

Overcoming collective action problems through anti-corruption messages

Caryn Peiffer and Grant Walton

Abstract

Anti-corruption campaigns often include an awareness raising component which highlights the negative consequences of corruption; the idea is that awareness will empower citizens to demand a change. However, experiences from developing countries suggest that messages that highlight corruption's prevalence may actually backfire by adding to the belief that corruption is normal and an intractable collective action problem. In this paper, we present findings from a survey experiment conducted in Port Moresby with over 1500 respondents, to understand how Papua New Guineans might respond to different messages about corruption and anti-corruption. Each respondent was randomly assigned to a group where they either were not exposed to a message about corruption (control group) or had one of four messages read to them and were shown a picture that was tightly associated with the message. The messages, each a separate narrative, emphasised the legal, moral and communal aspects of corruption and anti-corruption in Papua New Guinea, as well as its ubiquity. Findings suggest that respondents are more likely to see corruption as widespread, have favourable attitudes about reporting corruption, and may be more willing to report corruption when they are exposed to anti-corruption messages that emphasise impacts to respondents' local kinship groups. These findings have significant implications for those seeking to increase citizens' willingness to respond to corruption in contexts where corruption resembles a collective action problem.

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1. Introduction

Two assumptions are made by anticorruption awareness raising advocates. First, exposure to facts and images about corruption—shared via a range of media platforms—will cause outrage in citizens, and second, that outrage will lead to citizens being more willing to act against corruption (for example, by reporting corruption, signing a petition, or participating in a demonstration). This thinking was codified in the 2004 United Nations Convention Against Corruption (United Nations 2004, p. 15) and also featured heavily in the advice given in 2011 by Alun Jones, then Chief of Communications and Advocacy for the United Nations Office on Drugs and Crime, on the best practices in anticorruption awareness raising. Those calling for greater transparency as a measure to fight corruption similarly assume that citizens will both disapprove of corruption once made aware of it, and that that disapproval will translate into a willingness to become active in the effort to hold corrupt officials accountable (Bauhr and Grimes 2014).

However, these assumptions and the efficacy of anti-corruption awareness raising have been recently questioned. Dissenting voices are emerging from a nascent literature that suggests systemic corruption is most appropriately cast as a ‘collective action problem’ (Persson, Rothstein & Teorell 2013; Bauhr & Grimes 2014; Marquette 2012; Mungiu-Pippidi 2011; Bauhr & Nasiritousi 2011; Rothstein 2011; Dong, Dulleck & Torgler 2012). These scholars argue that when corruption is systemic and widely perceived to be the norm, it is much more likely that people will continue to go with the corrupt grain, rather than try to challenge it. This has profound implications for anti-corruption agencies seeking to raise awareness about corruption. By making corruption appear to be even more widespread, these well-intentioned efforts may be encouraging a collective action problem around fighting corruption, where citizens are more likely to engage in it, rather than fight it.

Despite this hypothesising, little is known about the effects of anti-corruption awareness raising. In 2011, Jones claimed that documentation of national successes was available, but conceded that the effectiveness of awareness raising campaigns was ‘hard to pin

down' (Jones 2011, p. 8). In their then-exhaustive review of research done on the effectiveness of anticorruption interventions, Johnson, Taxell & Zaum reported that they failed to unearth a single study on the effectiveness of awareness raising strategies (2012, p. 28). Since Johnson, Taxell & Zaum's (2012) review, a single study has been conducted to examine how it is that different awareness raising messages might influence willingness to fight corruption². The findings of Peiffer's study—conducted in Jakarta in 2015—showed that messages about corruption tended to trigger increased worries about corruption's ill effects, amongst a household sample, and either did little to influence willingness to fight corruption or *decreased* willingness to fight corruption (2017a, 2017b, 2018). These findings beg the question about whether different sorts of messages—other than those that were tested in Jakarta—may work to encourage citizens to get involved in the fight against corruption, thereby contributing to wider anticorruption efforts to solve the 'collective action problem' that corruption seemingly resembles in systemically corrupt countries.

This article presents findings from a survey experiment on anti-corruption messages in Papua New Guinea (PNG), which tested what impact exposure to four thematic messages have on attitudes about corruption and willingness to report corruption. The messages both emphasise themes that different literatures on anti-corruption highlight as being potentially useful in encouraging citizens to become involved in the fight against corruption, and speak to specific contextual characteristics within Papua New Guinea. One of these messages echoes a theme found in Peiffer's study (2017a, 2017b, 2018), as it emphasises the ubiquity of corruption. This message reflects the fact that most Papua New Guineans believe that corruption is very widespread. The other three messages depart from those tested in Peiffer's study, (2017a, 2017b, 2018) however. As religion is an important part of Papua New Guinean life, we test what impact a religious or moral message about anti-corruption has on attitudes about corruption and willingness to report corruption. To speak to the fact that many Papua New Guineans have strong cultural connections to their local kinship groups, another message tested frames anti-

² Few scholars have researched how messages about corruption influence attitudes and behaviour at all. Those that have, have primarily focused on how different messages about corruption influence voting patterns and party identification (E.g. Figueirido, Hidalgo & Kasahara 2011; Winters & Weitz-Shapiro 2013; Chong et al. 2015) rather than actually reporting or conceptualising corruption.

corruption to be a local community issue. Finally, as anti-corruption efforts have galvanised around the introduction, amendment and enforcement of different laws in PNG, we test what impact a message that emphasises the illegal nature of corruption has on attitudes about corruption and willingness to report corruption.

Promisingly, the results of our analyses suggest that certain, contextually tailored, messages may be useful for encouraging citizens to fight corruption. They show that messaging which frames anti-corruption as a local community issue in PNG is both persuasive and influential. Respondents exposed to this message believed that corruption was a ubiquitous problem, but also had more favourable attitudes towards reporting corruption and a greater willingness to report it. In contrast, all other three messages were far less influential. Exposure to messages about corruption's illegality and its ubiquitous nature influenced perceptions about the levels of corruption, however they did not influence willingness to report corruption, and exposure to a message about the immorality about corruption did not influence any of the perceptions tested.

This paper proceeds by first examining the literature, and then by providing a brief background on the case study: PNG. The methodology and key findings are presented before the concluding section discusses what these findings mean for the potential for anti-corruption messaging to challenge corruption as a collective action problem in PNG and other developing countries.

2. Literature review – What messages might overcome corruption as a collective action problem?

Research from a growing number of academics suggests that anti-corruption campaigns that focus on providing citizens with more information about the effects of corruption are likely to fail. This is because, rather than empowering citizens to resist corruption or engage in anti-corruption activism, providing information about corruption, it is feared, may lead to cynicism and trigger resignation (Peiffer & Alvarez 2016; Persson, Rothstein and Teorell 2013; Bauhr & Grimes 2014; Bauhr & Nasiritousi 2011). This sense of resignation has been called 'corruption fatigue' (see Peiffer & Alvarez 2016, p. 354), which is when individuals, confronted by a perceived widespread nature of the corruption problem, see no net benefit in working towards the common good of reducing

corruption, by, for example, personally refraining from engaging in corruption or reporting it when they come across it.

For several scholars, widespread ‘corruption fatigue’ in countries that suffer from systemic corruption has led to society-wide ‘collective action problems’ around fighting corruption (Persson, Rothstein & Teorell 2013; Bauhr & Grimes 2014; Marquette 2012; Mungiu-Pippidi 2011; Bauhr & Nasiritousi 2011; Rothstein 2011; Dong, Dulleck & Torgler 2012). From this perspective, with large groups of citizens convinced that fighting widespread corruption is a ‘lost cause’, inevitably too few will get involved in resisting or fighting to control corruption to make a real difference. The specific fear with respect to awareness raising efforts is that such efforts may work to trigger or reinforce ‘corruption fatigue’, by emphasising the notion that corruption is a widespread and intractable problem. In the words of Persson, Rothstein & Teorell (2013, pp. 464-465), efforts to make citizens ‘even more aware of the [corruption] problem’ can encourage ‘even noncorrupt actors to take part in the corrupt game’.

Despite the growing influence of this scholarship, there is still little known about what impact messages about corruption and anti-corruption have on citizens’ willingness to report corrupt activities. There has been some speculation that the ubiquity of anti-corruption messages in post-war settings may be fuelling citizens’ cynicism and undermining anti-corruption efforts (Galtung & Tisné 2009, p. 100). Others have established more promising trends: Peiffer & Alvarez (2016), for example, find that perceptions of widespread corruption in non-OECD countries are positively associated with being willing to engage in some civic anti-corruption activities, when confidence in the government’s efforts to also fight corruption grows. These findings provide some hope that awareness raising messages that make citizens more likely to think that corruption is pervasive may not necessarily trigger ‘corruption fatigue’, and be as problematic as feared.

The literature tends to focus on what citizens *might* be willing to do when faced with corruption as a perceived ‘collective action problem’ (Persson, Rothstein & Teorell 2013; Bauhr & Grimes 2014; Bauhr & Nasiritousi 2011). However, an emerging line of research suggests that anti-corruption messaging can both shape perceptions about the levels of corruption and willingness to act against it in different ways. Thus far, a sole recent research project has directly tested the linkages between awareness raising efforts and

willingness to engage in civic anti-corruption activity. Using a survey experiment research design, it exposed randomly selected citizens in Jakarta to different messages about corruption and anti-corruption (Peiffer 2017a; Peiffer 2017b; Peiffer 2018). It examined the extent to which exposure to different messages influenced attitudes about corruption and anti-corruption, as well as willingness to report, protest and otherwise resist corruption. The study tested four messages: one on grand corruption, which highlighted corruption scandals involving large sums of money and notable public officials, one on how pervasive petty corruption is, another on the ways in which the government has fought corruption, and a final one emphasising how ordinary citizens could get involved in the fight against corruption. Regardless of tone or content, all messages tested reduced the belief that ordinary people can easily participate in a civic-led anti-corruption movement, and exposure to the tested messages had either very little positive influence on willingness to get involved in anti-corruption civic activities or a net negative influence (Peiffer 2017a; 2017b). These findings provided very little evidence that the messages tested could discourage corruption fatigue, and instead showed that some messaging may in fact work to encourage it. Following these insights, this research paper tests whether different sorts of messages might shift perceptions about and willingness to work to overcome corruption as a ‘collective action problem.’

White context-specific, Peiffer’s findings (2017a; 2017b; 2018) are problematic for anti-corruption advocates as they infer that informing the public about corruption can make the problem worse. They suggest that motivating citizens to change their understandings of and response to corruption may require different sorts of messaging or that messaging may not be influential in intended ways. In contrast, the literature suggests reframing the content of the messages citizens receive about corruption might have a different effect than what was observed in the Jakarta experiment (in which the tone (positive or negative) and scale of corruption (petty or grand) framed messages).. Literature on the three themes, discussed next, suggest that messaging emphasising these themes might encourage citizens to think differently about and work to overcome the perception that corruption is a society-wide ‘collective action problem.’ Also important to the location of our study, each of these themes resonate well with the

Papua New Guinean context.³ The contextual fit of these themes is discussed after we briefly summarise the anti-corruption literature associated with each theme.

2.1 (II) legal framings

Framing corruption as a legal issue is a key part of international (Kennedy 1999; World Bank 2017) and national (Hin n.d) anti-corruption campaigns. The World Bank's *2017 World Development Report: Governance and the Law*, suggests that the law plays a crucial role in shaping preferences and coordinating expectations about how others will behave: "...law can act as a signpost – an expression – to guide people on how to act when they have several options... Law provides a clear reference in the midst of diverging views (p. 13)."

This assumption has long guided anti-corruption activity. In the early 1990s, Reed (1992) argued that it is the structure of laws and rules that shapes behaviour, particularly in the public service where corruption can be most acute, more than the values and attributes of individuals. Likewise, in the late 1990s Kennedy noted that anti-corruption campaigners drew on "a presumptively neutral and locally adopted rule of law" to steer away from "moralising rhetoric" and the echoes of colonialism associated with anti-corruption messages coming from Western actors (1999, p. 458). In other words, legal discourse helped campaigners to frame their advocacy.

Scholars have provided some insights into how legal messages might impact on citizens' attitudes towards corruption and willingness to report it. Research has found that when there is a credible threat of punishment, citizens are most incentivised to follow laws (World Bank 2017; Tyler, Callahan & Frost 2007; Gezelius and Hauck 2011). Second, scholars have suggested that laws can motivate citizens when they align to local values and culture (Tyler, Callahan & Frost 2007; Gezelius & Hauck 2011). For example, in a

³ Other messages were evaluated for their suitability for being tested but were found to be inappropriate for the PNG context. For example, in Indonesia Peiffer (2017a; 2017b) tested for what impact a message about improved government effectiveness in fighting corruption might have on willingness to engage in anti-corruption civic activity. This example was deemed inappropriate for PNG as the country has not seen credible improvements to anti-corruption efforts. It was felt that such a message would not be taken seriously (particularly in the wake of the closure of Taskforce Sweep, a key anti-corruption agency, see Walton 2018).

study of law enforcement officials, Tyler, Callahan & Frost (2007) find that officers' values and organisational culture are central to anti-corruption rule adherence; they suggest that "self-regulation via appeals to the values of law enforcement officers and soldiers is a viable strategy for minimising misconduct" (2007, p. 457). In turn, Gezeliu & Hauck (2011, p. 436) suggest that once citizens morally support the law's content, they are likely to promote compliance through informal social control and socialising others to "internalise group norms that prescribe compliance". These studies suggest that, in places where the law is considered legitimate and punishment is likely, appeals to national laws can reshape citizens' perceptions and actions, potentially encouraging citizens to work together to overcome corruption as a 'collective action problem.' Having said this, the ways in which legal messages specifically and directly impact on citizens' responses to corruption remains poorly understood, and academics have called for research to better understand these connections (Leszczynska & Falisse 2016).

2.2 Community framings

Anti-corruption responses have become more sensitive to the local context where citizens' social obligations, relationships, values and cultures are formed. This is evident in the push for decentralisation, which assumes that bringing service delivery closer to citizens will help reduce corruption (Vernon et al. 2006). As a part of the turn to decentralization, localized anti-corruption measures have seen greater support from anti-corruption actors. These measures include community programs to monitor corruption, media initiatives that shape opinions around corrupt practices, and school programs that teach appropriate norms (Michael 2004). Richards (2006, p. 5) calls these "community-based anti-corruption programs", describing them as "initiatives that are physically and conceptually located in a community to fight and counter corruption". She goes on to note that they are programs which actively involve "citizens in the design, implementation and evaluation of the anti-corruption activities". By incorporating local voices and concerns, some argue that resultant anti-corruption programs might be more effective (Bukovansky 2002; Huffer 2005).

Supporting this approach, studies suggest that better informing citizens about the *localised* impacts of corruption can improve citizen responses to corruption and mismanagement. Reinikka & Svenson (2011) show that informing citizens about the

status of local education funding in Uganda led to increased monitoring which improved funding arriving at local schools (by reducing corruption), student enrolments and achievement. Tsai (2007) has shown that rural government officials in China are subject to the local unofficial rules and norms from surrounding communities that establish and enforce their public obligations. This helped improve service delivery: villages where local culture and norms support accountability enjoyed better local government public goods provision.

Other studies have found that efforts to motivate community action to overcome a collective action problem do not always work. In their randomised education intervention in 550 households in rural Kenya, Lieberman, Posner & Tsai (2014) find that providing parents with information about children's performance did not improve educational outcomes. Given this result they suggest that "for information to generate citizen action it must be understood; it must cause people to update their prior beliefs in some manner; and it must speak to an issue that people prioritise and also believe is their responsibility to address... to the extent that the outcome in question requires collective action, they must believe that others in the community will act as well" (2014, p. 70).

In other words, the study reinforces the notion that messages that emphasise the local impacts of public service failures (and by extension corruption) might be effective if they tap into a broader sense of communal responsibility.

2.3 Religious framings

Since the late 1990s, when anti-corruption became central to international development, most anti-corruption policies and programs have focused on technocratic reforms. This approach has been challenged by those who consider corruption an inextricably moral issue (Huffer 2005; Laver 2010, 2014; Williams 2010), and that addressing corruption requires engaging religious institutions (Laver 2010, 2014). While some academics suggest that, globally, religious organisations have not been as engaged in anti-corruption efforts as they should be (Browne 2014; Laver 2010), religious organisations have and continue to play an important role in fighting corruption. For instance, in 2006 the theme of the Catholic Church's Pontifical Council for Justice and Peace was "The fight against corruption" (Laver 2010). There are also signs that religious messages are being

increasingly adopted by policy makers to help address corruption (Marquette 2012; Marquette, Vinod & Malik 2014). For example, recently, administrators in the Pakistan province Khyber Pakhtunkhwa – one of the country’s four administrative provinces – intended to incorporate anti-corruption slogans from the Holy Quran to help promote integrity and cohesion (Ashfaq 2014). In Indonesia, Wijaya (2014) reports that an interfaith organisation published a handbook for religious leaders to help demonstrate that all religions provide resources for helping their adherents resist corruption.

Yet, much of the academic research suggests that using religion in the fight against corruption may not be as effective as hoped. This is in part because religious organisations can be perceived as corrupt, thus undermining their messages (Browne 2014; Marquette 2012; Yagboyaju 2017). Indeed, Yagboyaju (2017) suggests that religious organisations helped to worsen political corruption in Nigeria, undermining their role in the country’s anti-corruption efforts. Qualitative research has found that religious messages are likely to be undermined by the systemic nature of corruption (Marquette 2012; Marquette et al. 2014). Marquette (2012, p. 24) argues that ultimately, it is not whether individuals are religious or not, but whether religion is ratified by the social environment that determines the potential for overcoming problems of collective action around effective anti-corruption.

In sum, while anti-corruption practice and theory suggests that legal, community and religious messages might help encourage citizens to engage in anti-corruption efforts, there is still little research to support the often-contradictory claims made by anti-corruption agencies and scholars. The next section provides a brief background on the case study chosen for this research – PNG.

3. Collective action, laws, community, and religion in Papua New Guinea

PNG is a developing country, ranked 154 out of 185 countries in the UNDP Human Development Index (UNDP 2016). It is a relevant case study to shed light upon these issues as, like in other developing countries, corruption in PNG is frequently framed to be a collective action problem. A previous Prime Minister has noted that corruption in the country is “endemic, systemic and systematic” (Australian Conservation Foundation &

CELCOR 2006, p. 23). These concerns are reinforced by regular media reports about corruption, and external indices that attempt to measure corruption (Walton & Jones 2017). In 2015, the PNG branch of Transparency International released findings of a survey in five provinces, which found that 99 per cent of respondents thought corruption was a big or very big problem, and 90 per cent thought the problem had gotten worse over the past decade (Transparency International Papua New Guinea 2015). The country is also a relevant case study for testing the themes reviewed through messages about corruption because citizens have strong associations with their local community; religion and religious organisations play an important part of people's lives; and the country's constitution and resulting laws are important institutions evoked in discussions about corruption.

3.1 Legal framing

In PNG, the law is a key institution which has been drawn on by scholars, citizens and anti-corruption agencies to understand and address corruption. Academics have sometimes conflated corruption with the law, suggesting that corruption needs to be understood as illegal behaviour (Pitts 2001, 2002). Citizens believe that the key reason corruption persists is due to the inability of the state to enforce existing laws: 65 per cent of respondents in a nine-province survey nominated this as the key cause of corruption in the country (Walton & Dix 2013, p. 33). Prominent academics and statesmen have also called for stricter enforcement of laws (May 2004; Morauta 1996). Over the past few years there has been a push to introduce and amend laws to fight corruption. As Walton and Hushang (2018) show, with the country facing a fiscal crisis, in 2018 the government prioritised legal responses over funding state-based anti-corruption agencies, which have seen significant reductions in budgetary allocations. In turn, there is concern that new and amended laws will not be enforced (Walton and Hushang 2018). Having said this, there is still respect for a few of the country's legal institutions. Urban citizens have protested against political manoeuvres that are perceived to undermine the constitution. For example, in 1997 (Dorney 1998) and 2011 (May 2017) citizens protested against political deals that were seen to be contrary to the meaning of the nation's constitution – a document that was a product of extensive community consultation.

3.2 Local, community framing

Many Papua New Guineans, even those in urban areas, are strongly connected to their local kinship groups. Local connections are most often expressed through the *wantok* – which means ‘same language’ or ‘one talk’ in Tok Pisin, PNG’s lingua franca – system. The *wantok* system provides connections and obligations within kinship groups, which often means that Papua New Guineans are more inclined to trust and display loyalties towards their *wantoks*. In the midst of a weak state (Dinnen 1997), the *wantok* system provides social protection, with kinship groups providing support when their *wantoks*’ are sick, unemployed and otherwise in need of assistance. However, these obligations can be associated with corruption, as politicians, public officials and those from the private sector direct resources towards their *wantoks*, sometimes through illegal means (Walton 2013b). Recent findings suggest there might be some potential for channelling citizens’ localised *wantok* relationships into action against corruption. In a household study on citizens’ perceptions of corruption, respondents were more concerned about corruption that occurred locally, even if these acts were petty in nature (Walton 2018). In particular, most of the over 1800 respondents were concerned when corruption appeared to impact on local communities rather than impacts on other scales (Walton 2018). These findings support calls for greater engagement with the *wantok* system by those seeking to address corruption in PNG (Okole & Kavanamur 2003; Walton 2013a).

3.3 Religious or moral framing

Religion is also a key part of Papua New Guinean life, and significantly impacts on the way corruption is understood and addressed in the country. The vast majority of citizens identify themselves as Christian, with 96 per cent identifying with this religion in both the 2000 and 2011 censuses (National Statistical Office, n.d.). The churches play a critical role in service delivery by, for example, running approximately half of the nations’ primary schools and half of the country’s ambulatory (Howes et al. 2014) and rural health services.

Churches have also played a crucial role in speaking out about government mis-governance and corruption. Church leaders highlighted grand-scale corruption in 1997 during public protests against the national government’s attempts to hire foreign

mercenaries to quash a civil war in the island province of Bougainville. Similarly, in 2005, churches, along with the national chapter of Transparency International, gathered tens of thousands of signatures on a petition and helped to stop a bill to bolster MP's constituency development funds, which many have been associated with corruption (Walton 2018). More recently, the Catholic Bishop's Conference of PNG and Solomon Islands focused on the impacts of corruption, declaring that "People suffer at the hands of those who misuse power for their selfish needs" (CathNews New Zealand 2015), and Anglican Bishops have [called for](#) "responsible honesty" in the fight against corruption (Igara 2016).

Most people in PNG trust the churches to keep the government accountable. A household study conducted in nine provinces found that 70 per cent thought the churches were totally or mostly effective in ensuring government accountability – the best response to any of the country's key anti-corruption institutions (Walton & Dix 2013). However, like in other contexts (Browne 2014; Marquette 2012; Yagboyaju 2017), there are also concerns about churches fostering corrupt activities themselves, particularly at the local level. From focus groups undertaken with almost 500 people across five provinces, Walton (2013b) shows that some respondents were concerned with the local church's involvement in corruption.

4. Survey-experiment design

4.1 Sampling procedures

The analyses that follow draws from an original survey experiment conducted in Port Moresby, PNG from 23 January to 16 February 2017. We utilised a convenience sample of 1,520 adult passers-by in public spaces. While a household, pure probability-based sampling method may be considered academically superior, given the context, a convenience sample was necessary to use. Valid probability sampling is impossible to achieve because there is an absence of detailed up-to-date demographic data for PNG. Security considerations make residential or household sampling impractical and potentially dangerous. The security situation dictates that interviewing must occur during the day time, however all able-bodied workers (formal and informal) and students

tend to be out of the home during the day. Moreover, because of the security situation in the city, many Papua New Guineans do not welcome strangers into their compounds.

Working with Anglo Pacific Research (APR), an experienced research firm based in PNG, 75 different public spaces were selected as the primary sampling units (PSUs), which were spread over three Port Moresby districts/electorates (South, North West and North East). About 500 participants were recruited from each electorate, and 20 interviews were conducted at each PSU. Insofar as it was possible, the PSUs were selected to represent a range of socio-economic situations within Port Moresby, however potential PSUs were necessarily excluded if they were deemed to be significantly unsafe at the time of fieldwork.⁴ Participants were recruited, with guidance from a quota system that ensured that an equal number of males and females, across age groups, were selected. Interviews were conducted in Tok Pisin by Papua New Guinean professional enumerators, employed by APR.⁵ Specific demographic characteristics of the sample are summarised in Appendix 1. Our sample was evenly split between male and female respondents and the age distribution is very consistent with that of other urbanites in PNG. However, our sample has, on average, received more education than other urbanites in PNG. While this should be kept in mind when drawing generalisations from this study, there is no expectation that this difference will impact the efficacy of the experiment.

4.2 Design

Participants in the study were randomly assigned to one of five groups: control, moral duty to fight corruption (moral), corruption should be fought locally (local), corruption is illegal (illegal), or corruption is widespread (widespread) (n=301 to 309 for each group). Enumerators started by reading a short introductory paragraph to the participants that described the study's aims as wanting to 'learn what citizens think about public services

⁴ At each PSU, permission was obtained to conduct the research from a local elder or councillor.

⁵ APR also translated the original English version of the survey instrument to Tok Pisin. The survey was piloted with 50 participants, to check translation and comprehension of the meanings of the survey questions. Participants in the pilot said that the questions were clear; the meanings of the questions were seemingly well understood. The interviews were only conducted with participants that were local to the PSU area and were done on a same-gender basis, with males interviewing males and females interviewing females. The enumerators discouraged crowding while interviewing; because of the experimental nature of the study, participants were not recruited from those who were watching another survey being undertaken. Very few of those approached refused to be interviewed.

and the experiences they have had with public officials.’ It was explained that the responses to the questions on the survey would be treated confidentially and that, if they wanted to, the participant could stop answering the questions posed at any time.

The participants were then asked their age, and enumerators recorded gender. If assigned to a treatment group — moral, local, illegal, or widespread — these two demographic questions were followed by the respective treatment paragraphs (messages) and respondents were shown a picture that corresponded with the treatment. Pictures were used because many anti-corruption awareness raising messages are visual as well as written (i.e. billboards, leaflets, posters and stickers). After exposure to the treatment (or not, for those in the control group, which proceeded immediately to the next set of questions), the participants were asked questions gauging their perceptions of corruption and their own role in the fight against corruption. Finally, the survey concluded by asking all participants a range of other socio-demographic questions, like their income and education levels.⁶

4.3 Treatments

To introduce the issue, all four treatments started with the same introduction, which read:

“Corruption in Papua New Guinea is considered to be widespread throughout society, the private sector and across all public services and agencies. In a recent survey, 99 per cent of respondents in PNG said that in PNG corruption is a very big or big problem. 90 per cent said that corruption had gotten worse over the past decade.”

This introduction was meant to reinforce the perception that corruption is widely perceived to be widespread, or put differently, might be considered a society-wide ‘collective action problem.’

The moral treatment went on to describe the outcry against corruption from religious leaders and groups. It also framed corruption as being immoral according to Christian

⁶ Ethical approval for the study was obtained at the Australia National University prior to it being conducted.

teachings, and argued that Papua New Guineans have a moral duty to fight corruption. The local treatment described corruption as being a national issue that can best be fought within local communities, or wantoks. It argued that Papua New Guineans must come together with their wantoks to fight corruption because local communities suffer acutely from it, and that the fight against corruption should focus on small-scale communal efforts with community-tailored responses to the problem. The illegal treatment included statements about how corruption is illegal in PNG, but also framed the fight against corruption as being part of a citizen's civic duty. To these ends, it describes corruption as undermining PNG's constitution and rule of law and argues that illegal corruption is harmful to fellow citizens. These three treatments were designed to make salient the themes we reviewed above (religious or moral, local and community, and illegal) that may be able to combat against 'corruption fatigue.'

The final treatment tested — widespread — sought to make the widespread nature of corruption in PNG especially salient. In other words, it deliberately emphasised that in PNG corruption resembles a 'collective action problem.' It mentions high profile scandals that have been the subject of front page news. This treatment was included for two main reasons. First, it was inspired by advice given by Alun Jones in 2011. Jones was then Chief of Communication and Advocacy for the United Nations Office on Drugs and Crime, and he advised that anti-corruption awareness raising efforts should call attention to the issue of corruption by publicising high profile corruption scandals (Jones 2011). Second, as extensively discussed, 'corruption fatigue' is hypothesised as being triggered when people believe that corruption is widespread.

The text of all treatments is displayed in Appendix 2. All of the facts cited in the treatments were drawn from news and political reports, or from the results of a PNG Transparency International survey in 2015. As mentioned previously, non-control group participants were also shown a picture that was associated with their respectively assigned treatment message. Those pictures also appear in Appendix 2. The enumerators reported that, in general, participants were interested in the treatments and found the treatments meaningful and/or relatable.

4.4 Dependent variable survey questions

The first set of analyses we consider examine the extent to which exposure to each treatment influenced perceptions of the level of corruption in PNG, while the second set examine the extent to which exposure influences attitudes towards reporting corruption and willingness to report corruption. The survey included seven questions to better understand these issues. Table 1 displays the exact wording of each of the seven questions used, the range of response options, and the mean response score given by the full sample of respondents (full distribution figures for these questions are provided in Appendix 3).

To understand how exposure to the treatments influences perceptions about levels of corruption, respondents were asked three survey questions. The first asked how common corruption was believed to be amongst public officials. The second asked whether and to what extent corruption levels had changed in the last two years. The third asked respondents whether they agreed or disagreed with the statement 'Most people I know have paid a bribe.' The average participant thought that corruption was common, that it had increased a little over the past two years, and agreed that most people they knew have had to pay a bribe. The mean views here suggest that most respondents perceived that corruption was a widespread problem.

Four additional survey questions gauge attitudes towards reporting and willingness to report corruption. Respondents were asked for (dis)agreement levels with the following four statements: 'There is no point in reporting corruption because nothing useful will be done about it; 'I would report corruption to the authorities because it is the morally right thing to do; 'I would report a case of corruption even if I would have to spend a day in court to give evidence'; and 'Unless the corruption directly and negatively impacted me or my wontoks, I am unlikely to report it to the authorities.' The average respondent believed that reporting corruption is the morally right thing to do and that they would report a case of corruption in court. However, they neither agreed nor disagreed that there is no point in reporting corruption, or that they would be unlikely to report corruption unless it impacted their local community. These generally positive and neutral views about reporting suggest that most respondents have not resigned themselves to the corruption problem, and do not have 'corruption fatigue'.

Table 1: Dependent variable questions

Category	Label	Question/Statement	Response Options	Mean Response
Corruption Levels	Corruption common	Taking into account your own experience or what you have heard, corruption among public officials is...	1 very uncommon to 5 very common	4.4 (closest to 'common')
	Corruption change	Over the past 2 years how has the level of corruption in PNG changed?	1 decreased a lot to 5 increased a lot	4.2 (closest to 'increased a little')
	Most bribe	Most people I know have paid a bribe	1 strongly disagree to 5 strongly agree	4.0 (closest to agree)
Reporting Corruption	Nothing useful	There is no point in reporting corruption because nothing useful will be done about it.	1 strongly disagree to 5 strongly agree	3.3 (closest to 'neither agree nor disagree')
	Report, moral	I would report corruption to the authorities because it is the morally right thing to do.	1 strongly disagree to 5 strongly agree	4.3 (closest to agree)
	Report, day	I would report a case of corruption even if I would have to spend a day in court to give evidence.	1 strongly disagree to 5 strongly agree	3.8 (closest to agree)
	Impact wantok	Unless the corruption directly and negatively impacted me or my wantoks, I am unlikely to report it to the authorities.	1 strongly disagree to 5 strongly agree	3.1 (closest to 'neither agree nor disagree')

Note: Mean response scores reflect the full sample's mean response.

4.5 Estimation strategy

Ordered logit regression analyses were run to determine if exposure to messages impacted perceptions about levels of corruption and attitudes towards fighting and reporting corruption. This method was used because the response options to the dependent variable questions are on a five-point ordered scale. Dummy variables were used to represent exposure to each of the four treatment conditions (the baseline is the control group). Also included in each of the models were variables controlling for the influence of age, gender, education, whether the respondent identifies as a Catholic, income level for the respondent, if the respondent had witnessed corruption in the last year, and regional variables that captured what region in PNG the respondent identified with most. Details of how all the control variables are coded and constructed can be found in Appendix 4.

5. Findings – Shaping perceptions about and willingness to report corruption

As discussed, much of the literature focuses on what citizens might do when they perceive corruption to be widespread. In this section, we report on two distinct sets of findings to provide a more nuanced understanding of the impact of anti-corruption messages. First, we examine how messages shaped perceptions about levels of corruption. In other words, we examine whether messages augment or undermine respondents' belief that corruption is ubiquitous. Second, we examine whether and to what extent messages shaped willingness to report corruption. While the 'corruption fatigue' hypothesis assumes that an unwillingness to report corruption will accompany perceptions of widespread corruption, results from the two sets of analyses allow us to understand whether the messages tested might impact differently upon perceptions of how ubiquitous corruption is, apart from their impacts on willingness to report corruption.

5.1 How does exposure to messages influence perceptions of corruption levels?

The policy and academic literatures align in providing a clear expectation that messages that highlight corruption will heighten perceptions of corruption being a widespread

problem. As all of the tested messages focus on the issue of corruption, the expectation in this study is that exposure to each message will increase perceptions about the amount of corruption. Because of this clear directional expectation, the questionnaire placed questions about perceived levels of corruption before questions about the willingness to do something about it. Following on from this directional expectation, the analysis below denotes significance based on one-tailed tests for the effects of exposure to each of the treatments on each of the perceptions of corruption levels questions, and significance based on two-tailed tests for the effects of all control variables.

Table 2: Impact of messages on perceptions of corruption levels

	Corruption common	Corruption change	Most bribe
Treatments			
<i>Moral</i>	0.10	0.03	0.11
<i>Illegal</i>	0.24*	0.23*	0.21*
<i>Local</i>	0.34**	0.22*	0.25*
<i>Widespread</i>	0.03	0.28**	0.07
Controls			
<i>Age</i>	0.12***	0.09**	0.15***
<i>Female</i>	0.69***	1.07***	0.74***
<i>Education</i>	0.21***	0.05	0.10***
<i>Catholic</i>	0.17	0.05	-0.03
<i>Income</i>	0.01	0.17***	0.05
<i>Witness</i>	0.37***	0.17	0.39***
<i>Highlands</i>	0.09	0.22*	0.09
<i>Momase</i>	0.07	0.18	0.05
<i>Island</i>	-0.24	-0.33*	-0.40**
Logit Cuts			
<i>Cut 1</i>	-1.46	-4.12	-2.49
<i>Cut 2</i>	-1.00	-1.24	-0.24
<i>Cut 3</i>	-0.33	0.96	0.50
<i>Cut 4</i>	1.84	1.93	2.44
N	1501	1500	1488
F	6.38	8.73	5.96
Prob. F	0.000	0.000	0.000

*Notes: Coefficients are displayed, and significance is indicated by *** p-value <0.01, ** p-value <0.05, and * p-value <0.10. Estimates are based on multiple-imputation estimates of an ordered logistic regression. Multiple imputation was performed to address missingness in the income variable. See Appendix 4 for further details on multiple imputation. Of treatment groups, the control group is kept as the baseline, and of the regional groups, Papua is kept as the baseline (and they are therefore not included in the models).*

Our analyses testing whether exposure to the four messages influenced perceptions of corruption levels are displayed in Table 2. Exposure to two of the messages were

consistently influential across the three questions tested. Compared to the control group, those exposed to the illegal and local messages were significantly more likely to think that corruption was very common among local officials, that corruption had increased a lot over the last two years, and that most people they knew paid bribes (one-tailed tests, p-values <0.10 to <0.05). In contrast, out of the three models, exposure to the widespread treatment is only significantly associated with a greater perception that corruption is increasing (one-tailed test, p-value <0.05), and exposure to the moral message is not significantly associated with the response patterns to any of the questions about corruption levels.⁷

All of the effects reported in Table 2 should be assessed within the specific context of PNG in mind, where 99

per cent of citizens surveyed in 2015 by Transparency International PNG thought that corruption was a very big or big problem. This suggests that, prior to participating in our survey experiment, the majority of our participants likely already believed that corruption was widespread and a potential collective action problem. The significant findings associated with the illegal and local messages demonstrate that, even where corruption is generally perceived to be widespread, some messages about corruption can still be influential in shaping perceptions about how common corruption is and whether it is a growing problem.

The local message likely shifted perceptions about levels of corruption due to the importance Papua New Guineans place on connections to kinship networks through the wantok system (Walton 2013b; Walton 2018). The significant impact of the illegal message is also to be expected in the PNG context. Surveys have found most citizens nominate poor laws as being a key cause of corruption (Walton & Dix 2013, p. 33). With laws poorly enforced (May 2004; Morauta 1996), and with social, political and economic forces conflicting with laws at the local level (Walton 2018) it is likely that this message

⁷ It is also worth noting, with respect to the impact of the moral message, that in other models, reported in Appendix 5, we test what impact exposure to the four messages had on attitudes about the morality of corruption. The results show that exposure to the moral message (and each of the other three messages) was not significantly associated with beliefs about whether corruption was morally wrong.

reminded citizens just how inadequate the law and legal institutions are in dealing with corruption, as well as other social concerns.

The null results associated with the other two messages, in contrast, highlight the fact that, at least in the context of PNG, any message that makes salient the issue of corruption will not necessarily impact upon perceptions of how bad corruption is. The moral message failed to heighten respondent's perception that corruption was common, increasing, and that most people participate in bribery. For a country like PNG, where 96 per cent of people identify as Christian and the churches play a key role in political and social life, this is an important finding. The explanation for this likely lies in the interpretation of the moral message. While the message stresses that corruption is widespread, it notes that the churches have "taken a strong stand against corruption... Many different denominations have banded together to defeat attacks on anti-corruption institutions". Given the high levels of trust citizens place in churches as anti-corruption institutions (Walton and Dix 2013), it is possible that respondents felt that corruption was being meaningfully addressed by these institutions, and thus messages reminding them of the church's role in corruption efforts did not influence perceptions of how widespread the problem is.

The widespread message – a message specifically designed to stress corruption as resembling a 'collective action problem' – only significantly increased respondents' belief that corruption was increasing. Its failure to move perceptions about how common corruption is and citizen involvement in bribery perhaps suggests that it aligned to existing beliefs, rather than provided compelling evidence suggesting that corruption was even more acute than previously believed (e.g. Taber & Lodge 2006).

The analyses also show that many of the control variables used are not significantly associated with perceptions of corruption levels. Notable exceptions are that, after controlling for the influence of exposure to the messages, older respondents and females were significantly more likely to perceive corruption as being common among public officials and peers and believe that corruption was on the rise. Witnessing corruption in the past year and education are also positively and significantly associated with a belief that corruption is common amongst public officials and peers, but are not related to perceptions of corruption changing.

5.2 How does exposure to messages influence attitudes about fighting corruption?

In this section we test whether anti-corruption messaging can encourage citizens to report corruption, thereby potentially overcoming the perception that corruption is a collective action problem. While many anti-corruption campaigns raise awareness of the issue of corruption with the aim of encouraging citizens to report corruption, the notion of corruption resembling a ‘collective action problem’ suggests that in countries where corruption is widely thought to be pervasive, most citizens will suffer from ‘corruption fatigue’ and be reluctant to report or otherwise act against corruption. However, policy and academic literature on three themes (corruption is immoral, corruption is illegal, and anti-corruption should be local) suggest that messages highlighting these themes may effectively challenge corruption fatigue. As they represent directional expectations — i.e. exposure to a themed message will encourage support for anti-corruption activism — we once again denote significance in the models reported in Table 3 based on one-tailed tests for the effects of exposure to each of these treatments on each of the dependent variables and significance based on two-tailed tests for the effects of all control variables.

Table 3: Impact of messages on attitudes towards fighting corruption

	Nothing useful	Report, moral	Report, day	Impact wantok
Treatments				
<i>Moral</i>	-0.07	0.19	0.01	0.03
<i>Illegal</i>	-0.07	0.08	0.03	0.04
<i>Local</i>	-0.28**	0.26*	0.33**	-0.17
<i>Widespread</i>	-0.07	0.12	-0.01	-0.15
Controls				
<i>Age</i>	-0.09**	0.03	-0.03	-0.05
<i>Female</i>	1.03***	0.15	0.52***	-0.48***
<i>Education</i>	-0.19***	0.30***	0.26***	-0.15***
<i>Catholic</i>	0.10	-0.07	0.10	0.20
<i>Income</i>	-0.03	0.12**	0.03	0.08
<i>Witness</i>	-0.18	0.24*	0.40***	-0.09
<i>Highlands</i>	0.14	0.06	-0.10	0.02
<i>Momase</i>	-0.24	-0.16	-0.02	0.02
<i>Island</i>	-0.15	-0.14	-0.32*	-0.05
Logit Cuts				
<i>Cut 1</i>	-3.40	-2.50	-1.49	-3.00
<i>Cut 2</i>	-1.56	-1.02	-0.53	-1.44
<i>Cut 3</i>	1.12	-0.13	0.89	-0.67

<i>Cut 4</i>	0.56	2.72	3.06	0.84
N	1505	1506	1502	1500
F	16.99	9.12	8.29	4.22
Prob. F	0.000	0.000	0.000	0.000

*Notes: Coefficients are displayed, and significance is indicated by *** p-value <0.01, ** p-value <0.05, and * p-value <0.10. Estimates are based on multiple-imputation estimates of an ordered logistic regression. Multiple imputation was performed to address missingness in the income variable. See Appendix 4 for further details on multiple imputation. Of treatment groups, the control group is kept as the baseline, and of the regional groups, Papua is kept as the baseline (and are therefore not included in the models).*

One message is associated with discouraging ‘corruption fatigue’. Compared to the control group, respondents exposed to the local message are significantly more likely to agree that corruption should be reported because it is the morally right thing to do (one-tailed p-value <0.10) and that they would report corruption even if it meant having to spend a day in court (one-tailed p-value <0.05), and are significantly less likely to agree that there is no point in reporting corruption (one-tailed, p-value <0.05). These findings suggest that local themed messages may be an important way forward to encouraging citizens to engage in a collective fight against corruption. This is likely due to the importance that Papua New Guineans place on kinship relations (see Walton 2013b, 2018).

It is equally important to highlight that exposure to the local message was not significantly associated with agreement that corruption is only worth reporting if it directly harms the local community (impact wantok). This null finding suggests that framing corruption as a local issue will not inadvertently undermine national anti-corruption efforts that aim to encourage people to report the corruption that they encounter. This seemingly contradictory finding makes sense in the context of PNG, a country that epitomises the idea of ‘unity through diversity’ (the state motto). The country has over 850 different language groups, which are held together by a thin thread of diverse nationalisms. If there is one thing that might bring Papua New Guineans together, it is their shared concern for their kin. Some scholars suggest that localism breeds particularist behaviour – behaviour that encourages corruption through distribution of goods to specific groups (Mungiu-Pippidi et al. 2011; Rothstein 2011; Persson et al. 2013). This finding, however, suggests that in some circumstances localism can lead to a greater willingness to fight corruption locally and nationally.

Exposure to the other treatments, in strong contrast, is not significantly associated with response patterns to any of the dependent variables gauging attitudes towards reporting corruption. These null results — associated with exposure to the moral, illegal and widespread messages — are incredibly instructive. They demonstrate that messages that frame corruption with these themes in mind will likely be ineffective when trying to encourage corruption reporting.

Once again, these analyses also show that many of the control variables used are not robustly significantly associated with attitudes about reporting. As an exception, after controlling for the influence of exposure to the messages, respondents with more education were robustly (across all models) and significantly more likely to have favourable views about reporting corruption. The impact of being female is also worth highlighting. A respondent's gender, while significant across three of the four models, through these significant findings seem to tell a contradictory story. Women were more likely to agree that they would report corruption even if doing so required going to court for a day and if it impacted their local communities, but they were also more likely to agree that there is no point in reporting corruption because nothing useful will be done about it.

6. Discussion and conclusion

In places where corruption is systemic, corruption fatigue — resignation to perceived widespread societal corruption — amongst citizens is feared to be commonplace, and so the challenge anti-corruption efforts face when trying to encourage citizens to work to overcome the collective action problem of fighting corruption is thought by many to be almost insurmountable. Anti-corruption awareness raising is one prominent tool that has been explicitly developed to encourage citizens to resist and even join in on the fight against corruption. The results of our analyses — based on an original survey experiment fielded in Port Moresby, PNG — makes four substantial contributions to our understanding of whether anti-corruption messaging might be useful to counteract or encourage corruption fatigue.

First, our results directly challenge the notion that awareness raising efforts will necessarily encourage corruption fatigue. While exposure to three of the fielded messages positively shaped perceptions of how widespread corruption was or is

becoming (local, illegal, and to a lesser extent widespread), none of the messages tested triggered pessimistic views about reporting corruption or an unwillingness to report corruption. Finding that messaging can both positively shape perceived levels of widespread corruption and not also turn people away from reporting corruption demonstrates that, contrary to the fears articulated by some who argue that systemic corruption behaves as a collective action problem, efforts that make citizens more aware of corruption will not necessarily trigger resignation.

More than finding that messaging can do no harm to reporting attitudes, this study also demonstrates that messaging can be used as a tool to foster positive views about reporting corruption and a greater willingness to report corruption. Instead of triggering corruption fatigue and contributing more towards an intractable collective action problem around fighting corruption, exposure to the local message increased perceived levels of corruption and encouraged respondents to be more willing to report corruption and think more positively about reporting. These findings are incredibly important to this nascent literature. Peiffer's similar study (2017b) found that all messages tested had either a net negative influence on willingness to fight corruption or no influence at all. In turn, the findings presented in this paper suggest the right anti-corruption message can improve citizens' chances of reporting corruption.

Third, we also found that those exposed to the local message were not more or less likely to agree that corruption is OK as long as it is used to benefit local communities, or with the idea that corruption is only worth reporting if it directly harms the local community. These two null findings demonstrate that framing corruption and anti-corruption in local, community terms does not necessarily also promote particularistic feelings about corruption or anti-corruption, where citizens might be more prone to only support local anti-corruption efforts or think that corruption is permissible if it helps the local community. Put differently, in framing anti-corruption efforts as a community issue, a trade-off is not necessarily made between promoting engagement and concern locally, and disengagement and a lack of concern about what happens in anti-corruption outside of the community.

Finally, this study also found that the morally themed message and a message emphasising the illegal nature of corruption were not influential in shaping attitudes

about reporting corruption. While it may be the case that other messages crafted with these themes in mind might be influential, the null results associated with the messages based on these themes in this study tentatively suggest that awareness raising messaging may be ineffective in encouraging reporting if they emphasise these two topics. However, it should be noted that exposure to the illegal message was associated with greater assessments of the corruption problem and its increasing nature. This indicates that legally toned messages can successfully raise a red flag about corruption as a problem, but will likely be unable to motivate many to think and act differently when they observe corruption occurring or otherwise confront it.

With respect to the ineffectiveness of these two messages in shaping attitudes towards reporting, more testing is needed. Our results suggest that the high regard that Papua New Guineans have for the churches to address corruption might have meant the moral message failed to shift willingness to report. While some Papua New Guineans are concerned with church corruption, we believe that trust in churches had more impact on our results than it might in other contexts (Marquette 2012; Marquette et al. 2014). With respect to the illegal message, information about the illegal nature of corruption will perhaps consistently be weighed less heavily when also up against the competing functions that corruption can fulfil. It may be that where the state is weak, economic, social and cultural needs to engage in corruption trump the desire to follow poorly enforced laws – as has been found in PNG (Walton 2013b) and other contexts (Marquette & Peiffer 2017). However, these tentative findings would benefit from further research in other environments that reportedly suffer from corruption as a collective action problem.

7. Appendices

7.1 Appendix 1 – Sample characteristics

The sample was evenly split between male and female respondents. Eight per cent of the sample was under 25 years old, 32 per cent were between 25 and 35 years old, 26 per cent of the sample were between 36 and 45 years old, 18 per cent were between 46 and 55 years old, and the remaining 16 per cent were between 56 and 65 years old. A small percentage of the sample (four) had no formal education, two per cent had completed

primary school only, 15 per cent had completed an intermediate level of education, 32 per cent had completed high school, 17 per cent had completed technical school, and the rest (30 per cent) had completed some level of university education. Six per cent of the sample reported a household monthly income of below 100 kina, 19 per cent reported an income between 100 and 500 kina, 35 per cent made between 500 and 1,000 kina, 19 per cent made between 1,000 and 2,000 kina, and 12 per cent made over 2,000 kina; 9 per cent of the sample refused to answer or did not know their income. Though the survey was conducted in Port Moresby, 34 per cent of the sample identified mostly with the Highlands, 45 per cent identified with the Papua Region, 12 per cent with Momase, and 9 per cent with the Island region. Finally, 98 per cent of the sample identified as Christian, and 81 per cent reported to have personally witnessed an act of corruption in the past year.

To the extent to which they were available, the demographic statistics of the sample can be compared to statistics for all urbanites in PNG (PNG NSO 2010). According to estimates made by the Government's National Statistics Office in 2010 (the most recent reliable source of national data available), 32 per cent of urban adults are between the ages of 25 and 35 years old, 24 per cent between 36 and 45 years old, 18 per cent between 46 and 55 years old, eight per cent between 56 and 65 years old and only one per cent is over the age of 65. Because sampling was conducted purposively with age quotas, bearing this estimated urban age-based population distribution in mind, it makes sense that these statistics are very consistent with the sample of participants used in our study. Also, according to estimates made from the National Statistics Office (PNG NSO, 2010), 30 per cent of urbanites have completed primary education, a quarter has completed secondary education and an additional fifth has completed some form of tertiary education. By comparison, our sample is generally more educated, as a higher percentage have completed tertiary education, and fewer of our participants lack a primary education.

7.2 Appendix 2 – Full text of treatment and accompanying pictures

Introduction to all treatments:

Corruption in Papua New Guinea is considered to be widespread throughout society, the private sector and across all public services and agencies. In a recent survey, 99 per cent

of respondents in PNG said that in PNG, corruption is a very big or big problem. 90 per cent said that corruption had gotten worse over the past decade.

Moral treatment:

The churches in PNG have taken a strong stand against corruption. For example, the Catholic Bishop’s conference recently declared that “People suffer at the hands of those who misuse power for their selfish needs”. Anglican Bishops have called for “responsible honesty” in the fight against corruption; similarly, a United Church Bishop has called for the end of administrative corruption. Many different denominations have banded together to defeat attacks on anti-corruption institutions through the Community Coalition Against Corruption. Corruption is against the word of God; it is against the principals set out in the Bible. As a Christian country, and in line with our strong cultural traditions, we all have a moral obligation to fight corruption whenever we come across it, no matter if it involves our friends or wantoks. We need more genuine Christians in PNG to stand up against corruption whenever they are able.



Illegal treatment:

There are now many laws in PNG that show that corruption is clearly illegal. Those in positions of power and PNG citizens are bound to obey these laws against corruption. In doing so we honour PNG’s founding fathers who believed that all Papua New Guineans

should fight corruption. Corruption undermines PNG's Constitution and the rule of law. Illegal corruption is harmful to all of our fellow Papua New Guinean citizens. Given this, individuals have a legal and patriotic obligation to fight corruption whenever we come across it, no matter if it involves our friends or wantoks. As a citizen of PNG, it is your civic duty to fight corruption. The fight against corruption is a fight for our beloved country.



Local treatment:

We live in a land that has a diverse array of cultures and tribes. We need to do what is right by the laws and rules of our own communities, before addressing issues that impact the nation as a whole. Corruption is a national issue, but it impacts on our own wantoks and families first and foremost. We must come together with our wantoks to fight corruption because our own communities are the first to suffer from it. The fight against corruption must focus on small-scale communal efforts against the problem. With many communities we need many different responses to the problem of corruption.



Widespread treatment:

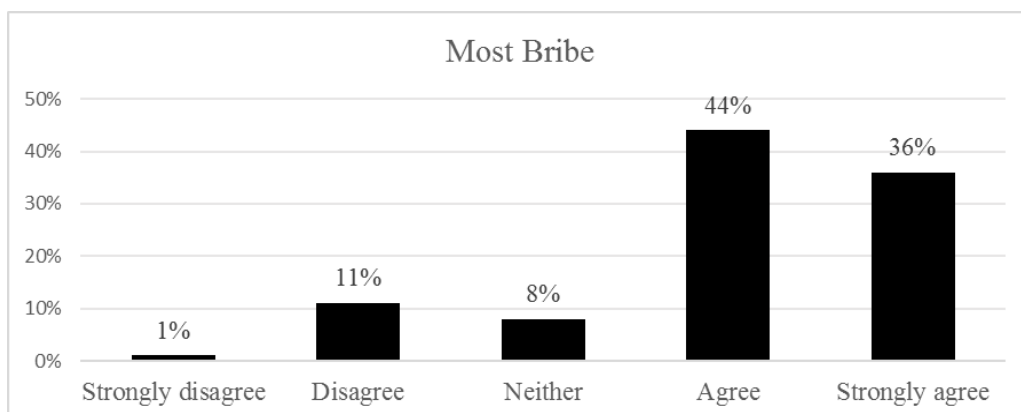
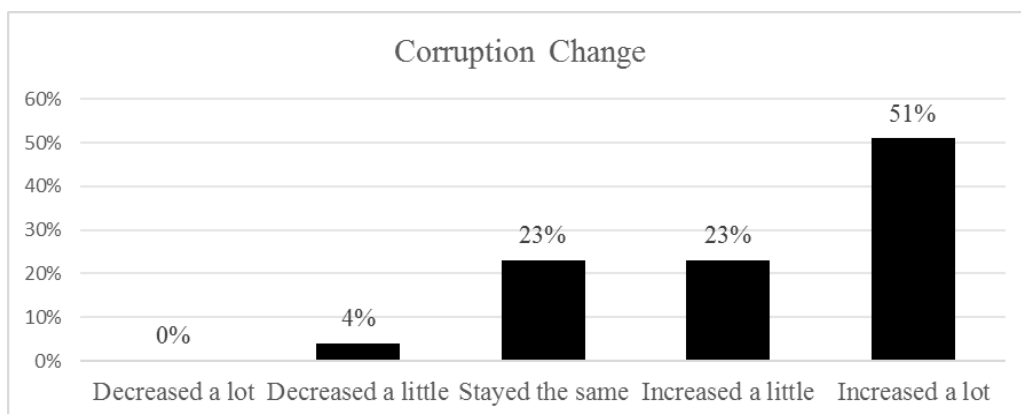
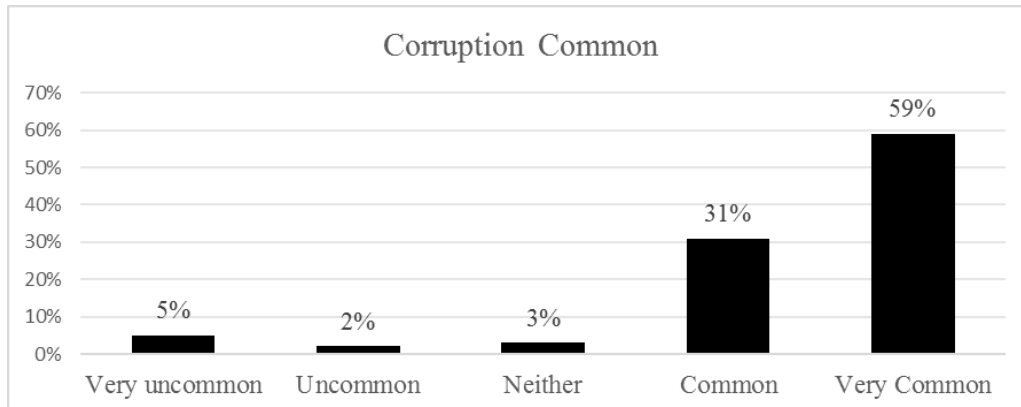
In the same survey almost half of the respondents said they paid a bribe for a service they were entitled to. Many elites have been involved in corruption. In 2014 and 2015 the ex-government Minister and member for Pomio, Paul Tiensten, was sentenced to a total of 12 years imprisonment for corruption-related offences. The short-lived anti-corruption agency, Investigation Taskforce Sweep, registered more than 350 cases of corruption since 2011, this included MPs, businessmen and public servants. It seems that corruption infects most, if not all, sectors of PNG's society, private sector and government.

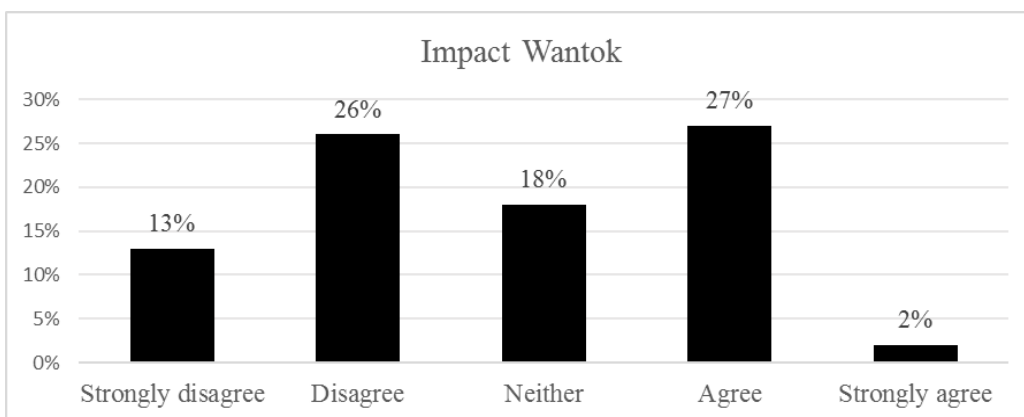
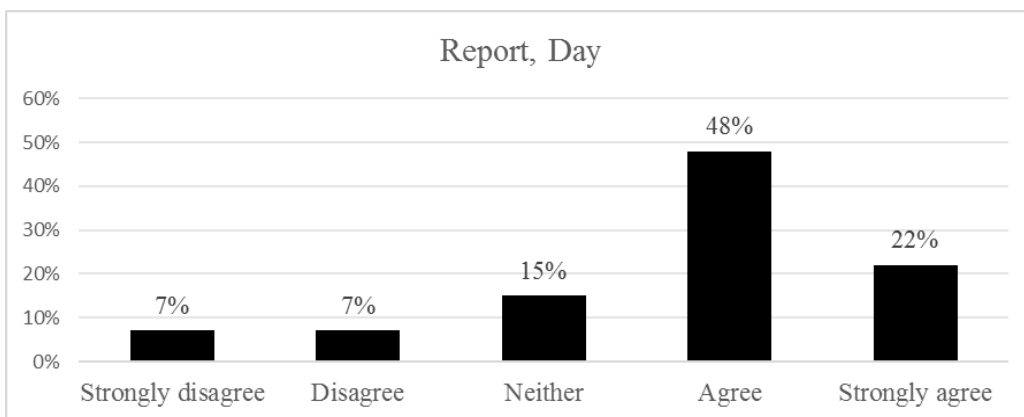
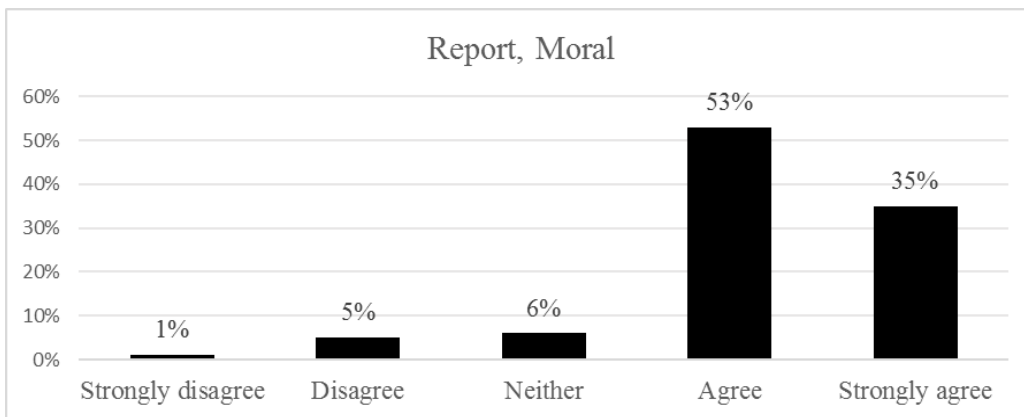
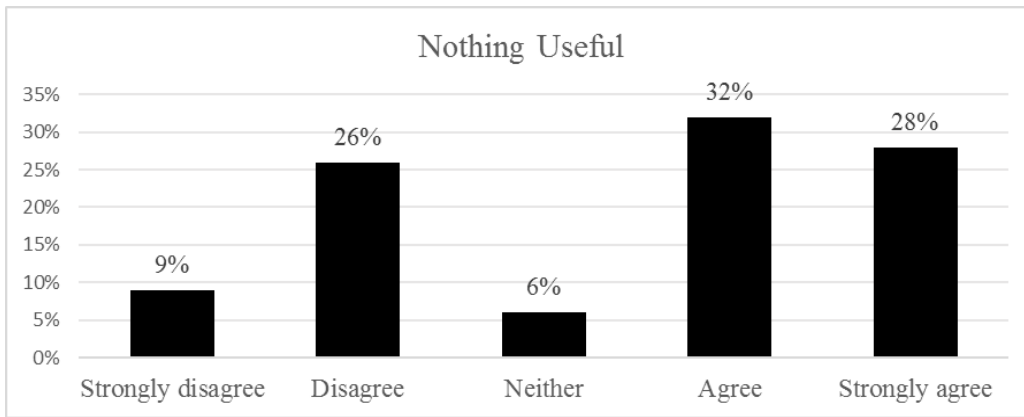


7.3 Appendix 3 – Distributions of sample across dependent variable questions

The following figures display the distributions of the sample across dependent variable questions. Distributions are based on the full sample.

Perceptions of corruption levels





7.4 Appendix 4 – Coding and details of control variables

Variable	Coding & Range	Mean
Age	1) Under 25; 2) 25-35; 3) 36-45; 4) 46-55; 5) 56+	3.0
Female	0) Male; 1) Female	0.5
Education	1) No formal; 2) Basic (at least 5 years); 3) Intermediate (at least 9 years); 4) High School (at least 12 years); 5) Technical School; 6) College or University; 7) Postgraduate.	4.7
Catholic	1) if identify as Catholic (among a list of 10 denominations); 0) if not.	0.2
Income	Monthly household income. 1) Less than 100 kina; 2) 100 to 500 kina; 3) 500 to 1,000 kina; 4) 1,000 to 2,000 kina; 5) 2,000 kina or more*	3.1
Witness	1) Has personally witnessed an 'act of corruption' in the past year; 0) if not.	0.8
Region		
Highlands	1) If identify most with Highlands region; 0) if not.	0.3
Momase	1) If identify most with Momase region; 0) if not.	0.1
Island	1) If identify most with Island region; 0) if not.	0.1
Papua	1) If identify most with Papua region; 0) if not.	0.5

*Notes: Mean response scores reflect the full sample's mean response; *10 per cent of the sample did not answer the survey's income question; multiple imputation was used to address income missingness, Ten imputations were performed for each model, and imputation was based on data from all other control variables.*

7.5 Appendix 5 – Testing the influence of exposure to messages on attitudes about the morality of corruption

Three additional analyses were run to test what impact exposure to each of the messages had on attitudes about the morality of corruption. Details on the three dependent variables are displayed below and the ordered logistic regression results follow.

Morality of corruption dependent variable questions

Label	Question/Statement	Response Options	Mean
OK benefit wantok	Most corruption is bad, but sometimes it is ok for government employees to use their position to benefit their wantok	1 s. disagree to 5 s. agree	2.6

Not morally wrong	If something corrupt is done for the right reasons, it isn't morally wrong	1 s. disagree to 5 s. agree	2.6
Not if everyone	It isn't corrupt if everyone does it	1 s. disagree to 5 s. agree	2.2

Note: Mean response scores reflect the full sample's mean response.

Influence of messages on morality of corruption

	OK Benefit Wantok	Not Morally Wrong	Not if Everyone
Treatments			
<i>Moral</i>	-0.04	0.03	0.00
<i>Illegal</i>	0.05	0.04	0.13
<i>Local</i>	-0.07	0.16	0.13
<i>Widespread</i>	-0.13	0.03	0.32
Controls			
<i>Age</i>	-0.09**	-0.06	-0.11***
<i>Female</i>	-0.82***	-0.41***	0.01
<i>Education</i>	-0.03	-0.03	-0.17***
<i>Catholic</i>	0.14	0.18	0.18
<i>Income</i>	0.00	-0.10*	-0.07
<i>Witness</i>	-0.20	-0.10	-0.07
<i>Highlands</i>	-0.07	0.06	-0.01
<i>Momase</i>	0.03	0.22	0.02
<i>Island</i>	-0.09	0.37**	0.29
Logit Cuts			
<i>Cut 1</i>	-2.18	-2.22	-2.27
<i>Cut 2</i>	-0.69	-0.40	-0.19
<i>Cut 3</i>	-0.23	0.33	0.51
<i>Cut 4</i>	0.87	2.31	2.68
N	1504	1498	1500
F	5.96	2.12	4.64
Prob. F	0.000	0.010	0.000

Notes: Coefficients are displayed, and significance is indicated by *** p-value <0.01, ** p-value <0.05, and * p-value <0.10. Estimates are based on multiple-imputation estimates of an ordered logistic regression. Multiple imputation was performed to address missingness in the income variable. See Appendix 4 for further details on multiple imputation. Of treatment groups, the control group is kept as the baseline, and of the regional groups, Papua is kept as the baseline (and are therefore not included in the models).

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