe that there will be a future where the advanced form of this technology combined with blockchain will ensure that only a minimalist elected leadership is required to run a nation.

A government of the people which is always controlled by the people for the people...

The new system combining technology and humanity would be an ideal Government where a real people's political machinery owned by the people runs the affairs of a nation for the people.

In such a time major political decisions can be made with the participation and consensus of the masses.

A true democracy will have arrived.

Juffa's hopeful vision reminds us, however, that new digital technologies are elements of both a moral economy and infrastructural assemblage shaped by corporate actors and state agents as well as 'the masses'. Facebook, like Digicel, is not 'owned by the people'; and online polling is not the same thing as adversarial electoral politics. The governance of media infrastructure in PNG is motivated by multiple interests and more than one vision.

Some of the state agents whom DCG members entreat to regulate Digicel have responded to the emergence of digital activism with initiatives to regulate the complainers. In 2016, two new related policies were enacted, one requiring all mobile phone users to register their Subscriber Identity Modules (SIM cards) and the other, so-called cybercrime legislation, stipulating harsh penalties for 'defamatory publication'. Critics of these initiatives were quick to voice concerns about the burden that SIM card registration would impose on rural residents who would have to travel to town in order to register as well as the dubious political motivations behind the new policies. In an interview with Radio New Zealand, Martyn Namorong expressed his concerns about provisions in the cybercrime law regarding 'cyber unrest':

You know, some of my blog posts are very provocative and could be interpreted as trying to undermine the state. I mean, is that sedition? It's very unclear whether some of the criticism of government could be interpreted as undermining the state. For instance, you use social media to talk about protesting or organising people to protest, is that undermining the state or undermining the government? (Fears of overreach with new PNG cyber crime law 2016)

Former PNG prime minister Sir Mekere Morauta was more forthright in his denunciation:

The Prime Minister's use of the NICTA Act to clamp down on freedom of speech and the media is an unparalleled abuse of power. The nation would seem to be moving step by step towards becoming a dictatorship. (PNG: Former PM criticises new cybercrime laws 2015)

NICTA issued a public announcement when the policies were first proposed in 2013 that asserted: 'Calls by certain sections of the community that the Cybercrime Policy and the SIM card registration Regulation are intended to police social media and to block criticism of government are unfounded and misguided' (NICTA 2013). In 2015, however, NICTA publicly reminded social media users of Section 266 of the NICTA Act 2009, which stipulates the punishments for a person who, by means of an ICT service:

Sends any content or communication that the person knows is offensive or of an indecent, obscene or menacing character, or;

- (1) For the purpose of causing annoyance, inconvenience or needless anxiety to another person – Sends any content or communication, that he/she 1. knows to be false, or;
- (2) Persistently makes use of that ICT service with that intended purpose, is guilty of an offence.

NICTA did eventually extend the deadline for SIM card registration twice, and then extended it again for people living in district-level towns and rural areas. On July 31, 2018 when deactivation of unregistered SIM cards finally began in major urban areas, more than one million cards had still not been registered (Vari 2018).

SIM card registration makes visible the contested interfaces of the moral economy of mobile phones. Consumers, whether for political or logistical reasons, were not the only ones who hesitated to comply with the government's intentions and NICTA's announcements: Mobile network operators were expected to bear the full costs of SIM card registration. During the public consultation period for the proposed legislation, NICTA had to negotiate with Digicel, the dominant service provider, over the terms of the registration policy. Initial plans to require biometric data from registrants were scrapped over the company's protests at the prohibitive costs involved (and alleged resistance on the part of some evangelical Christian Papua New Guineans to surrendering such data). One Digicel official explained to me that the labor costs of registration alone would be very high assuming that one employee would take at least five minutes to process the paperwork of each registrant. Other issues that had to be negotiated between NICTA and Digicel included the number of SIM cards that could be registered to an individual (initially two, eventually six) and, most importantly, who would own and manage the database generated by SIM registration (eventually, Digicel) and to what purposes (such as police investigations) might that database be legitimately put by state agents and by the mobile network operators themselves (such as targeted marketing).

As Amanda Watson (2018a, 2018b) has noted in her periodic updates on SIM card registration in PNG, the success of the process in countries that require registration has depended upon the effectiveness of national identity schemes. In PNG, the state's National Identification (NID) project, launched in 2015 and beset by allegations of corruption, had only registered a small fraction of the population by the time deactivation of SIM cards was first set to begin in January 2018. In effect, then, compulsory SIM card registration legislated that mobile network operators carry out a process that the PNG state lacked the resources to accomplish on its own. This inability of state agents to fix and record the

identity of PNG citizens was on display during the 2017 elections, when concerns over inaccuracies in the electoral rolls undermined the legitimacy of the voting. It was therefore not surprising when a Digicel executive privately speculated to me that the company would sell the database created by SIM card registration to the PNG government in light of the failure of the NID program.

A similar question attends the state's capacity to enforce its 2016 cybercrime legislation. In August 2016, the Minister for Communications and Information Technology, in an announcement on the Facebook page of the ruling People's National Congress party, 'called for civil legal action to be taken against online news sources who publish false and misleading information that costs millions of Kina in lost national investment, income and employment' (<https://www.facebook.com/peoplesnationalcongress/posts/-online-news-reporters-should-face-legal-action-for-misreporting-authorised-by-t/575162216020378/>, accessed 15 July 2019). The minister named offenders that included EM TV (a PNG broadcaster) and the Australian Broadcasting Corporation (ABC), but no lawsuits were actually brought.

In 2018, Papua New Guinea received rare international media coverage when Sam Basil, then communications minister, announced a one-month ban on Facebook. According to a report in *The Guardian* (Roy 2018), Basil told the *Papua New Guinea Post-Courier* newspaper:

The time will allow information to be collected to identify users that hide behind fake accounts, users that upload pornographic images, users that post false and misleading information on Facebook to be filtered and removed... This will allow genuine people with real identities to use the social network responsibly.

Both Basil and Prime Minister Peter O'Neill subsequently denied any government plans to implement such a ban. However, in May 2019, as momentum built toward a vote of no confidence against him, O'Neill announced a new initiative to regulate social media and to prevent the circulation of 'fake news'. The prime minister asserted: 'It is destroying our people and destroying our society. We've lived in peace and harmony for thousands of years without social media' (Elapa 2019). O'Neill focused his criticism on 'multi-billion dollar foreign companies' and on Facebook, in particular, for its role in the promulgation of false information.

The prime minister's announcement was met with immediate criticism from politicians and journalists. Governor Gary Juffa's rebuttal on Facebook was representative:

We are all subject to abuse and gossip and rhetoric and though we may be upset or hurt by it we need to ensure we protect the rights of our people to express themselves as that's an essential aspect of [what] democracy is about—freedom of speech. If we have issues we can report it to the Police or take civil legal action. (<https://www.facebook.com/juffa/posts/10155910867102134>, accessed 15 July 2015)

Sylvester Gawi (2019) likewise blogged: 'The fact is you can't control platforms where information is circulated, attempts to do such undermines the role of democracy and freedom that is enshrined under the constitution of our country'. In the event, nothing came of the prime minister's plans and his resignation ultimately rendered the whole matter moot, at least for the time being.

It remains uncertain what effect, if any, the new ICT policies might have on public discourse four years after their enactment. What seems clearer is perhaps a corollary to Logan's (2012) proposition that transparency without accountability breeds cynicism. That is, if the

ineffectiveness of state agents to eliminate corruption and curtail the abuse of political office promotes resignation, then the ineffectiveness of these same state agents to enforce censorship and surveil users enables and may even promote continued critique. Not only digital activists such as Martyn Namorong but also elected officials such as Bryan Kramer and Gary Juffa have resisted recurrent efforts to govern the infrastructural assemblage in ways that limit criticism of government. The unfolding of these efforts and counter-efforts – inevitable given the felt need in PNG as elsewhere to deal with the circulation of hate speech and disinformation through social media – constitutes the subject matter of an anthropology that treats media infrastructure as a never fully completed process.

CONCLUSION: EVIL INFRASTRUCTURE?

Chris Kelty (2016) has given the designation of ‘evil’ to infrastructures that ‘prohibit or frustrate participation rather than extend it, or that support inequality and racism rather than trying to neutralize it, or that facilitate closure rather than extending openness’. In PNG, the evilness – or not – of media infrastructure hinges on sorting out who owes what to whom; this sorting – never finished once and for all – shapes and reshapes how the infrastructural assemblage is both constituted and governed.

What do foreign companies owe to the citizens and governments of the countries in which they operate? In his comments about ‘multi-billion dollar foreign companies’, former prime minister O’Neill observed that Facebook was beyond the reach of PNG’s national courts:

They make revenue in countries like ours, but do not pay a cent in tax, and leave behind a lot of damage to communities. Facebook does not even have a local office in Papua New Guinea, and that is an indication of how serious they are about making a contribution to our country, and to properly manage the sensitive issues that we are raising.

As a responsible government, we must look at every avenue to keep our people safe.

A total ban on platforms like Facebook is not in the community’s interest, and is not feasible. But we will undertake a review of how these platforms operate in our country with immunity from our laws, and their negligence when it comes to public safety. (Elapa 2019)

O’Neill’s understandable concern about economic inequality and the fairness of corporate taxes might lie behind a provision announced in the 2019 national budget. According to Watson and Fox (2019), the government of PNG is considering a ‘turnover tax’ on mobile telecommunications companies that make above normal profits because of limited competition and use complex pricing schemes that are difficult for the Internal Revenue Commission to assess. Watson and Fox (2019) note that there appears to be no public record of how much corporate tax, if any, Digicel pays.

What do state agents owe the citizens upon whom the legitimacy of the government ideally depends? Madang MP Bryan Kramer filed motions twice in 2018 to delay the deactivation of unregistered SIM cards (see Watson 2018b, 2018c). He noted the hardship for remote village residents to travel to town for registration and argued that deactivation would deny rural populations access to two-way communications critical for dealing with medical emergencies and natural disasters. Kramer’s efforts to do no infrastructural evil were taken

up, on different grounds, by the Ombudsman Commission (OC), which in January 2019 filed a reference with the Supreme Court that challenged the constitutionality of SIM card registration. The OC questioned whether registration restricted ‘qualified rights and freedoms’ of Papua New Guinea citizens. By July, the case had been adjourned a few times for further directions. Digicel did not deactivate cards while it awaited the outcome of the OC’s case (Amanda Watson, personal communication). Finally, in December the Supreme Court of PNG declined to answer questions regarding SIM card registration, thereby making deactivation imminent for an estimated 40% of all SIM cards in use (Watson 2019).

What can be concluded from all these attempts to regulate companies, on the one hand, and state agents such as NICTA, on the other? The conceit that infrastructures remain hardly noticeable until they break down never made much sense in places like Papua New Guinea where power and water outages not to mention unpassable roads are normal. It makes even less sense in the case of media infrastructure, but not because cell towers and handsets and fibre optic lines all operate in the background with smooth efficiency, as Digicel Complaints Group members never fail to note. Rather, it is because the new technology of mobile phones is more accessible to more people than electric power or indoor plumbing. Mobile phones have quickly become an integral feature of everyday life – the public focus as well as material means for defining and debating obligations between citizens and state agents, consumers and companies. These obligations range from selling services at a just price to guaranteeing fundamental democratic rights. Paying attention to the moral economy of mobile phones thus becomes a productive if not mandatory strategy for apprehending the political effects of a rapidly changing infrastructural assemblage.

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NOTES

1. See Hobbis 2019 for a review of the spread of mobile phones elsewhere in Melanesia; see Foster and Horst 2018 and Ketterer Hobbis 2018 for additional references to the anthropological literature on mobile phone usage in Melanesia.
2. Digicel Pacific’s regional director, Paul Statham, noted that in PNG: ‘At least 10 per cent of our towers are only accessible by helicopter. The (rest) tend to be very difficult to get to for a variety of reasons. There are very complex social arrangements, particularly around landlords—but Digicel has done it. Last year [2017], we invested over \$US45 million (PGK147m) in upgrading the network; looking after it and maintaining it. It has delivered a sustainable infrastructure that will deliver a connected economy’ (James 2018b).
3. A very small sample of the burgeoning literature includes: Larkin 2013; Starosielski 2015; Collier et al. 2016; Harvey et al. 2016; Anand et al. 2018.
4. This article builds upon the conceptual framework of a collaborative research project designed and conducted with Professor Heather Horst (University of Sydney/RMIT University). Our project, funded by the Australian Research Council (DP140103773), is called the Moral and Cultural Economy of Mobile Phones in the Pacific. It involves historical and ethnographic research in Papua New Guinea and Fiji organized in terms of a comparative study of relations between and among companies, state actors and consumers (see Foster and Horst 2018).
5. In August 2019, bmobile announced the end of a non-equity partner market agreement with UK-based Vodafone Group originally signed in 2014.

6. See, for example, the following Facebook groups: Sharp Talk, created 2011 (<https://www.facebook.com/groups/Sharptalk/>); PNG News, created 2012 (<https://www.facebook.com/groups/326819464091972/>); Act Now!, created 2009 (<https://www.facebook.com/groups/326819464091972/>). See also Logan and Suwamaru 2017.
7. 'Havnt u guys had enough of commnting? Save ur energy already and stop commenting. Toktok ose tru pa'a blo upla ya readim sta hahahahaha get real... Stop eaisting ur time na wait after 9 months by upla vote. Now please enough ya'.
8. For accounts of digital activism under conditions of tight media restrictions in other Pacific Islands countries see Titifanue et al. 2016 and Brimacombe et al. 2018.

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