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A GRAND CHALLENGE FOR DEVELOPMENT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

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IDS Institute of Development Studies

RESEARCH REPORT

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RESEARCH
REPORT

The techno-centric gaze: incorporating citizen participation technologies
into participatory governance processes in the Philippines

Contents

Summary

In recent years, government and civil society organisations have increasingly deployed digital tools in their efforts to increase the participation of citizens in various aspects of governance. The term 'civic tech' is often used to describe this at the city governance level; however, as this research also considers initiatives that aim to extend citizen participation in global, national and corporate governance, we use the term 'citizen participation technologies'. Examples of such technologies include interactive government websites, open data portals, online participatory budgeting platforms and text and instant messaging tools.

Much of the existing research on citizen participation technologies takes the technology as its starting point, focusing primarily on the identification and analysis of technical barriers to adoption and assessing opportunities for technical improvements. We argue that this techno-centric gaze obscures non-use and the reasons why many citizens remain excluded. Instead, this research adopts a human-centric approach, selecting specific user groups as case studies rather than specific technologies, and identifying the contextual social norms and structural power relations that explain the use and non-use of citizen participation technologies.

Qualitative data gathered from semi-structured interviews and focus groups are interpreted through the five A's of technology access and the conceptual lens of the Power Cube, to ask: which forms of power, operating at which levels, and in which sorts of spaces, affect the use and non-use of citizen participation technologies?

Key themes in this paper

- Power and participation
- Digital technologies and ICT4D
- Civic tech

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

Introduction

In recent years, there has been a global proliferation of digital governance initiatives that aim to enable citizens to make their city or local government more open, transparent and responsive. By digital governance, we mean the use of digital information and communication technologies (ICTs) to create or enhance the communication channels that facilitate the interaction between citizens, government and the private sector (Haikin 2016). This research is concerned with the use of citizen participation technologies in digital governance initiatives in the Philippines.

The term 'civic tech' is widely used to refer to the use of digital technologies to extend citizen participation in city governance. As this research includes a wider consideration of citizen participation – in village, national and corporate governance – we use the broader term 'citizen participation technologies'. These include, but are not limited to, mobile applications (apps), websites, online portals, and SMS and instant messaging platforms.

Their popularity in digital governance initiatives is based on the claim that they enable citizens to monitor, intervene and influence the governance processes that affect their lives, and to do this remotely. Citizen participation technologies have the potential to allow citizens to monitor government performance; to access government data; to make freedom of information requests; to report issues needing attention; to check representatives' voting records; or to contribute to policy and budget discussions. Established examples of digital governance initiatives include IPaidABribe,[1] FixMyStreet[2] and BudgIT,[3] which focus on corruption reporting, service deficiency reporting and budget transparency initiatives respectively; these were all created by citizens.

This report forms part of the wider Making All Voices Count programme of research into the expanding citizen use of digital technologies to monitor and influence governments and corporations, as well as moves towards technology-mediated forms of more participatory governance. In pursuing this research, Making All Voices Count has focused on eight African and four Asian countries, funding over 100 projects and studies in which digital technologies are applied to promote transparency, fight corruption, empower citizens and harness the power of new technologies to make government more effective and accountable.

The research covered in this paper reviews a selection of citizen participation technology initiatives in one of Making All Voices Count's priority countries: the Philippines. The Philippines is a particularly appropriate place for research on citizen participation technologies, as it has a unique history of civic engagement in governance and is at the forefront of the uptake of many digital technologies. Once known as the 'text messaging capital of the world' (Text Engine nd), the Philippines more recently became the 'Facebook capital of the world' (Chaffey 2017) and is currently the country with the fastest-growing number of Internet users in the world (Shadrach 2017).

The role played by the Philippines' 'Generation Text' was crucial in mobilising citizens to end the rule of President Joseph Estrada during the People's Power II uprisings (Rafael 2003). When President Estrada was eventually overthrown, he famously blamed the 'text messaging generation' for his demise. Filipinos are evidently adept at applying their advanced digital capabilities to address failings in governance, and they are currently using a wide range of innovative digital technology applications to increase their participation in governance.

Our initial desk review suggested that, given the high levels of digital adoption and public engagement in governance issues, we might expect to find significant traction for citizen participation technologies in the Philippines. However, our literature review suggested that existing research was often techno-centric, asking users why they use a certain technology and how it can be technically improved. This is, of course, a valid and illuminating line of research, which we in no way seek to devalue, but it leads to a focus on the technical barriers to adoption – at the expense of the social and political barriers. To address this gap and shift the focus away from the technology, we avoided the common practice of focusing our case studies around specific technologies. Instead, we identified three opportunities to engage with case studies of citizen groups engaging in governance issues in the areas of: (1) participatory budgeting; (2) participatory school management; and (3) popular oversight of extractive industries.

The research was conducted over six months in 2017, and involved desk-based research in the UK as well as field research in Manila, the capital of the Philippines, and in Palawan province.

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1 See: www.ipaidabribe.com
2 See: www.fixmystreet.com
3 See: http://yourbudgit.com

1.1 Research objectives

The overall objective of studying citizen participation technologies was to improve our understanding of the factors that contribute to citizen uptake of governance technologies, and the extent to which their use translates into increased government responsiveness to citizens' priorities.

This study was designed to pay particular attention to the factors that explain why some citizens do *not* use these technologies. We adopted this focus because we wanted to learn who is not participating, which factors contribute to their exclusion, and to foreground their voices and standpoints. This research intends to build out from the technical analysis of many previous studies, to provide a complementary consideration of the social and political factors that enable or constrain citizen uptake and government responsiveness.

The knowledge gaps we aimed to address were the lack of:

- non-user perspectives in existing research

- case studies of citizen participation technologies in the Philippines

- a structured approach for conducting technology access analysis

- structured power analysis in the existing literature on citizen participation technologies.

The rationale for our research, then, was to 'zoom out' from the common techno-centric focus and to make a 'power-aware' assessment of the social and political factors that explain the use and non-use of citizen participation technologies. The main research questions we sought to answer were:

- Which forms of power, at which levels and in which spaces, explain the use and non-use of citizen participation technologies?

- From this power-aware perspective, what deficiencies exist in existing theories of change around the use of citizen participation technologies?

- What lesson should guide future practice for digital governance initiatives, in the Philippines and other Making All Voices Count countries?

The lessons and findings from our research can be used to interrogate the underlying assumptions of citizen participation technology initiatives and inform future theories of change. This addresses a core Making All Voices Count priority – citizens' use of technology to hold power-holders to account – and seeks to enhance the existing understanding of digital citizen participation processes in the Philippines.

2. Literature review and theoretical framework

Great hope has been invested in the idea that new digital technologies can provide solutions to global development challenges. From the one laptop per child project[4] to 3D printers (Ramalingam, Hernandez, Prieto Martin and Faith 2016) and the blockchain (Hernandez 2017), expectations are repeatedly raised about the potential that digital technologies offer. The challenge of increasing government's transparency and responsiveness to citizens' needs has been no exception. Open data projects, freedom of information initiatives and interactive, online citizen-to-government platforms are common citizen participation technologies that seek to achieve these ambitions.

The champions of these technologies see them as important new mechanisms for increasing government transparency, accountability and responsiveness.

However, the early promise of applying technology for transparency and accountability has not been fully realised. It has been argued that this is partly due to a series of false assumptions in the theories of change that underlie many transparency and accountability initiatives (McGee and Gaventa 2011). Such assumptions may be conscious or unconscious and may be explicit or implicit.

One such false assumption is that aggregating and communicating citizens' demands via citizen participation technologies will result in increased government responsiveness. This assumption rests on others: that citizens have sufficient access, intent and agency to demand responsiveness; and that government has sufficient capacity and intent to respond. Based on such assumptions, the theory

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4 See: www.olpcnews.com/2006/08

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

of change in many initiatives is that a correctly specified technology is a sufficient condition to increase government responsiveness to citizens' demands. When such projects fail to produce government responsiveness, the techno-centric response is often limited to altering technical specifications. This techno-centric gaze fails to consider contextual social and political factors which may also be relevant.

2.1 The techno-centric gaze

Citizen participation technologies often aim to provide citizens with a mechanism to shed light on government deficiencies and to 'close the feedback loop' (Gigler and Bailur 2014) in the belief that doing so will improve government service provision. However, the empirical evidence to support this hypothesis is weak (Fox 2007). Disappointed by the results of early initiatives, technology-led activists often respond by offering further technical modifications. Yet in most of the 23 technology for transparency and accountability initiatives analysed by Peixoto and Fox (2016), levels of government responsiveness were deemed to be low or non-existent.

The techno-centric gaze tends to perceive any social problem as a technical problem, amenable to a technical solution. This blinkered framing leads to the idea that pre-packaged, techno-centric solutions are the answer to global development challenges. This view is by no means restricted to citizen technologies for participatory governance, as has been extensively documented by scholars including Easterly (2006) Toyama (2015, 2010) and Ramalingam (2013). Yet transparency and accountability are, by definition, political to the extent that they aim to secure, for accountability seekers, information or action from accountability givers across a space of power differentials (McGee and Carlitz 2013).

By avoiding the techno-centric gaze and adopting the standpoint of non-users, we were able to better understand the barriers to technology access, explaining non-use as well as the power relationships embedded in these non-actions. The remainder of this section presents the twin lenses of technology access and power analysis that we used to interpret the data. The power analysis was part of the original research design and arose from the literature review. However, it was the highly differentiated levels of technology access that we encountered during the fieldwork phase that led us to add an analysis of technology access.
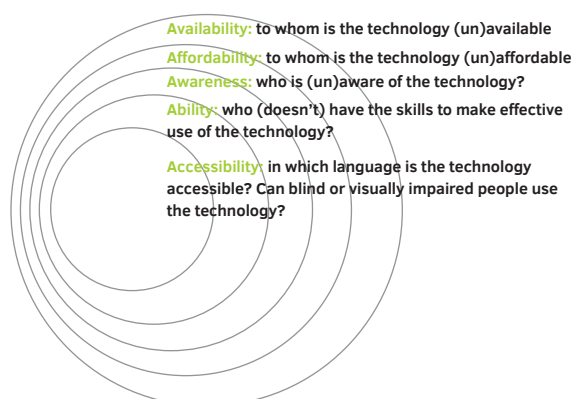
2.2 Technology access analysis: the five A's

There are 118 mobile phone subscriptions per 100 citizens in the Philippines (ITU 2016). Many Filipinos buy subscriptions with more than one provider to cope with signal drop-outs and to benefit from special offers. Estimates of Internet-capable smartphone ownership in the Philippines range from 25–40% (IDC 2016). Only 3.4% of the population has fixed broadband Internet in their home, but more generally 40% have some form of mobile internet, dial-up or broadband access (ITU 2016).

Yet these figures disguise as much as they reveal. Such statistics imagine that connectivity is binary: that a citizen is either fully connected or not at all connected. In reality, the situation is much more complicated. A person may be double-counted as connected because they have two mobile phone numbers, but they still may not enjoy reliable access to either phone calls or mobile Internet for a number of reasons. For most Filipinos, their connectivity varies dramatically over time and space, as they move in and out of coverage – coverage that is likely to be intermittent and of variable quality – or as payday approaches or recedes, and their ability to keep their phone charged and loaded with credit varies.

As we examined the factors at play in the Philippines, rather than think of connectivity as a binary function, we found it useful to assess connectivity using the five 'A's of technology access (Roberts 2016): availability, affordability, awareness, ability and accessibility. Focusing our analysis on these five dimensions helps to 'de-centre' the actual technology and highlight the social and political factors that limit technology access. Figure 1 illustrates these five dimensions.[5]

Figure 1 The five A's of technology access

Availability: to whom is the technology (un)available
Affordability: to whom is the technology (un)affordable
Awareness: who is (un)aware of the technology?
Ability: who (doesn't) have the skills to make effective use of the technology?
Accessibility: in which language is the technology accessible? Can blind or visually impaired people use the technology?

Source: Roberts (2017)

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5 This builds on Roberts (2010), Kleine (2008) and Tongia and Subrahmanian (2006).

Availability

The Philippines comprises around 7,000 islands, many of which are not connected to the national power grid, to broadband Internet, or to any of the fixed or mobile telephone networks. For people living in these islands, the Internet is simply not available. This form of digital exclusion reflects pre-existing geographical and economic exclusions, but in a world where economic and social life is increasingly mediated online, this new form of exclusion can significantly amplify pre-existing ones.

Government services or development initiatives that are only available via technology risk adding digital inequalities to existing disparities of income and education levels. For example, rural populations that are already excluded from many government health and education services are now excluded from new e-health and online education initiatives. Women are over-represented in rural communities, and are therefore disproportionately affected by non-availability in these areas.

People in rural areas are often accustomed to such fragile connectivities (de Lanerolle 2017), with mobile phone signals often weak and intermittent, and frequent power cuts further compromising connectivity. For these already marginalised communities, the advent of the information society can magnify existing exclusion in relation to affluent urban populations. For example, the Batak community that we visited in Palawan had no grid electricity, no Internet connection and no cellular mobile coverage – but they could get a mobile phone signal at the nearest highway, although this required a long walk across 11 bridges. This highlights how availability is not binary: a person may have no connection at home, but be connected elsewhere. Often this will be at their workplace or in a public library.

Affordability

Within the section of the population for whom Internet coverage is *available*, there is a smaller group for whom it is not *affordable*. The Philippines has the most expensive (and lowest quality) Internet in Southeast Asia when measured as a percentage of gross national income (ITU 2016), with a duopoly of providers blamed for artificially high prices and low incentive to improve the quality of service. These high costs mean that Internet connectivity is out of reach for many Filipinos on low incomes. Nationwide, 40% of citizens live below the poverty line; this rises to 60% in outlying provinces such as Palawan, and higher still in historically marginalised communities such as the Batak indigenous people.

Affordability is not a binary issue, however. A person may purchase a bundle of phone credit or data connectivity on pay day, for example, but this must be used frugally to make it last (de Lanerolle 2017). In the Philippines, frugal practices include avoiding unlimited text bundles in preference to WhatsApp instant messaging data; owning multiple SIM[6] cards to switch between free services at different times of the day and week; and keeping phones charged to receive incoming calls, but not making any outgoing voice calls. A person employing frugal practices to make their credit last may feel unable to use citizen participation technologies for reasons of affordability.

Awareness

For those to whom the Internet is both available and affordable, a lack of awareness often contributes to levels of non-use of certain technologies. A large number of citizen participation technologies have been launched in the Philippines, but levels of public awareness about them are not very high. Here, awareness relates to knowing that an initiative exists, and knowing if it has relevance to a person's life priorities. It is common for digital development project teams to lack expertise in marketing or awareness-raising, and for project budgets to omit the necessary resources to scale engagement by building project awareness. Awareness-raising must enable a person to judge for themselves whether the investment of time and money required will produce outcomes that they value. Like affordability, awareness is not a binary issue but something that can have various levels, and which has to be built progressively over time, perhaps through a range of mechanisms.

Ability

Even if awareness levels are high, a person's ability to make effective use (Gurstein 2003) of available technology can be limited by a lack of digital literacy, skills or knowledge. Inadequate provision of digital literacy training is a common feature of many technology for development programmes. It is often easier to secure funding for early-stage technical prototyping and pilots than for user training and awareness-raising. Citizen participation innovators are themselves often urban, middle class and university educated, and the levels of digital literacy they project onto their imagined users are often inaccurate.

To avoid further disadvantaging those already marginalised by low levels of education and technology access, digital development initiatives need to invest in building these abilities alongside technical platforms. As gender norms often lead

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6 Subscriber identity module, which is intended to securely store the international mobile subscriber identity number of a mobile phone.

RESEARCH
REPORT

The techno-centric gaze: incorporating citizen participation technologies
into participatory governance processes in the Philippines

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a close initial analysis of local levels of technology access, but achieving
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communities to enhance their participation in governance.*

to the under-representation of women and girls in
science, technology, engineering and mathematics,
particular attention needs to be paid to enhancing the
appropriate abilities in gender-aware programming.

Accessibility

If we design technologies that are inaccessible to
people with disabilities – people who are blind or
visually impaired, for example – or technologies
that only operate in a country's main language, we
risk excluding these groups and adding another
layer of disadvantage to their marginalisation. Yet
citizen participation technologies are sometimes
built without taking into consideration the needs of
everyone, for example indigenous language speakers
or people living with disabilities. Accessibility-aware
design means ensuring that digital interfaces are
available in local languages, use culturally appropriate
images and content, and are easy to use by those with
low print literacy.

In the Philippines, disability statistics have not been
fully established (Buenaobra 2011), but in line with
other countries, over 10% of the population are living
with a disability. Only 2% of disabled Filipinos attend
school and only 1% are properly diagnosed (Ibid.).
Disabled people are disproportionately unemployed
and therefore living on relatively low incomes, making
them among the most marginalised in society.

Analysis using the five A's

These five A's of technology access can be used
positively to consciously include marginalised groups
whenever digital technologies are designed and
deployed. Designing digital initiatives that accurately
meet existing needs requires a close initial analysis
of local levels of technology access, but achieving
this can form a solid basis for positive engagement
with marginalised communities to enhance their
participation in governance. There is reason to
believe that technology design based on an accurate
assessment of local realities is more likely to lead to
successful citizen participation initiatives.

It is important to remember that none of these
categories is binary, and that each encapsulates a
range of different experiences – a different quality of
connection and different degrees of access. Analysing
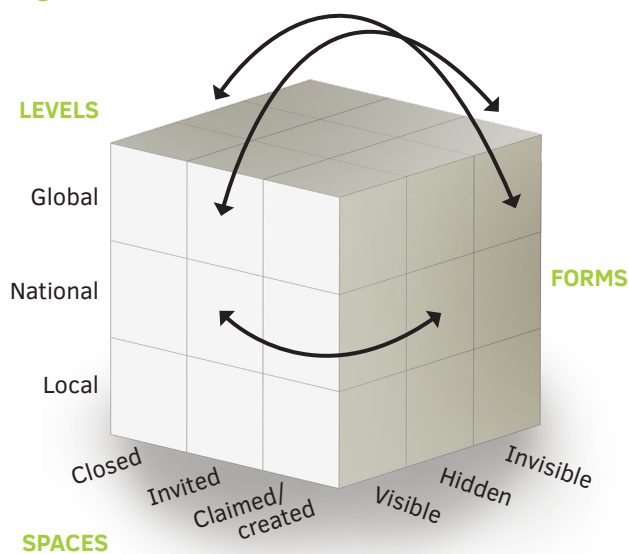technology access in this way highlights that the

binary idea of 'fully connected' or 'fully disconnected'
citizens – as conveyed by national statistics – is far
from the more complex and nuanced reality on the
ground.

Using the five A's method of analysing access is
one way of thinking through exactly who initiatives
are intended to benefit and which blend of digital
technologies and analogue complements are
necessary to achieve objectives. Such analysis also
invites the question of which factors are structuring
these different levels of technology access. For
this reason, we also include power analysis in our
conceptual framework.

2.3 Power analysis: the Power Cube

Although the literature on citizen participation
technologies acknowledges the importance of power
relations, there has been relatively little systematic
power analysis to date. This is surprising, given
the wealth of tools that exist for this purpose. Our
research contributes to addressing this gap by
applying Gaventa's (2005) Power Cube to analyse
the various dimensions of power that enable and limit
citizen participation technologies, as shown in Figure 2.

Figure 2 The Power Cube

Source: Gaventa (2006)

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

Citizen participation technologies are most often designed to address visible power, in the sense that they seek to include more citizens in formal consultations, monitoring and decision-making processes. We argue, though, that hidden and invisible power can explain low levels of uptake and the failure of some projects to meet their objectives.

The Power Cube provides a means of analysing the different spaces, levels and forms of power that are in play when change processes are attempted (Pantazidou 2012). *Closed spaces* refer to decision-making that takes place behind closed doors by unaccountable individuals using unknown procedures. Making closed spaces and procedures open to public scrutiny has been a core focus of transparency and accountability activists. Some citizen participation technologies are designed and implemented by governments to create *invited spaces*, into which citizens are encouraged to access information, input data and participate in aspects of governance. Other citizen participation technologies are designed and implemented by civil society to create *claimed (or created) spaces*, from which they were previously excluded, in order to voice demands and expand the space of participatory governance.

These 'spaces' of power may impact at various 'levels' or power. While the Power Cube shows three levels – global, national and local – it is important to take account of the multiple levels that are relevant within specific contexts, such as provincial or household.

The third dimension of the Power Cube is 'forms' of power. *Visible power* refers to exercising power over the setting and enforcing rules, procedures and institutional processes such as budget-setting and elections. *Hidden power* refers to the use of back-room power over who gets a seat at the decision-making table and what issues make it onto the agenda, as well as the use of intimidation, secretive lobbying, bribery or co-option to influence decision-making.

Invisible power refers to the use of power over channels of socialisation in order to control access to information and to favour the propagation of particular ideas, beliefs and values. This invisible internalised oppression is often described as the most insidious form of power. Ideas of sexism, racism or class / caste superiority and inferiority –

learnt during socialisation – are often so pervasive that they come to be unconsciously internalised by oppressed groups, in ways that limit their sense of self-worth and self-efficacy or 'power within' (Rowlands 1997). This can manifest itself as a disinclination to join with others (power with) and take action to bring about change (power to).

Citizen participation technologies are most often designed to address visible power, in the sense that they seek to include more citizens in formal consultations, monitoring and decision-making processes. We argue, though, that hidden and invisible power can explain low levels of uptake and the failure of some projects to meet their objectives. When assessing the low uptake of citizen participation technologies, we should not discount the possibility that invisible power could disincline some people from actively engaging if they have internalised images of themselves as having little of worth to voice, or believe the status quo to be impervious to change.

Analysis of the extent to which these spaces and forms of power act as barriers to or stimulants of non-use and non-response is a gap in the research. Our research addresses this by reviewing and analysing citizen participation technologies in the Philippines using Gaventa's Power Cube, in order to produce new knowledge about the use and non-use of citizen participation technologies. It will, therefore, contribute conceptually to our understanding of the theories of change related to citizen participation technologies.

Table 1 helps to clarify the concepts of visible, hidden and invisible power, and illustrates how these three dimensions of power are all forms of 'power over'. It also illustrates how marginalised groups can respond to the exercise of 'power over' with tactics and strategies that build and deploy people's sense of self-efficacy (power within), collective action (power with) and ability to influence and control (power to) (Rowlands 1997).

Table 1 The Power Matrix

Mechanisms through which 'power over' excludes and privileges	Examples of injustice arising from 'power over'	Responses and strategies to build countervailing power using 'power within', 'power with' and 'power to'
Visible power *Formal institutions and officials:* presidents, parliament, courts, International Monetary Fund, World Bank, corporations *Instruments:* policies, laws, constitutions, budgets, regulations, conventions, written rules and processes	Laws or policies that do not address the needs of indigenous people, women or those on low incomes When equality in law exists, but decision-making structures (including courts, committees, etc.) systematically favour the elite or powerful, and are closed to voices of excluded groups and minorities	Confronting, engaging, negotiating *(power with + power to)*: • lobbying and monitoring • negotiation and litigation • public education and media • policy research, proposals • marches and demos • voting and running for office • modelling alternatives
Hidden power Behind closed doors, decisions by dominant groups about who gets a seat at the table and what issues are allowed onto the agenda Political control of (often unwritten) procedures to protect vested interests and exclude certain groups and delegitimise their issues Use of intimidation, co-option and misinformation to defend the status quo	Leaders are undermined, labelled trouble-makers or unrepresentative Issues are demeaned as elitist, impractical; not worthy of public action; and not economically viable The media does not consider these groups' issues to be mainstream or newsworthy Crucial information is concealed or inaccessible	*Building collective power (power with):* • building active constituencies around common concerns • strengthening organisations, coalitions and movements • demonstrating power through direct action • participatory research and dissemination of information that legitimises the issues of the excluded
Invisible power Shaping what is considered to be normal by socialisation and media Shaping of norms and values Control of information, practices, cultural norms and customs to shape people's own understanding of the limits on their place, role, rights and capabilities in ways that diminish their appetite to demand equitable treatment	Socialisation internalises feelings of powerlessness, inadequacy, apathy, etc. Coupled with a lack of basic information, this restricts the ability to participate effectively and articulate demands Gender, race and class are critical: oppressed people learn to blame themselves rather than structural injustice	*Building individual and collective power (power within and power with):* • education for self-confidence using alternative media • building self-efficacy, political awareness, and active citizenship • developing a shared critique of injustice and speaking out together • participatory action research and popular education and organising

Source: adapted from VeneKlasen and Miller (2002)

3. Methodology

To capture and foreground the knowledge and meaning-making of local (non-)users, we adopted a mix of qualitative methods that combined focus groups and semi-structured interviews.

In Phase One, we conducted a desk-based literature review in the UK alongside a series of Skype consultations with Filipino experts from stakeholder organisations. This enabled us to generate insights into the key research questions and specific examples from which to construct the case studies.

Phase Two consisted of ten semi-structured interviews and five focus groups, conducted in Manila and Palawan province. Through these, we were able to bring together stakeholders to explore research questions in a collaborative dialogic process. After piloting our interview questions with Filipino experts and revising them accordingly, our research partners at G-Watch (Government Watch) convened a series of five focus groups comprising civil society representatives and grassroots organisations (n=66). The focus groups incorporated participatory exercises that enabled exploration of the research themes, and clustering and ranking of priority issues. These were complemented by a series of semi-structured interviews with key informants (n=10).

Phase Three involved the coding and selective transcription of data collected during Phase Two activities, as well as further consultations with key informants. The write-up of the research findings took place in the UK, with drafts shared with research partners for verification purposes.

This research design was developed in collaboration with the Making All Voices Count country research director in the Philippines, whose expertise in this field allowed us to benefit from the relationships that she has built up over many years.

3.1 Research ethics

This research was conducted in accordance with the research ethics policy of the Institute of Development Studies (IDS).[7] This process included informing all research participants of the purposes of the study and potential uses of data, including making all findings and interpretation openly available. Voluntary informed consent was provided by all research participants. Given the principle of 'avoiding doing harm' and

the local Philippines context in which violence is experienced by some civic activists, and paying attention to the sensitivity of some of the data collected, it was necessary to conceal the identities of research participants. This confidentiality and anonymity involved not only providing aliases for research participants quoted, but removing organisation names and other potentially identifying information. Research data was recorded without participants' names and was never shared beyond the researchers.

3.2 Case studies

The Philippines was selected as a focus country in consultation with Making All Voices Count management due to its high concentration of citizen participation technology initiatives and the country's history of applying digital technologies to governance issues. Given the wide range of technologies and the finite resources for this study, it was necessary to select a sample that would best enable us to answer the research questions.

A purposeful sample was determined through a desk review of Making All Voices Count-funded projects and the wider field, drawing on the local expertise of Making All Voices Count's research director in the Philippines. The desk review found that the existing literature was dominated by techno-centric research at the expense of person-centred approaches. To address this, we avoided constructing case studies centred around a specific technology (for example an Open Data platform or mobile phone application) and instead built three case studies around citizens and their prioritised concerns, including schools, local development projects and protecting their land from illegal mining.

Case study 1: participatory budgeting

We looked at two contrasting examples of participatory planning and budgeting technologies: Bottom-up Budgeting and Check My Barangay.

Bottom-up Budgeting: Although the Philippines Constitution of 1987 and the Local Government Code of 1991 had promoted and required citizen participation in local governance, one interviewee told us that some government figures felt that progress towards participatory governance was too slow.[8] In response, in 2012 the Aquino government

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7 See: www.ids.ac.uk/about-us/who-we-are/governance-and-funding/research-ethics
8 An alternative view from a research participant not in senior government was that institution-building in a post-authoritarian state takes time (after 21 years of rule by Marcos). From this person's perspective, Bottom-up Budgeting should be less about speed and efficiency and more about the democratisation and representation of the under-represented in fiscal decision-making.

RESEARCH
REPORT

The techno-centric gaze: incorporating citizen participation technologies
into participatory governance processes in the Philippines

implemented Bottom-up Budgeting to provide communities with some semblance of input into the budgetary decisions that affect their lives. It was adopted by the central government's Human Development and Poverty Reduction cluster, and initially led by the National Anti-Poverty Commission, then later by the Department of Interior and Local Government. It was then piloted in 600 of the country's poorest municipalities before scaling nationwide (Ateneo de Manila University 2013).

The process involves a transparency element in which government expenditure reports and budget projections are made available on the OpenBuB portal.[9] The process also involves a participation element in which accredited civil society organisations (CSOs) are invited to identify communities' expenditure priorities. These are identified in meetings or online fora, through which communities select those projects that they judge as best responding to their articulated needs. CSOs then articulate these to government.

Check My Barangay: While the government's commitment to increasing transparency and citizen participation is evident in the OpenBuB portal, this only reaches down to the municipal level of government; it stops short of the village, or *barangay*,[10] level. The Check My Barangay initiative created a space at the grass-roots level to enable citizens to play a direct and active role in the planning, monitoring and evaluation of public expenditure in their neighbourhood.

Check My Barangay is a relatively small civil society-initiated pilot project, funded by Making All Voices Count. Developed by the non-governmental organisation (NGO) Affiliated Network for Social Accountability-East Asia Pacific (ANSA-EAP), the project combined a mobile app and website platform to enable citizens to design, promote and vote for local development projects online. Contrary to their expectations, ANSA-EAP found that the technology aspect of the project was unsuccessful due to low levels of smartphone and data connectivity among their target users. Instead, they had to rely on older, more traditional analogue technologies and engagement methods. For example, when the use of their mobile app was much lower than hoped for, they reverted to the proven approach of driving around the neighbourhood in a rented bus with a

loudspeaker system. Using this approach, they were able to broadcast their call to action and achieve their objective of increasing citizen participation in local budgeting processes.

Case study 2: participatory school governance

Users and non-users of citizen participation technologies for school governance are the second case study. We looked at one central government initiative called eBEIS, and one civil society initiative, funded by Making All Voices Count, called Check My School.

eBEIS: The Philippines government was a founding member of the global Open Government Partnership and one of the first governments to make selected government datasets available (Government of the Philippines 2012). However, the Open Data Portal includes almost no information on schools.[11]

Instead, the Department of Education publishes school data on its enhanced Basic Education Information System (eBEIS). This was originally intended to be a user-friendly and publicly accessible information resource for all those directly affected by school performance and school management (Gigler and Bailur 2014). However, early iterations of eBEIS were beset by technical problems, and the current version of eBEIS is password-protected and only available to authorised education managers.[12]

Check My School: The Aquino government encouraged participatory community-monitoring initiatives. Check My School[13] was one such initiative managed by ANSA-EAP in cooperation with the Department of Education. It builds on the previous success of citizen participation monitoring projects run by G-Watch, most notably Textbook Count.[14] Check My School created a new space for citizen participation in school management by providing access to records about school resources (e.g. numbers of students, classrooms, books, school budget and test results) and making it possible for anyone to point out discrepancies. It uses citizen participation technologies and community dialogue processes to inform community members by providing them with data about school resources, and to involve them in the monitoring and verification of school management, as well as in collective problem-solving of any identified issues to improve school performance.

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9 See: http://openbub.gov.ph
10 The *baragay* is the smallest unit of administrative governance in the Philippines and equates to a neighbourhood or village of 50–100 families. There are 42,000 *barangay* in the Philippines.
11 See: www.gov.ph/data/search/field_topic/education-47/type/dataset?sort_by=changed
12 See: http://ebeis.deped.gov.ph/beis/#
13 See: www.checkmyschool.org
14 Textbook Count was a successful citizen monitoring project for school resources. It was initially run by the CSO G-Watch, but later incorporated within the Department of Education's core functions.

The original Check My School concept imagined community members directly inputting and accessing data via an interactive website. However, access problems caused ANSA-EAP to change their design to include the training of community infomediaries to speak with local school administrators and citizens, gather and input data on behalf of community members, and to feed back to them. A detailed review of the Check My School process can be found in the World Bank's evaluation of the programme (Shkabatur 2014).

Case study 3: participatory governance of extractive industries

Users and non-users of citizen participation technologies for transparency and accountability in extractive industries were our final case study. While most participatory governance work focuses on citizens holding various levels and departments of government to account, the member organisations of Bantay Kita, an association of CSOs working on participatory governance issues in extractive industries, focus on holding corporate mining companies and other extractive industries to account.

The Philippines is the world's largest producer of nickel and produces significant quantities of other minerals and precious metals, oil and gas; these account for more than 10% of Philippines' exports and 6% of its gross domestic product (EITE nd). Under the Aquino administration, the Philippines government joined the global Extractive Industries Transparency Initiative (EITI) and publishes annual reports disclosing the income received by government and indigenous leaders from extractive industry companies.[15] EITI is used by the government as a space to invite some CSOs to participate in aspects of oversight and policy formation in relation to mining and other extractive activities.

The Philippines has progressive environmental laws and participatory governance processes compared to many neighbouring countries. However, members of Bantay Kita point to a substantial gap between the spirit of the law and practice at the local level. While the constitution promotes participatory governance, and the mining and environmental law is in place, the will and capacity to implement these are often absent. There is evidence that bribery and corruption are systematically used to evade due process. Some Bantay Kita members are involved in activities intended to secure transparency and hold extractive industries and government to account for any failure to adhere to the legislation.

We travelled to the outlying island province of Palawan to hold a focus group discussion with members of Bantay Kita, as well as visit members' organisations representing the Batak indigenous people and the Palawan NGO Network. As the police have a track record of taking bribes and 'losing' evidence; the Palawan NGO Network retains confiscated chainsaws and vehicles as evidence. Their compound contains confiscated boats, motorbikes, guns and machetes and a 20-foot 'sculpture' made from over 100 identical chainsaws.

Meanwhile, the Palawan NGO Network raises awareness in local communities of existing environmental laws and land rights, and trains organised communities to defend their land against illegal logging, mining and fishing by conducting lawful citizens' arrests and securing the prosecution of environmental criminals. It uses global positioning systems (GPS) and geographic information systems (GIS) to document environmental crimes, taking geo-tagged and time-stamped photographs from mobile phones which are uploaded to ArcGIS software. This provides legally admissible evidence for later court cases, verifying that offences took place in government-protected locations.

These collective actions were designed to build the capacity of communities to safeguard their own land and environmental resources in accordance with the law. However, the majority of citizens that we met did not use citizen participation technologies, and provided evidence of the wide range of constraints that impede the use of technologies among marginalised communities.

4. Findings: access analysis

The following two sections present our research findings. We have highlighted the words of users and non-users of citizen participation technologies – these are shown as quotes throughout the text – and interpret them through the conceptual frameworks of access analysis (this section) and power analysis (Section 5). The next two sections present findings ordered around the framework of access analysis and power analysis.

Given the Philippines' history of early adoption and high levels of text messaging, social media use and the rapid expansion of smartphone ownership, we began this research expecting to find extensive use of citizen participation technologies. Our naiveté in this

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15 See: www.ph-eiti.org

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

regard was challenged early in the research process. Interviewees and focus group participants made it clear that a more complex and dynamic reality exists, where differentiated levels of device and connectivity access act as barriers to citizen participation in digital governance initiatives.

4.1 Availability

Connectivity is uneven in the Philippines: 21.5% of the population are not covered by a 3G signal,[16] for example.[17] Being a nation of 7,000 islands presents a formidable network infrastructure challenge that acts as a major obstacle to digital inclusion: "If you speak about remote islands, 100% [of them] are off the grid."

For many Filipinos living on remote islands or in outlying rural areas, Internet access is simply not available. This is a formidable problem for development initiatives that aim to incorporate marginalised communities in civic life and inclusive governance activities. As one interviewee from a CSO commented, "Most of the communities that we work with are in far-flung places, so connectivity is an issue." Only the main central islands have broadband cable Internet connections; many others have mobile phone connections, but hundreds of islands have no electricity connection.

These networks do not exist in isolation from each other; electrical network outages often cause Internet connection failures. Even on islands that *are* connected, the connectivity footprint does not extend to all of the population and is often very fragile. "We have outages every day … How can a community access the [citizen participation] data if the infrastructure is so weak?" An example of this came about during our research. The Wi-Fi connectivity was generally good in the hotel in the Palawan's provincial capital where we held the focus group discussions, but frequent power outages meant that the hotel often had to rely on a diesel generator as a back-up. Even this level of Internet availability was a luxury compared to the subsequent focus group discussions with the rural Batak indigenous people's organisation. The Batak village had no connection to the electricity grid[18] and we were told that getting a mobile signal often involved a long hike – across 11 bridges – to the nearest main road.

Availability issues are not by any means confined to the Batak people: "The data of the government says that almost half (between 40–50%) of the communities here in Palawan do not have access

to electricity." The lack of availability is a particular issue for indigenous peoples, the majority of whom are concentrated in the highlands, rural areas, and remote islands of the Philippines, where the level of all government service provision, as well as corporate connectivity infrastructure, is low.

By contrast, those living or working in the urban metropolitan centres experience much greater Internet connectivity. There are, however, still availability issues. As women live disproportionately in rural areas and spend more time in the home or engaged in unpaid domestic work (PSA 2016), they have less availability than men. It is important to note that, in relation to the five A's, we found a general deficit of gender-disaggregated data – a finding consistent with other research on technology in development (UNCTAD 2014). However, we established that although Filipina women are 7% more likely than men to be registered mobile phone users, they are 3% less likely to be users of mobile data. The reasons for this are not clear, but may include affordability and awareness (further discussed later in this section).

Overall, our field data produced a complex picture of fluid and fragile connectivities (de Lanerolle 2017), especially among those living in marginalised communities. This contradicts the static, binary 'imaginary' produced by official connectivity statistics, which characterise populations simply as either connected or disconnected. For the Filipinos that we spoke to, availability varies over space and time, as a person moves from their home to their workplace or from the village to the main road. Availability also fluctuates in unpredictable and intermittent ways: as the power supply cuts in and out, or as the cellular coverage fluctuates.

As these examples make clear, even when a citizen lives in an area where the Internet is available, questions of reliability and quality remain. The Philippines has the slowest Internet connection speeds in the Asia Pacific region (Akamai 2017); as one of the Philippines' foremost open government data professionals quipped, the very slow connection speeds available at his home meant that he has plenty of time to boil his rice while waiting for a dataset to download.

Availability is clearly an effective barrier to online citizen participation in the Philippines. However, as the following sections will show, availability by itself does not lead to technology use; GSMA (2016) research estimates that of those Filipinos for whom mobile

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16 The third generation of wireless mobile telecommunications technology.
17 See: www.mobileconnectivityindex.com/#year=2016&zoneIsocode=PHL
18 Some homes have solar power as a result of a non-government project.

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

"A 3G signal is available but it is not affordable."

broadband is available, 67% do not use it. The other four 'A's of technology access offer some reasons why.

4.2 Affordability

This was the single most important reason for non-use of citizen participation technologies in our research. Even where connectivity is available, there exists a substantial subset of Filipinos who cannot afford smartphones or mobile internet data, predominantly those on modest or low incomes. As one expert put it when discussing the cost of mobile data connectivity, "A 3G signal is available but it is not affordable."

This finding was reinforced in all five focus group discussions. Group members worked individually and then in pairs to identify the most common reasons for non-use, which they then clustered, discussed and ranked in importance. Affordability was ranked among the two most important factors by all of the focus groups. As one participant commented, "A phone that is 3G-ready is too expensive … and that is because we have a duopoly in the Philippines … We had a third entrant try to come in … but the duopoly blocked that."

There are two important points here. Firstly, although some mobile phones are affordable, smartphones can be very expensive. Secondly, a data connection fast enough to browse the Internet is too expensive for most. A GSMA survey (2016) showed that Filipinos in the top 20% income bracket would, on average, expect to spend 5% of their income on mobile ownership, while those in the bottom 40% would have to spend 29%. The World Economic Forum ranks the Philippines 107th out of 139 countries regarding affordability.[19] This affects the way Filipinos use mobile phones; 95% of mobile phone subscriptions are prepaid; only 55% of subscribers use mobile broadband, of which 80% only have access to the lowest speed plans (1–3 megabits per second).

Our findings confirm that affordability is not a binary issue. As anticipated in Section 2, there is no neat division in the Philippines population between those who can afford smartphones and Internet connectivity, and those who cannot. What stood out in our findings was that there appear to be different classes of connectivity forming in the Philippines, which reflect existing socio-economic divisions.

People on low incomes can often still afford to buy a basic feature phone, register a mobile phone number, and buy a 'bundle' that provides 50 SMS messages – all for as little as US$10. At the other end of the spectrum, a new, top-end smartphone costs over US$1,000 and a post-paid monthly data and voice subscription can cost US$50 per month. For a nurse or a teacher, for example, that is unaffordable; it would equate to four months' salary just to buy the phone[20] and another 20% of their monthly salary for connectivity.[21] SMS-only connectivity is affordable to most (but not all) of the people that we met, but SMS connectivity is insufficient to engage with many of the citizen-engagement platforms that we reviewed, many of which require Internet access or smartphone apps.

This tiered picture of classes of connectivity is supported by other data, which shows that only 46% of Filipinos use mobile phones to connect to the Internet, 26% only use their mobile phones for voice and text, and 28% do not use mobile phones at all (GSMA 2016).

Our analysis of access in Manila and Palawan leads us to the finding that different classes of user experience exist in the Philippines; Table 2 lists these. These are determined largely by affordability and may map onto income levels and socio-economic class. This resonates with Qiu's (2009) research with marginalised migrant workers in China and his concept of 'working class technologies'. It also builds on other Making All Voices Count research by de Lanerolle (2017), which found that low and very low income South Africans experienced 'fragile connectivity' and had to adopt 'frugal practices' to manage the limited connectivity that they could afford. Further research with larger samples and in other places will be necessary to test the veracity of this claim.

Table 2 is a schematic illustration of our findings in the Philippines, based on a modest amount of data and a limited sample. Despite this, we argue that this typology has value in illustrating a richer, more nuanced understanding of connectivities compared

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19 See: http://reports.weforum.org/global-information-technology-report-2016/networked-readiness-index/
20 See: www.payscale.com/research/PH/Job=Registered_Nurse_(RN)/Salary
21 See: https://shop.globe.com.ph/postpaid-plans

RESEARCH
REPORT

The techno-centric gaze: incorporating citizen participation technologies
into participatory governance processes in the Philippines

Table 2 Classes of technology access in the Philippines

Class of technology access	Employment	Device	Connectivity	Experience
Upper class	Independently wealthy or urban salaried professional	Latest smartphone	• Post-paid monthly mobile contracts with maximum gigabit / month data; unlimited calls and texts • Wi-Fi at home and at work	• Connected by default to all the fastest available services • Uses Internet extensively • Not frugal
Middle class	Teacher, civil servant, shopkeeper	Previous generation of smartphone	• Post-paid mid-range monthly package of calls and text with limited data • Wi-Fi at work and coffee shops, but not at home	• Always able to call and text • Uses web mainly on Wi-Fi • Uses mobile data mainly for instant messaging • Frugal with mobile data
Working class	Manual worker	Feature phone with touchscreen and Internet capability	• Prepaid call credit • Unlimited texts • Limited data • No Wi-Fi access	• Text rather than voice calls • Frugal with data (instant messaging only) • Internet limited to Facebook and free basics
Underclass	Unpaid work, unemployed, underemployed, informal work	No phone or basic phone, with a non-touchscreen and physical keyboard	• Prepaid, but often has no credit • Phone often not charged • No data • No Wi-Fi access	• Unconnected by default • Frugal with voice calls – mainly passive recipient of calls and texts

Source: Author's own

to the dominant, binary understanding. Our research even identified further exceptions to the categories in Table 2: a manual worker, for example, may choose to forego other pleasures in order to set aside money to spend on an advanced phone or data credit. A second-hand market in imported or stolen phones is another means by which some people access a 'higher' class of technology. Alternatively, even if a person has no job, she or he may have a phone gifted to them by a family member.

Nevertheless, levels of technology access are largely related to socio-economic class and income levels. Conceptualising technology access in this differentiated way has the advantage of facilitating future research into the relationship between socio-economic class and income levels to technology access. Such research could usefully consider other variables, such as age, gender and urbanity / rurality. This would inform increased understanding of the extent to which classes of citizens are in a position to take part in participatory governance initiatives, when such initiatives are predicated on a particular class of device ownership or connectivity access.

Building on Qiu (2009) and de Lanerolle (2017), this conceptualisation of different classes of technology device ownership and connectivity access allows us to

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

The popular notion of a meritocratic information revolution, in which the binary category of unconnected is rapidly disappearing, is not borne out by the evidence from this study.

question the idea that the rapid pace of technological change leads to a progressive equalising of access and social equity. The popular notion of a meritocratic information revolution, in which the binary category of unconnected is rapidly disappearing, is not borne out by the evidence from this study. On the contrary, our evidence shows different classes of technology access forming. Although the capabilities of specific technologies improve over time – and the speed of connectivity increases – this is not translating into social equality or even into equality of connectivity. Indeed, these inequalities may be being amplified.

This is highly relevant because of the temptation by digital development designers to 'future-proof' citizen participation technologies by designing apps for the latest technology. The motivation to do so is often based on the flawed assumption that everyone will, sooner or later, have access to smartphones and to a level playing field of mobile Internet connectivity. While this argument undoubtedly has some logic, it ignores at least two facts.

Firstly, levels of access to technology change over time, both for rich people and for poor people. Even if it were the case that, in the future, everyone will own a smartphone and be able to afford mobile data connectivity, by that time it is reasonable to assume that the richest consumers will have advanced to the next generation of digital technologies. The net effect of this would be that the relative divisions – between classes of technology access – endure over time.

Secondly, in 2017 over 50% of the world's population still does not have Internet access (UNCTAD 2017). Even in technologically and economically advanced countries such as the UK, as many as 10% still do not use it (ONS 2017). If this continues to hold true, then the implications for digital development are significant: citizen participation technologies that require relatively advanced levels of technology access will exclude those without that level of technology access. The result will be that those who are already privileged gain a further relative advantage.

A further finding from our research was that for our participants, affordability was not simply about the purchase price of devices and connectivity; for some

respondents, it was time (rather than money) that they could not afford to spend on citizen participation technologies. For this reason, it is important that applications were easy to use and could upload data quickly: "The cost and time is very real … Time is very important, because they could have been doing something else, earning money." In addition to this calculation of the opportunity cost, one interviewee framed the calculation in terms of the return on investment, where the expected return was government responsiveness: "If citizens are engaging but government is not responding, why should they continue engaging?"

From a gender perspective, the issue of time is particularly important, as research has established that women enjoy less free time than men due to the gendered burden of unpaid domestic work (Bardasi and Wodon 2006). This echoes findings from a Web Foundation report,[22] which stated that lack of time was the single most important barrier preventing women from using the Internet more often. Lack of time was cited more often by women than men in our research, and more often by the poorest women than by other women. Further research is needed on these exclusions.

4.3 Awareness

Awareness levels can explain the non-use of citizen participation technologies where availability and affordability are not issues. Insufficient awareness of a particular technology, or of its relevance to the lives of potential users, can be crucial to uptake levels. As one research participant commented about Bottom-up Budgeting, "They [citizens] are not aware of the programme."

It is ironic that initiatives that are focused on creating awareness of government data are often designed without sufficient thought or budget to create awareness of their own existence and relevance. As one respondent noted, awareness-raising should not be considered as a one-off event, but an ongoing process: "It's never about a one-time event when you are speaking about Open Data. It has to figure within the awareness."

Our research showed that low levels of awareness of citizen participation technologies exist even among

22 See: https://webfoundation.org/2016/04/closing-the-digital-divide-a-briefing-note

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

the smartphone-owning technology experts and government officials that we interviewed in Manila. As one respondent pointed out, "Some of the chief executives of the local government units do not even know that they have an existing website in their municipality." Our research also found low levels of awareness of other citizen participation technologies among tech-savvy urban governance activists.

In the less tech-savvy rural Batak community, no one had heard of any of the citizen participation technology initiatives. None of our case studies had sufficient marketing budgets to raise levels of awareness, and there was agreement among the projects' actors that it was far easier to attract short-term funding for the technical development than to secure the medium- to long-term investment in the awareness-raising that is essential for successfully scaling initiatives beyond the pilot phase.

In a GSMA survey (2016), 51% of offline Filipinos stated a lack of awareness of the usefulness of the Internet, and lack of locally relevant content,[23] as reasons for not getting online. These general levels of awareness remain a barrier to inclusive citizen participation, quite apart from the low levels of awareness of specific citizen participation technologies we identified in this research. In the GSMA survey, Filipino citizens reported experiencing four barriers to internet access: lack of awareness and locally relevant content (51%), lack of digital literacy and skills (27%), affordability (13%) and lack of network coverage (8%). Although this terminology differs slightly from ours, the survey provides some statistical support for our categories of awareness, abilities, affordability and availability.

4.4 Abilities

This can be a crucial barrier to the uptake of citizen participation technologies in places where the issues of availability, affordability and awareness have been addressed. As one member of the Batak community focus group said: "That [the Internet] is only for the educated ones; if you are not educated, you cannot use the computer."

There exists a significant sub-set of Filipinos who do not have sufficient digital literacy skills, or lack the self-confidence to learn these, to become independently active users of citizen participation technologies. The feeling of not being sufficiently well educated to use a computer speaks to the concept of 'invisible power' and internalised oppression (see Section 4.2), but in this section, we limit our discussion to the issues of users' skills.

Our research found that to enable the effective use of citizen participation technologies, there is a need for digital literacy training – not only in marginalised communities, but also in some CSOs and government departments: "Even among [CSOs], they really need to do information technology capacity-building." Citizen participation technologies that aim to engage people from disadvantaged communities cannot presume the same levels of digital literacy that are found in relatively affluent areas. Although high-quality computer education is common in the country's top schools and colleges, standards vary elsewhere. Educational resources such as classrooms, books and teachers are unevenly spread across the population, as are the resulting levels of educational attainment (Yamauchi and Parandekar 2014).

Citizen participation technology initiatives therefore need to assess the abilities of their target users and incorporate training and capacity-building if these initiatives are to be truly inclusive. As one of our most experienced interviewees commented, "We see a lot of potential in citizens using technology to engage with government, but that of course will depend on citizens having access to technology, knowing how to use it, understanding and appreciating the information." Citizen participation initiatives that aim at social inclusion will need to design for equity from the outset.

4.5 Accessibility

Certain issues make it impossible for some citizens to participate in governance initiatives even when availability, affordability, awareness and abilities are not an issue. As noted in Section 2, we use the term 'accessibility' to refer to technology modifications that are inclusive of citizens with disabilities, or whose literacy is in a regional or indigenous language: "At one of our [women's] forums, we had a speaker who is visually impaired and she spoke about the difficulty."

For example, some digital technologies incorporate adaptations so that blind or visually impaired people can use them. In doing so, this opens up new employment and communication possibilities to these groups. However, these adaptive technologies are often only affordable to the most affluent citizens. Yet people living with disabilities tend to suffer from higher levels of unemployment and are more likely to live in poverty. To make it possible for blind or visually impaired citizens to use citizen participation technologies, designers will need to incorporate adaptive technologies that make their initiatives accessible to people with special needs – and make them affordable.

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23 In our five A's classification, locally relevant content is a sub-component of accessibility.

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

"Government has its own language and citizens have their own language. There is a disconnect ... when we speak about technology, it's not just about the hardware, it's also about the interface – whether it is understandable or not."

Limited language choices, in terms of the screen interfaces that applications use and Internet content overall, can present another accessibility barrier. Over 50% of all information available on the World Wide Web is in English, a language in which around 60% of adult Filipinos are fluent.[24] Many Filipinos also speak native languages, including Tagalog, Filipino, Cebuano and Hiligaynon, but each of these constitutes less than 0.1% of all web content (w3techs 2017). This barrier is even more profound for indigenous communities. For instance, the language spoken by the Batak indigenous community was not available on any of the citizen participation technologies that we reviewed.

Alternative languages could be incorporated into new versions of the software featured in our case studies. Furthermore, future citizen participation technology designers may wish to consider, at the outset, which communities their technologies are designed for and include language interface development and adaptive technologies in their overall development plans.

It is worth noting, however, that communication barriers can be obstacles even when there is a shared language. As one participant pointed out, "Government has its own language and citizens have their own language. There is a disconnect … when we speak about technology, it's not just about the hardware, it's also about the interface – whether it is understandable or not."

4.6 Assessing the five A's framework

In concluding this section, we can say that the five A's were functional in providing a framework to help us to think through the complex and nuanced forms of access experienced by the users and non-users of citizen participation technologies. Far from reproducing the binary categories of (entirely) connected or (entirely) unconnected, our research revealed a complex picture of access which is dynamic, fluid and fragile over time and space. The five A's framework helped us to de-centre the technology in our analysis and highlight the ways in which different levels of citizen access to digital devices, and different levels of connectivity, reflect and are structured by existing socio-economic class divisions.

As discussed, our analysis suggests that existing inequalities in class, gender and ethnicity are being reproduced as unequal access to digital devices and Internet connectivity. As more aspects of social and economic life move online, these inequalities of technology access represent new forms of exclusion. We have to conclude, therefore, that the ability of Filipino citizens to participate in technology-mediated citizen governance initiatives is being structured unequally, and along familiar dimensions of gender, ethnicity and class.

5. Findings: power analysis

After using the five A's framework to analyse patterns of exclusion in the use and non-use of citizen participation technologies, our analysis then used the Power Cube framework (see Figure 2) to answer the research question of which *forms* of power, operating at which *levels*, and in which *spaces*, affect the use and non-use of citizen participation technologies.

5.1 Visible power

The Philippines is a signatory to many international conventions and was a founder member of the Open Governance Partnership. But as one research

participant, who leads an organisation that uses citizen participation technologies, commented, "We are signatories to so many international treaties, and we have good legislation … but that is just one side of the story. The best measure of whether a policy is good or not is whether it is implemented or whether people really benefit: in terms of compliance it is just a token."

This point – that signing conventions and passing progressive legislation is only one factor contributing toward inclusive governance – was echoed by others. For example, the distinction between good policy

24 See: www.ef.co.uk/epi

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

and good practice was reinforced by one of the participants in the extractives focus group: "When we speak about visible spaces, our mining policies are actually very progressive. In every stage of monitoring, there is always civil society engagement, there is always community monitoring, there is multi-stakeholder oversight communities everywhere – but when you look deeper, there are ways that government and companies play around these policies."

The CSOs that we spoke to in the Philippines were not primarily concerned with the level of enabling legislation, however. In this regard, their situation is more advanced than other southeast Asian countries. For example, several research participants spoke with some pride about the Freedom Constitution of 1987: "[It] is a special constitution because it came out of the dictatorship. It was a constitution that was developed with real participation from all sectors, so that is why it's quite strong around participation."

However, as noted, the practice of participation does not always reflect the spirit of constitutional guarantees. The absence of a freedom of information (FOI) law[25] was repeatedly mentioned during one focus group as hindering citizen access to government data, and transparency and accountability more generally. As one participant stated, "The absence of an FOI … keeps the masses ignorant and does not allow them to engage … The fact that we don't have an FOI is a reminder to the public that you don't have the right; that the government can tell you if it feels you should know." The participant went on to describe how the current formal processes of demanding information can be discriminatory and / or make it difficult to remain anonymous: "[Identification is] required to access information, unlike in the US, where you can say you are Mickey Mouse and not give a reason."

According to Filipinos consulted during this research, the lack of a statutory freedom of information law remains a barrier to citizen participation, as people experience discrimination and fear a government record of who has asked for what information.

5.2 Hidden power

Despite the presence of 'front stage' policies that actively promote open governance and citizen participation, our interviewees and focus groups members had personal experience of 'back stage' practices that effectively limited this participation. One civil society leader commented that "local

government officials are wary of participation. As much as possible, they would like to take control of decisions because … they have self-interests, they will be held accountable. They cannot hide … if you open to transparent processes, you expose yourself to people taking power from you." It was the view of this interviewee that the government officials he had interacted with had reasons to hide the processes by which they used their power to secure their own interests. The hidden power mechanisms that participants had experienced were wide-ranging, from the relatively mundane use of bureaucracy and personal relationships to aggressive nuisance lawsuits, bribery, intimidation and murder.

"It's who you know and how you know them that facilitates the getting of information, and sadly it is easier to get something if you say you are part of an organisation than if you are just [an individual]." Despite President Duterte's executive order establishing that Filipinos have a right to information, and the 2017 launch of an electronic freedom of information website,[26] several research participants cited personal experience where having existing relationships within government officers was a more effective means of access than following official process. One civil society leader explained that "because we have connections, we do get that information, through the EITI, because we sit in the multi-stakeholder group. [However] there is information that we want but cannot get, such as the auxiliary rights given to mining companies to divert water resources from the community to their operations … their right to cut down trees … these we don't have access to."

These examples show that social capital often remains a more reliable means to 'open' government data than some open government transparency initiatives. It also shows that some transparency organisations use their own political capital to gain preferential access to information and influence, as well as the finite limits of that access. Moreover, it shows that 'open' data is not a binary concept; our research suggests that some data is open to some people, and that significant power remains with the Philippines government to deny citizen access.

Our research in Palawan provided evidence of systematic bribery to secure political and corporate outcomes: "Vote-buying here is really, really strong. How can we expect people to be vigilant against those politicians when they are already bought? In the Philippines, every time there is an election, there ha[s]

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25 Although President Duterte made an executive order with regard to freedom of information, there are 161 exceptions allowed and, unlike a law, an executive order can be revoked without notice or due process.
26 See: www.foi.gov.ph

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

been buying stations here and long lines for those stations."

This electoral vote-buying was also evidently complemented by bribery in corporate governance; according to one civil society activist, "I ran for officer of [an organisation]. This one government official heard I was running and sent someone [who] gave me this big envelope, and I could sense that it was money … he told me, 'It's loyalty from you he wants, and a guarantee.'" The same activist reported another, unrelated incident: "One of the officials of a mining company spoke to me three times … his message was just asking me what they can give me to mellow down my positions against their violations … he was just asking me how much do I need just to tone down more … officials already understand each other in terms of money … So that is the sad truth of why CSOs are unable to lobby for good governance – because you have this hidden agenda."

What these incidents show is that although the visible processes of political and corporate governance in the Philippines are, in some senses, exemplary, there is often a significant disconnect between policy and practice. Vested interests are able to mobilise hidden power to reproduce their power over others.

We also found a pattern of intimidation and violence used to secure vested interests: "The governor here is something of a dictator … He's scared everyone, including the mayors. He is rich and can file cases against them and can make charges. He controls the military. He is related to the president."[27] This quote is significant in the types of power it highlights; by this account, the governor has political, military and financial power and uses his wealth to abuse legal power. Rather than being earned through merit, these powers were acquired through familial relationships with the president. This lack of independence among government officials was echoed by one research participant who commented that "the point where civil service is a meritocracy, we are not there yet, we haven't reached that point". The use of money to launch nuisance lawsuits was also mentioned by a focus group participant: "It's difficult to oppose mining … [indigenous farmers] don't like mining because it depletes the watershed … but money really talks … He has been threatened in 13 cases with harassment lawsuits … and when the local government is pro mining, it's even more difficult for the indigenous people's communities."

When bribery and lawsuits are insufficient incentives, violence is frequently deployed to secure vested

interests, according to some research respondents: "We already have communities that have been killed, shot. We have cases against the killers." Several interviewees confirmed that not only was fear widespread, but that those who stood up against mining companies were regularly killed. Global Witness (2017) research confirms that the Philippines is the most dangerous place in Asia to be an environmental activist, with 28 documented murders in 2016 alone. The Global Witness report also confirms that aggressive lawsuit attacks, intimidation and violence are widespread in the Philippines, particularly in Palawan, where most deaths are linked to mining and where the majority of those killed are indigenous peoples. In relation to the Philippines, one of the report's main findings points to the disconnect between the terrain of visible power and hidden power when it concludes that "the government's regulatory rhetoric on mining is contradicted by a discourse threatening defenders" (Ibid: 31).

Hidden power also manifests itself in the ability to shape the agenda of what gets discussed and what gets resolved (VeneKlasen and Miller 2002). One interviewee said that despite formal processes (visible power) that entitled his organisation to a seat at a table representing a vulnerable constituency, in practice they were only able to push forward changes on minor issues and lacked the ability to influence more strategic issues: "In the committee there are seven members, and we are just one of them. So, whenever we raise issues critical to government or [big businesses], then it goes down to voting and we get outnumbered. So, although we are very active and have some influence, when it comes to critical issues, we are less influential. We can mobilise people and resources, but regarding critical issues, we don't have power." The presence of this oversight committee creates an appearance of participation, but without the power to effect change.

5.3 Invisible power

If hidden power enables government to deny people a seat at the table, then invisible power means that even for those granted a seat, developing the self-efficacy to use power comes more slowly. Invisible power shapes people's sense of themselves, what they feel that they deserve, what they feel that they are capable of, and what they believe to be true. "We are the small people" was how one indigenous Batak leader explained the self-image of many of her neighbours, as a way of explaining their non-

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27 At the time of our fieldwork, President Duterte had begun his election commitment to give the police impunity to kill low-level drug dealers and addicts without the need for recourse to any judicial system. This has resulted in several thousand extrajudicial killings and summary executions by police and vigilante death squads.

RESEARCH
REPORT

The techno-centric gaze: incorporating citizen participation technologies
into participatory governance processes in the Philippines

When it came to coding our field data, there was more evidence related to invisible power than any other category – and the most significant and unexpected code that emerged was the word 'fear'.

engagement in formal governance issues. As a result of socialisation, culture and ideology, some people feel that their opinions and participation are of little value, and defer to others to make decisions about what is best for them. When it came to coding our field data, there was more evidence related to invisible power than any other category – and the most significant and unexpected code that emerged was the word 'fear'.

The different kinds of fear mentioned ranged widely. One participant described how his community chooses not to engage in governance for fear of being marked out for special attention: "There may be the possibility that you get branded as a supporting a politician … even if you support a politician, that should not be carried after the election, but the reality is … you get branded and that affects your access." This fear was learned over time and internalised. The interviewee told us how they were hospitalised and asked a politician for assistance, but did not receive it because they had previously helped another politician. Another interviewee reiterated this point: "That is quite common in the Philippines – party affiliation affects access."

Research participants also feared repercussions for family members if they engaged in governance issues: "Their relative works in the mining company. So, they cannot speak out because if they do, their relative may lose their job or scholarship. I always hear [things like]: 'I am afraid my son or daughter who is employed will be removed.'" This is as true for powerful mining companies as it is in schools. Check My School told us that rural mothers often "find it risky to be involved in our work because they fear the principal might target their child".

Persistent experience of intimidation and powerlessness can be internalised as a feeling that a person's opinions are not valued or worthy of consideration. According to one research respondent, Filipinos are "not necessarily blunt or forthright when it comes to speech. Especially when speaking to authoritative personalities – those that have some kind of power status. The whole submissiveness is there. Perhaps it is a post-colonial thing." The idea that acceptance of power difference can be explained as a national cultural characteristic has been systematically challenged as culturally deterministic (Ailon 2008; McSweeney 2002; Hofstede 1984).

What we can say is that submissiveness is necessarily a relational concept, in that subordination requires something or somebody else to be dominant. The interviewee's reference to "those that have some kind of power status" indicates that those being submissive have learned a (social norm of) deference to members of another group with a (socially constructed) higher status, justified on the basis of age, education, gender, ethnicity or class. One interviewee explained some people's reluctance to challenge officials by saying, "I think it's the class status: you are just a citizen, you are not an official, you're not a government employee. You know, specifically the poor people, they have low self-esteem." As one of the citizen participatory technology developers commented in her interview, in relation to those that have been persistently deprived and unheard, "The idea is that their opinion doesn't count because it never has, especially if they are poor."

An internalised sense of low self-worth was a recurring theme among our interviewees. One interviewee explained how community members approached to engage in a participatory monitoring project would commonly ask questions like: "Who am I to be monitoring these projects? I am not an engineer, I'm not a professional, I am just an ordinary citizen." Marginalised groups are susceptible to not only internalising a low sense of self-worth, but also internalising the idea that they are worth even less than the 'ordinary citizens'. One indigenous interviewee expressed this point when saying, "Especially since we are small people, it would be very easy to disregard us."

This learned sense of low self-worth and low self-efficacy was raised by several interviewees as a significant obstacle to securing citizen participation: "This is the problem with getting people to step and engage, because of the culture of 'Why bother?' and that 'It's beyond me' is already very much engrained." People may also internalise the idea that they are ignorant and have nothing intelligent to offer, "So that assertiveness that we were hoping for wasn't there. We were able to provide them with access to the data and eventually the resources, but even that is not enough to empower them."

We also found evidence that contextual social norms and power relations prevent marginalised people

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

from taking full advantage of citizen participation technologies – even when the technology and data are provided out of project funds. Our research participants discovered, for example, that providing disadvantaged people with access to data, or giving them phones, was insufficient for achieving their participation in governance. From this, we conclude that digital governance interventions need to go beyond technical access and assess the social and political factors that limit citizen participation. In other words, in order to be fully successful, projects should consider the inhibitive effects of hidden and invisible power on citizen participation. The director of one of the more successful projects in our case studies had learnt lessons from early failures, and incorporated analogue components alongside their digital designs: "The reason that we have [this] blended approach – online and offline – it's because empowerment cannot be encapsulated in technology! It's more dynamic that that. You need face-to-face human interaction for that."

5.4 Levels of power: global, national and local

The forms of power discussed in Sections 5.1 to 5.3 can take places at one or more level. Nominally, the Power Cube has three levels of power – global, national and local – but in reality, the actual number of levels varies from case to case. In our research, the relevant levels of local governance included province, municipality and *barangay*, as well as levels within the decision-making structures in indigenous people's organisations' that feed into the *barangay* and municipality levels.

Global power

For interviewees working on open government data, their membership of global bodies such as the Open Governance Partnership were valued sources of strength and expertise: "We work with Publish What You Pay because they are our international coalition." In the extractive focus group, reference was made to the leverage gained through membership of EITI. One interviewee using citizen participation technologies for disaster risk reduction reported that "the global level has been effective at bringing issues of the Philippines to international debates. For example, the [United Nations] Conference on Climate Change … really brought out … disaster preparedness and disaster risk reduction."

The challenge, however, has been the disconnect between the global level and local levels. As one of the mining activists commented, "It was really interesting, because a few weeks ago, when we were working with communities, we asked 'do you know EITI?' and all of them had never heard of it and they had never heard of the [mining] companies paying

US$3 million over three years to their local chiefs." Despite the potential for global open data initiatives to inform local communities about what mining companies are paying local leaders for their consent, the current reality is that the individuals engaged at the global level are rarely from the most marginalised groups. It remains a challenge to connect global and local practices meaningfully.

National power

At the national level, the Philippines' constitution promotes participation, and the Aquino government introduced legislation and regulations that mandate citizens' representation on a raft of monitoring and oversight committees, and forced the issue through processes such as Bottom-up Budgeting (see Section 3.2). This is an example of the use of hidden power operating at the municipal level to frustrate global conventions, constitutional guarantees and legislative intent. It also illustrates how any of the forms of power from the Power Cube can play out at any of the levels of power.

In the extractives focus group, there was frustration that global conventions and national policy rhetoric stood in stark contrast to local practices: "At the national level, we get to raise our issues but at the local level, when people raise their issues, they get killed, they get harassed by local politicians and by mining companies themselves, so participation becomes difficult at the local level."

It was in this context of violence that one provincial organisation had taken to using digital photographic evidence from local community activists, which were geo-tagged and time-stamped and then uploaded to GIS software to provide admissible evidence that extractive industries were breaking the law. "You can convince government if you have technology and you have evidence. We have a special law that bans extractive activities in natural forests … before, because you didn't have geo-tagged and photographical evidence, the politicians wouldn't believe you."

Indigenous people's use of digital evidence, embedded in geo-spatial technology, helps them to elevate the status of their legal testimony in ways that substantially improve their ability to defend their communal lands from illegal mining, logging and fishing. What was interesting about this successful application of citizen participation technologies was that the organisation responsible was clear that their ability to scale the work was not an issue of access to more (digital) technology, but rather the ability to expand their (analogue) capacity-building with local communities regarding national environmental law and their rights to protect their territory against illegal encroachment and environmental crime.

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

Local power

Local power is structured at three main levels of government in the Philippines: province, municipality and *barangay*. Historically, indigenous people were under-represented at all levels as they were not recognised as citizens in the Philippines. There is now special provision for the tribal councils of indigenous people to represent their concerns at the *barangay* or municipal level: "The chief would go to the *barangay* captain. They bring up their issues at the *barangay* and, if it is needed, they go to the city … They are involved with the *barangay* council as the minority representative."

Similarly, prior to 1987, CSOs were not represented in local or corporate governance, but now they are required to be representative. However, the spirit of this law is often not adhered to. An interviewee told us that "in municipal government council law, it says at least 25% should come from CSOs, but in the monitoring team there is only one out of 15 people … we are able to get our issues on the agenda, but whether or not it is acted upon varies. There are issues that are easily addressed, but more fundamental and strategic issues are not addressed." Again, the evidence from our research suggests that hidden power is deployed to subvert the regulatory requirement for specified levels of participation. This interviewee also claimed that while there is some flexibility around less important issues, for fundamental and strategic issues citizen and civil society concerns are not influential at the local level.

Some of the local citizen participation initiatives in our research noted a tension between wanting active support from national government at the same time as wanting to avoid being slowed down by government bureaucracy or co-opted by government and watered down. One official from eBEIS expressed this clearly: "We are more or less operating independently and that has its good and bad sides. The good side is that we can really determine the course of our own project. The bad side is that there is low appreciation on the side of the Department of Education … If we were [more integrated into government], you would get more rules, you would get more guidelines to the point where it becomes part of the bureaucracy and gets watered down. That's what happened to Textbook Count."

On the other hand, local initiatives often need engagement from the national government if their objectives are to have a widespread effect: "That's the difficult part, because if we would like to push for a reform within the government structure, that cannot happen at the local level alone. It should have some national support. In the same manner, national movements should be supported by grounded activities. If the movement is confined in some location, then you might be successful in the localised advocacy work – but influencing national decision-making [is impossible]."

One strategy to address this paradox is to join civil society networks. This enables an initiative to retain a local focus but partner with others to engage with government at other levels (global, national, local), while at the same time working horizontally with other CSOs in the media, academia and faith-based groups: "Joining a network so that [a] recommendation can have greater weight … when nothing happens with the formal structure, the network brings the case to the media, sometimes to Facebook, sometimes to someone in higher authority."

5.5. Spaces of power: closed, invited and claimed

Most citizen participation initiatives – and hence citizen participation technologies – target closed spaces of power and aim to create more *invited* or *claimed* spaces as a way to create more open, transparent and accountable forms of governance. The extractive industries in the Philippines are a case in point.

The process by which global mining corporations secured rights from the national government to clear forests, divert water courses and strip-mine the land were almost entirely *closed* to the local indigenous people who inhabited and farmed the land. Bantay Kita is the national association of CSOs working on extractive issues in the Philippines. Bantay Kita member organisations work in invited and claimed spaces to open up government and corporate decision-making on extractive issues. They do so at global, national and local levels. Through their membership of the global EITI initiative, Bantay Kita has successfully obtained access to open data records that extractive industries are now required to submit as part of global agreements. The Aquino government created a range of *invited* spaces in which some CSOs were given limited places on a range of decision-making, monitoring and oversight committees. Meanwhile, at the local level, CSOs like the Palawan NGO Network have been successful in creating new *claimed* spaces of legal accountability, by organising citizens' arrests and prosecutions. The boundaries between these categories can be contested, as it could be argued that invited spaces arise as a function of civil society claims, but they are conceptually valuable nonetheless.

In understanding how change happens, the question arises as to whether it matters if a new space for participation is created by government (invited) or by citizens (claimed). Different opinions were offered

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

by participants that we interviewed. The head of one CSO argued that "citizen engagement is more likely to be successful if it is initiated by CSOs rather than by individuals, because CSOs have a history of engaging with the government". Another education activist opined that "if government initiates, it has the authority and the resources of government, so you have an advantage". For this reason, they formed close constructive relationships with government departments. This opinion was echoed by an activist from the mining sector: "There is more traction when events are called by national government … one of the [our] advantages … is that we get to engage with governments."

One international expert that we interviewed made the case that "it matters who initiates [because] Filipinos are relational … there is very high regard for working with someone who has been vetted by other people that you have worked with before". From her perspective, it is not so much whether the person initiating is from the government or a CSO, but whether they have earned the trust of citizens based on past performance – and whether others will therefore join the initiative.

Several research participants made a strong case that what mattered most was whether the process increased the political agency of citizens: "We need to clarify the difference between disclosure and access [to government data]." This participatory governance activist argued that there is a significant difference between a government opening datasets that it wishes to publicise, and a citizen feeling able to demand access to any data that they wished to see: "Government disclosing data does not take the place of arming citizens with the tools to access what they want to access, because opening data is the call of the government – but wanting data is the call of citizens, the ability to ask further rather than just having access to what is disclosed. That is more telling about whether you are really empowered and whether the government is really open."

This last point is crucial. If the objective is for government to be transparent and accountable to citizens, then citizen participation technologies need to enable citizens to access the information of their choosing; information which reflects citizens' priorities. If the objective is to empower citizens, then moving from the internalisation of powerlessness (a sense of feeling unheard and unentitled) to a sense of empowerment sufficient to request information and, with others, to influence government, is potentially transformative. What matters in assessing the transformative potential of such initiatives is the extent to which they enable previously marginalised people to claim citizenship and effect changes over decisions relevant to their own lives and interests (Gaventa 2005).

6. Conclusions

This research analysed a range of citizen participation technology initiatives in the areas of participatory budgeting, school monitoring and extractive industry governance. The purpose was not to evaluate the initiatives themselves, but rather to understand which factors affect exclusion and non-use. To avoid the techno-centric gaze, case studies were formed not around specific citizen participation technologies, but rather around groups of users and non-users in the three focus areas.

Focus groups and interviews produced new knowledge about different classes of technology ownership and citizens' often fragile and fluid connectivity experiences, especially among marginalised communities. This contradicts the binary and static view of (entirely) connected or (entirely) unconnected people, as represented in official statistics.

The five A's of technology access served as a useful framework for thinking through the complex levels of technology access and exclusion experienced by research participants in the Philippines. This also proved useful as a way to de-centre the technology itself and identify a wide range of technical, social and political factors that structure those exclusions. Our analysis suggests that, for this research sample, pre-existing structural inequalities of class, gender and ethnicity are being reproduced in unequal classes of technology ownership and connectivity access. Those with the lowest class of connectivity and technology ownership were unable to take part in technology-mediated governance initiatives. Those with the most privileged access to technology gain yet further social and political advantage by having their voices heard in any technology-mediated 'participatory' governance initiatives.

To this extent, it is evident that unequal classes of technology access (re)produce pre-existing social inequalities. Further research is necessary to test these findings with larger sample sizes and in different geographies, as well as in relation to the intersection

RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

of class with other dimensions of inequality, including gender, ethnicity, age and disability.

The power analysis we conducted as part of this research found that the provision of technology alone (in the form of free phones or mobile apps to target groups) was an insufficient condition of citizen participation. The evidence presented suggests that forms of hidden and invisible power can explain non-use and the consequent failure of some digital development projects to meet their objectives.

These findings point to a need to modify the theory of change that underlies many citizen participation technology initiatives, and digital development efforts more widely. To enhance citizen participation in governance, it is necessary to do more than provide the correctly specified technology. In terms of technology access, our case studies demonstrated that, in addition to addressing availability and affordability, successful projects also need to tackle levels of awareness, abilities and accessibility to ensure citizens are able to make effective use of participation technologies. In terms of power, the case studies illustrated that when people have been systematically marginalised or persistently deprived, we must not discount the possibility that internalised oppression may self-limit levels of engagement.

As a result, digital development projects that aim to secure the participation of disadvantaged groups may need to include activities that enhance the self-efficacy and political consciousness of marginalised groups in order to be genuinely inclusive. Such processes should be designed to bring people outside of the decision-making process into it and lead people to perceive themselves as able and entitled to make decisions.

Technology is not neutral; it often reflects and reproduces dominant social relations. The ability of Filipino citizens to actively participate in technology-mediated governance is being structured along recognisable lines of ethnicity, class and gender. As long as social and economic inequalities endure in the Philippines, there is good reason to expect them to continue to be reflected *materially* in inequitable technology access and *subjectively* in people's internalised sense of privilege or powerlessness. For those concerned with digital development, the question therefore becomes: which classes of users are their citizen participation technologies intended for, and how can they ensure inclusive and equitable participation?

Our research leads us to make three recommendations to designers of digital development initiatives who wish to be inclusive of marginalised and excluded citizens:

1. Prior to implementation, obtain, through access analysis, a clear understanding of which technologies and levels of connectivity are *available* and *affordable* to marginalised and excluded groups

2. Through power analysis, obtain a detailed understanding of which forms of (hidden and invisible) power need to be addressed in programme design.

3. Based on that analysis, *design for equity* by *building awareness, ability and accessibility components* into the implementation of projects, as well as countering the effects of hidden and invisible power by including elements that raise awareness of governance issues and enhance the political agency of those previously marginalised and excluded.

By seeing beyond the techno-centric gaze and incorporating these social and political considerations into their theories of change, future digital development initiatives can improve both their levels of inclusion and their overall efficacy.

RESEARCH
REPORT

The techno-centric gaze: incorporating citizen participation technologies
into participatory governance processes in the Philippines

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RESEARCH REPORT

The techno-centric gaze: incorporating citizen participation technologies into participatory governance processes in the Philippines

About Making All Voices Count

Making All Voices Count is a programme working towards a world in which open, effective and participatory governance is the norm and not the exception. It focuses global attention on creative and cutting-edge solutions to transform the relationship between citizens and their governments. The programme is inspired by and supports the goals of the Open Government Partnership.

Making All Voices Count is supported by the UK Department for International Development (DFID), the US Agency for International Development (USAID), the Swedish International Development Cooperation Agency (SIDA) and the Omidyar Network, and is implemented by a consortium consisting of Hivos, IDS and Ushahidi.

Research, Evidence and Learning component

The programme's Research, Evidence and Learning component, managed by IDS, contributes to improving performance and practice, and builds an evidence base in the field of citizen voice, government responsiveness, transparency and accountability (T&A) and technology for T&A (Tech4T&A).

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