

# Public Opinion in Hong Kong about Gays and Lesbians: The Impact of Interpersonal and Imagined Contact

Holning Lau<sup>1</sup>, Charles Q. Lau<sup>2</sup> and Kelley Loper<sup>3</sup>

<sup>1</sup>University of North Carolina School of Law, NC, USA; <sup>2</sup>Survey Research Division, RTI  
International; <sup>3</sup>Faculty of Law, University of Hong Kong, Hong Kong, China

## Abstract

Using data from a 2013 telephone survey in Hong Kong ( $N=850$ ), we investigate how interpersonal and imagined contact with gays and lesbians affects attitudes toward gay people and gay rights. We also study the demographic correlates of interpersonal contact with gays and lesbians, as well as the correlates of attitudes toward gay people and gay rights. For all demographic groups, we found strong associations between interpersonal contact and favorable attitudes. Using a split ballot experiment, we found that asking respondents to imagine contact with a same-sex couple produced more favorable attitudes among respondents who had no prior interpersonal contact with gay people. For individuals who had prior interpersonal contact with gay people, imagined contact had no effect.

The visibility of gays and lesbians in Hong Kong has increased remarkably over the past decade. Ten years ago, there were no large-scale public events in Hong Kong organized by gays and lesbians. Since 2005, however, gays and lesbians have gathered in annual International Day Against Homophobia (IDAHO) marches in Hong Kong. Beginning in 2008, there have also been annual Pride Parades. These events have encouraged gays and lesbians to “come out” instead of concealing their sexual orientation (Wong, 2007). In recent years, a growing number of gays and lesbians in Hong Kong have in fact come out, including public figures ranging from pop stars Denise Ho and Anthony Wong to Hong Kong’s first openly gay legislator Raymond Chan.

People often do not realize that they have a gay colleague, friend, or family member until that gay individual discloses his or her sexual orientation. As more gays and lesbians come out, people in Hong Kong become more likely to realize that they have had contact with gays and lesbians. In light of this changing dynamic, this study investigates whether and how people's contact with gays and lesbians shapes public opinion about gays and lesbians in Hong Kong. We tackle this question by analyzing data from a telephone survey of the Hong Kong public and drawing on literature about the "contact hypothesis," which suggests that contact reduces prejudice against gays and lesbians (Smith, Axelton, & Saucier, 2009).

In their meta-analysis of existing literature, Smith, Axelton, & Saucier (2009) identified a need for more research examining the relationship between contact and antigay prejudice in different cultural contexts around the world. We know of no previous peer-reviewed research on contact and antigay prejudice in Hong Kong. By focusing on Hong Kong, this article addresses that gap, shedding light on how public opinion is likely to change as contact with gays and lesbians in Hong Kong continues to grow.

Beyond focusing on Hong Kong, this study contributes more generally to the literature on imagined contact. A nascent body of research suggests that, besides having actual interpersonal contact with a gay person, imagining having contact can also reduce antigay biases (Turner, Crisp, & Lambert, 2007; Turner, West, & Christie, 2013). Our study builds on this literature by examining a type of imagined contact that has not been explored elsewhere. In earlier studies on imagined contact, researchers have asked respondents to imagine engaging in interactive social activities with a gay individual. We examined instead whether asking respondents to imagine simply sitting next to and observing a same-sex couple would reduce antigay bias. This experiment helps test the outer limits of imagined contact's bias-reducing effects.

In the following sections, we first review current research about interpersonal and imagined contact. We then test hypotheses about how interpersonal contact and imagined contact are related to public opinion about gay people and gay rights in Hong Kong. We conclude by discussing how our results advance understandings about the processes that underlie changing attitudes toward gays and lesbians.

### Contact Effects and Normative Context

In 1954, Allport articulated his now-famous "contact hypothesis," which holds that having contact with someone from a different social group helps to reduce an individual's prejudices against that other group (Allport, 1954). Allport posited that prejudices are most likely to decrease under four conditions: when the contact is between people who have equal status, share

common goals, cooperate, and have institutional support for their contact. Since Allport's seminal work, researchers have studied the contact hypothesis extensively (for reviews, see Hewstone & Swart, 2011; Pettigrew & Tropp, 2006). The contact hypothesis has garnered substantial attention partly because of its implications for social change. If the contact hypothesis holds true, intergroup contact could be promoted as an intervention to reduce social biases.

Research overwhelmingly supports the contact hypothesis. In a meta-analysis of 515 studies, Pettigrew and Tropp (2006) found negative relationships between contact and prejudice in 94% of their samples. Pettigrew and Tropp also found that the optimal conditions identified by Allport (equal status, common goal, cooperation, and institutional support) are not necessary for contact to reduce biases. It appears that many different types of contact, and contact under different circumstances, can weaken biases. Research has found that contact has a causal effect on attitudes; it is not only that people who are less prejudiced also happen to seek out contact (Binder et al., 2009; Pettigrew & Tropp, 2006). Contact reduces prejudice because it prompts people to question stereotyped perceptions, alleviates individuals' anxiety about interacting with people different from themselves, and induces positive affective processes such as empathy (Crisp & Turner, 2009; Hewstone & Swart, 2011).

A number of studies have specifically investigated the effects of contact with gays and lesbians. In a meta-analysis of 41 studies, Smith, Axelton, & Saucier (2009) found a significant negative relationship between contact and antigay prejudice. Research from the United States has shown that contact with gays and lesbians is associated with greater support not only for gay people but also for gay rights (Lewis, 2011). Although research on contact and antigay bias has begun to expand to other parts of the world (e.g., Detenber, Ho, Neo, Malik, & Cenite, 2013), most of our understanding is based on research from the United States. For example, all but 6 of the 41 studies in Smith et al.'s meta-analysis were from the United States.

Despite the impressively large body of existing research on the contact hypothesis, certain aspects of contact still are not well understood. In particular, there has been a growing, but small, body of research on how contact effects vary across different normative contexts. For example, fundamentalist religious norms are one antecedent to prejudice against gays and lesbians. In the United States, not only is the effect of contact on antigay prejudice weaker for religious conservatives, it is also weaker for religious moderates and liberals who have personal or professional relationships with religious conservatives (Merino, 2013). Research also suggests that cultural norms in southern parts of the United States weaken the effect of contact on antigay bias (Skipworth, Garner, & Dettrey, 2010). These findings indicate that contact affects

prejudice differently depending on the normative contexts in which the contact occurs.

Because normative contexts can vary dramatically across the world, scholars have predicted that contact effects will differ by country (Smith, Axelton, & Saucier, 2009). In some places, antigay prejudice might be so deeply embedded in religious or cultural norms that the prejudice is highly resistant to contact effects. Conversely, contact might produce particularly strong effects in places where antigay bias is less firmly rooted in local norms. Unfortunately, little is known about how contact effects differ across normative environments around the world.

### The Contact Continuum

Beyond better understanding contact effects in different normative contexts, another research area that requires more attention is contact that does not occur through face-to-face interactions. As Crisp and Turner (2009) have suggested, contact exists along a continuum. At one end of the continuum is interpersonal contact, in which individuals interact directly face to face. At the other end of the continuum are various forms of parasocial contact. Building on previous research (Schiappa, Gregg, & Hewes, 2005), we use the term “parasocial contact” as an umbrella term referring to situations in which people are exposed to individuals or fictional characters through media or other forms of storytelling.

Researchers have examined three types of parasocial contact: media contact, vicarious contact, and imagined contact. Studies on media contact have shown that exposing individuals to positive television and film depictions of gay men fosters more favorable views of gay men (Riggle, Ellis, & Crawford, 1996; Schiappa, Gregg, & Hewes, 2005). Research on vicarious contact (also known as “extended contact”) has similarly found contact effects. In vicarious contact, individuals learn that people they know, such as family or friends, have had positive interactions with members of different social groups. While we are unaware of research on the relationship between vicarious contact and antigay prejudice, research has found negative relationships between vicarious contact and biases based on race, religion, and other social statuses (for a review, see Crisp & Turner, 2009). Finally, imagined contact has also been shown to reduce prejudice. One study found bias-reducing effects when people were asked to imagine having an enjoyable conversation with a gay man (Turner, Crisp, & Lambert, 2007). In another study, there were bias-reducing effects when researchers asked people to imagine being engaged in their favorite pastime with a gay person (Turner, West, & Christie, 2013).

Our study contributes to literature on the third type of parasocial contact, imagined contact. The body of research on imagined contact is small but

growing, and researchers have consistently produced bias-reducing effects when they ask people to imagine positive interactions with outgroup members (e.g., Husnu & Crisp, 2010; Stathi & Crisp, 2008; Turner, Crisp, & Lambert, 2007; Turner, West, & Christie, 2013; West, Holmes, & Hewstone, 2011). Because the research on imagined contact is nascent, however, some scholars are still skeptical about the ability of imagined contact to reduce intergroup prejudice (Bigler & Hughes, 2010). The designs of existing research have limited the external validity of the studies' findings. For example, the two studies on the relationship between imagined contact and antigay bias have relied on small convenience samples of undergraduate students (Turner, Crisp, & Lambert, 2007; Turner, West, & Christie, 2013). Results from these samples may not generalize to a larger population. Our study makes a fresh contribution because, to the best of our knowledge, it is the first to study imagined contact in a probability sample of the general population.

We also test the boundaries of imagined contact by investigating a new form of imagined contact. Earlier studies have asked respondents to imagine having substantial interactions with members of a different social group. For example, researchers have asked respondents to imagine having a conversation or engaging in a favorite pastime with a gay person (Turner, Crisp, & Lambert, 2007; Turner, West, & Christie, 2013). Instead, we asked people to imagine a scenario in which they sit beside and observe a same-sex couple in a restaurant without interacting with the couple. We told a story that developed two characters, which is similar to what the media does when depicting gay people. Unlike media such as film and television, however, our description was short (~30 s) and left more to the imagination of our survey participants.

The topic of imagined contact has garnered attention in part because of its practical implications. Researchers have suggested that educators should incorporate imagined contact exercises into diversity and sensitivity trainings (Crisp & Turner, 2009). Such interventions, however, must be culturally competent. In some places, including many parts of Asia, cultural norms make it unlikely for strangers to engage in highly interactive activities with each other (Berko, Aitken, & Wolvin, 2010). In these places, asking someone to imagine a deep social interaction with a stranger may be unrealistic. Thus, our study seeks to shed light on whether educational interventions can be effective if they are based on imagining less interactive social situations.

Like interpersonal contact, the three types of parasocial contact that we have discussed—vicarious, media, and imagined contact—can reduce bias through cognitive mechanisms (e.g., reducing stereotypes, increasing perception of intergroup similarities) and through affective mechanisms (e.g., reduction of intergroup anxiety, development of positive affect) (Crisp & Turner, 2009; Riggle, Ellis, & Crawford, 1996; Schiappa, Gregg, & Hewes, 2005; Stathi & Crisp, 2008). While vicarious contact, media contact, and imagined

contact share some common underlying mechanisms, scholars have also begun to theorize their differences (Crisp & Turner, 2009). Some preliminary insights have emerged from this literature.

Compared with vicarious and media contact, imagined contact is most similar to actual contact because it simulates real-life events. Research has shown that people process imagined scenarios similarly to real experiences (Crisp & Turner, 2009). It is therefore possible that, like interpersonal contact, imagined contact can trigger a range of cognitive and affective mechanisms depending on the nature of the imagined scenario. Vicarious contact is unique because it reduces bias partly by cultivating norms (Crisp & Turner, 2009; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). In vicarious contact, people learn that their friends or family members have had positive interactions with individuals from other social groups; these friends and family members serve as exemplars whose experiences influence norms regarding intergroup relations. Meanwhile, media contact differs because television and film depictions can provide images that are more detailed than a friend or family member's account of intergroup contact; such vivid imagery might be especially effective at challenging stereotypes (cf. Schiappa, Gregg, & Hewes, 2005).

### Research Aims and Hypotheses

As discussed earlier, contact effects can be influenced by normative context. Religious and cultural norms in Hong Kong differ from norms in the United States, which is the setting for most research on contact and antigay prejudice. Thus, we aim to investigate contact effects on attitudes toward gays and lesbians specifically in the context of Hong Kong. We also test whether a previously unstudied form of imagined contact can produce bias-reducing effects. Although our imagined contact experiment is situated in Hong Kong, it can help to guide future research on imagined contact around the world.

Our first hypothesis addresses interpersonal contact in Hong Kong:

H1: There will be positive associations between interpersonal contact and favorable attitudes toward gay people and gay rights.

Suggestive evidence for this hypothesis comes from a Hong Kong government report, which found that individuals who had interpersonal contact also reported greater acceptance of homosexuality and support for gay rights (Home Affairs Bureau, 2006). However, the government report did not control for demographic variables such as age and education, which might be positively correlated with both contact and attitudes toward gays and lesbians. As a result, the government report potentially overstated the association between contact and attitudes. Our first hypothesis is also informed by literature

suggesting that antigay bias is susceptible to change when the prejudice is not deeply embedded in religious norms (Merino, 2013; Skipworth, Garner, & Dettrey, 2010). In Hong Kong, religious norms play a relatively small role in shaping antigay bias (Lau, 2011; Stotzer & Lau, 2013). Religion plays a relatively small role in most Hong Kong people's lives. One study ranked Hong Kong the seventh least religious country or territory in the world (Crabtree & Pelham, 2009). Antigay prejudice in Hong Kong stems primarily from cultural norms about family obligations, whereby men and women are expected to marry and have children to continue the family line (Chou, 2001; Chow & Cheng, 2010). The fact that religion plays a small role in shaping antigay bias in Hong Kong reinforces our hypothesis that attitudes in Hong Kong are susceptible to contact effects.

Our next two hypotheses pertain to imagined contact.

H2: For individuals who have had no interpersonal contact, there will be positive associations between imagined contact and favorable attitudes toward gay people and gay rights.

H3: For individuals who have had interpersonal contact, subsequent imagined contact will not be associated with any significant change in attitudes.

In our second hypothesis, we propose that the imagined contact in our study will reduce biases among individuals who have had no prior interpersonal contact with gays or lesbians. We anticipate this reduction because the nascent literature on imagined intergroup contact suggests that such contact can reduce bias (Crisp & Turner, 2009). However, we posit in our third hypothesis that, among individuals who have already had interpersonal contact with gays or lesbians, briefly imagining contact during the survey will not be associated with a significant change in attitudes. This is because people may resist believing that a brief imagined scenario accurately reflects social reality; as a result, they may form their opinions based on their real-life social encounters instead (cf. Turner, Crisp, & Lambert, 2007).

In addition to these three hypotheses, we investigate three other research questions:

RQ1: What demographic characteristics are associated with interpersonal contact and favorable attitudes toward gay people and gay rights in Hong Kong? How does interpersonal contact mediate the relationship between demographic characteristics and attitudes toward gays and lesbians?

RQ2: Do demographic characteristics moderate the relationship between contact (interpersonal and imagined) and attitudes toward gay people and gay rights?

RQ3: Will associations between imagined contact and attitudes depend on the gender of the same-sex couple that we ask respondents to imagine?

There is little research about the correlates of interpersonal contact and attitudes toward gays and lesbians in Hong Kong. Because of this paucity of literature, we do not predict *a priori* how demographic variables influence contact effects, or how contact mediates the relationship between respondent characteristics and attitudes. In examining these questions, we aim to advance understandings of how antigay prejudices operate in Hong Kong.

## Methods

### Data

Our data come from a telephone survey of adults (age  $\geq 18$  years) living in Hong Kong. In June 2013, the Social Sciences Research Centre (SSRC) at the University of Hong Kong conducted 850 interviews using a probability sample of landline telephone numbers in Hong Kong. Reflecting language patterns in Hong Kong, 98% of interviews were conducted in Cantonese and 2% were conducted in English. The interviews lasted an average of 8.1 min (standard deviation: 3.4 min). SSRC used the “age last birthday” method to select a respondent within the household. The cooperation rate was 78% (AAPOR Cooperation Rate 2), and the overall response rate for the survey was 15% (AAPOR Response Rate 4). In calculating the response rate, we used proportional allocation to determine cases with unknown eligibility, which leads to a conservative estimate of the response rate (Smith, 2009). Individuals born in mainland China and those from the lowest educational groups were underrepresented in the survey relative to 2011 Census data on the Hong Kong population. We used poststratification weights to adjust the demographic distributions to the 2011 Hong Kong Census. The weighted sample is 54% female and 46% male; the average age is 46.4 years (standard deviation: 18.2 years). Thirty percent had attained no more than primary school education, and 27% had attained postsecondary school education or higher. Slightly over half (56%) were born in Hong Kong, 35% were born in mainland China, and 10% were born in other locations. Twenty percent considered religion to be “very important” in their lives. A separate question about religious affiliation indicated that 21% identified with Christianity, 16% with Buddhism, and 1% with another religion (including Daoism, Islam, and Hinduism).

### Measures

**Vignette manipulation.** At the beginning of the survey, respondents were randomly assigned to one of two groups: 48% were assigned to the “nonvignette group” and 52% were assigned to the “vignette group.” Assignment was uncorrelated with demographic characteristics and

interpersonal contact. For the nonvignette group, interviewers posed five agree/disagree questions about whether same-sex couples should have couple-based rights, including hospital visitation, protection from housing discrimination, ability to sue for the wrongful death of one's partner, property inheritance, and marriage.

For the vignette group, interviewers asked respondents to imagine sitting next to a same-sex couple and the parents of one member of the couple. Interviewers then told a brief story that depicted the same-sex couple positively. In English, the exact wording of the vignette was as follows:

Please imagine that you are at a restaurant and are seated next to a family consisting of two middle-aged [women/men] and an elderly couple. You overhear that family's conversations. You learn that the two [women's/men's] names are [Irene and Mary/Anthony and Michael]. They are a same-sex couple who have been living together for 15 years and they are having a meal at the restaurant with [Mary's/Michael's] parents. Six months ago, [Mary/Michael] was struck by a reckless car driver and severely injured. As a result, [Mary/Michael] has had to stop working. Since the accident, [Irene/Anthony] has been financially supporting [Mary/Michael] and [Mary's/Michael's] parents. [Mary's/Michael's] parents are very grateful and consider [Irene/Anthony] to be like a [daughter/son].

When providing the vignette in Chinese, we used the names 家敏 and 阿儀 for the female couple, and 浩然 and 阿傑 for the male couple.

After hearing the vignette, respondents were asked whether the imaginary couple should have each of the same five couple-based rights that interviewers posed questions about to the nonvignette group. We do not analyze data from the questions about couple-based rights in the present article. Instead, we analyze questions described below, which were posed to both the vignette and nonvignette groups using identical wording.

We use the vignette manipulation as our measure of imagined contact. Individuals assigned to the vignette group were engaged in imagined contact, and individuals assigned to the nonvignette group served as the comparison group. We randomized the gender of the same-sex couple in the vignette, such that 49% of respondents received a vignette about a male couple and 51% received a vignette about a female couple.

**Attitudes toward gays and lesbians and nondiscrimination policies.** After the vignette manipulation, both the vignette and nonvignette groups were asked an identical set of general questions concerning attitudes toward gay people and attitudes toward antidiscrimination policies. We used seven items to measure attitudes toward gay and lesbian individuals in Hong Kong. Drawing from existing scales (Morrison & Morrison, 2002; Wright, Adams, & Bernat, 1999) and previous surveys (Home Affairs Bureau, 2006), we selected these items because of their relevance to Hong Kong. The first six items were "A person's sexual orientation does not affect whether I accept that

person”; “It does not matter to me whether my friends are [gay/homosexual] or straight”; “Parents should love their children regardless of whether their children are [gay/homosexual] or straight”; “[Gays and lesbians/homosexuals] make me nervous” (reverse coded); “[Gays and lesbians/homosexuals] are immoral” (reverse coded); “[Gays and lesbians/homosexuals] should be avoided whenever possible” (reverse coded). Response options were “Completely Agree,” “Somewhat Agree,” “Neutral,” “Somewhat Disagree,” and “Completely Disagree.” The final item asked “How accepting are you of [gays and lesbians/homosexuals]?” and had response options of “very,” “moderately,” “a little,” and “not at all accepting.” For all seven items, we randomly assigned each respondent to one of two conditions. One condition used the term “同志,” which we translated as “gays and lesbians.” The other condition used the term “同性戀者,” which we translated as “homosexuals.” There was no significant difference in the response distributions between the two conditions, so we combined these two groups and use the term “gays and lesbians” in this text for parsimony.

To measure attitudes toward policies related to discrimination against gays and lesbians, we asked respondents: “Do you agree or disagree that Hong Kong should have a law that protects people from being discriminated against because of their sexual orientation?” Responses were measured using the same five-category scale as described above.

**Interpersonal contact.** Following the attitude items, we replicated two questions about interpersonal contact from a 2005 Hong Kong government survey (Home Affairs Bureau, 2006). The first question asks “Have you had any contact with homosexuals?” Response options were yes and no. Respondents who said yes were asked “Is it frequent or not?” Our measure has three categories: no contact, infrequent contact, and frequent contact.

**Demographic characteristics.** We included characteristics such as gender, age (continuous), education (primary or below, junior secondary school, senior secondary school, postsecondary or above), marital status (married, divorced or separated, widowed, never married), religiosity (very important, somewhat important, not at all important), religion (none, Christianity, Buddhism, other), and birthplace (Hong Kong, mainland China, other).

## Analysis

Our analysis consists of three parts. In the first part, we describe the levels and correlates of interpersonal contact with gays and lesbians. We use a logistic regression to predict contact with gays or lesbians using respondent gender, education, age, place of birth, religiosity, and religious affiliation.

The second part of our analysis investigates associations between interpersonal contact and attitudes toward gay people and gay rights. To start, we

regress attitudes toward gays and lesbians on demographic characteristics. We then add interpersonal contact (frequent, infrequent, no contact) to the model. Estimating these two models (with and without interpersonal contact) sheds light on how interpersonal contact mediates the relationship between demographic characteristics and attitudes. Next, to test whether the association between attitudes and interpersonal contact depended on respondent characteristics, we added interaction terms between interpersonal contact and each respondent characteristic. We then examine the relationship between interpersonal contact and support for a law that would prohibit discrimination based on sexual orientation. We estimate a logistic regression of support for the public policy on respondent demographics, and in a subsequent model, add interpersonal contact. We investigate whether associations between contact and attitudes vary by respondent characteristics by including interaction terms in the model.

The third stage of the analysis investigates the effects of imagined contact on attitudes. We compare attitudes between respondents randomized into the vignette group (who were engaged in imagined contact) and respondents who were randomized into the nonvignette group (our comparison group). We do so by regressing attitudes toward gay people and gay rights on the experimental condition (vignette vs. nonvignette). We stratify the analysis by whether the respondent had interpersonal contact because we hypothesized that contact effects would only exist for respondents with no prior interpersonal contact with gays or lesbians.

## Results

### Levels and Correlates of Interpersonal Contact

Our results show that 54% of the public reported no contact with gays or lesbians; 33% of the public reported infrequent contact, and 12% reported frequent contact. These figures represent a notable increase in interpersonal contact. In a 2005 Hong Kong government survey, whose question we replicated for the present study, 77% of the public reported having no contact whatsoever with gays or lesbians (Home Affairs Bureau, 2006). In Table 1, we present the parameters from a logistic regression predicting any contact with gays and lesbians. In preliminary analysis, we estimated a multinomial logistic regression for a three-category dependent variable: frequent contact, infrequent contact, and no contact (reference category). The parameters for the “frequent contact” and “infrequent contact” equations were not meaningfully different, so we combined these two categories for parsimony.

Controlling for other variables in the model, older people are less likely to have contact with gays or lesbians ( $p < .01$ ). Women’s odds of contact are 79% higher than the odds for men ( $p < .01$ ). There was a notable educational

Table 1

*Parameters From a Logistic Regression Predicting Any Interpersonal Contact With Gays or Lesbians*

Predictors	Odds ratio	z
Age in years	0.97***	-5.15
Female (male)	1.79***	2.95
Senior secondary education (junior secondary or less)	2.03**	2.43
Postsecondary education (junior secondary or less)	4.45***	5.05
Born in mainland China (HK or other)	0.33***	-4.68
Religion very important (somewhat/not important)	0.82	-0.67
Christian (no religion)	1.53	1.39
Buddhist (no religion)	1.16	0.48
Intercept	2.01	1.47

*Note.* Data come from a telephone survey of the Hong Kong adult population conducted in 2013 ( $N=818$ ). Reference categories are in parentheses. Data are weighted.

\*\* $p < .05$ , \*\*\* $p < .01$ .

gradient in contact: individuals with postsecondary education have four times the odds of contact, compared with those with junior secondary education or less ( $p < .01$ ). Individuals born in mainland China had 67% lower odds of contact compared with people born in Hong Kong or other locations ( $p < .01$ ). Notably, religiosity and religious affiliation were both uncorrelated with contact.

### Interpersonal Contact and Attitudes toward Gays and Lesbians

After examining the levels and correlates of interpersonal contact, we investigated the relationship between interpersonal contact and attitudes. Preliminary analysis revealed that interpersonal contact had the same associations with each of the seven attitude items about gay and lesbian individuals. Because presenting all items separately would be cumbersome and not provide additional information, we opted for a more parsimonious approach using a composite attitude measure based on predicted factor scores: All seven items loaded on a single factor with an Eigenvalue of 3.35 ( $\alpha = 0.81$ ). Higher values of this measure correspond to more favorable attitudes. In Table 2, we report the unstandardized coefficients ( $\beta$ ), standard errors, and standardized coefficients ( $B$ ) from an OLS regression predicting favorable attitudes toward gays and lesbians. Model 1 contains demographic characteristics only, whereas Model 2 includes both demographics and interpersonal contact with gays and lesbians. Note that the vignette manipulation does not bias the associations in Table 2; including a dichotomous indicator for the experimental condition did not alter the results.

Table 2  
*Parameters from an OLS Regression Predicting Favorable Attitudes Toward Gays and Lesbians*

Predictors	Model 1			Model 2		
	$\beta$	s.e.	B	$\beta$	s.e.	B
Infrequent contact (none)	...	...	...	0.68***	0.08	0.31
Frequent contact (none)	...	...	...	0.86***	0.09	0.28
Age in years	-0.01*	0.00	-0.10	0.00	0.00	-0.02
Female (male)	0.21**	0.08	0.10	0.15*	0.08	0.07
Senior secondary (less)	0.32***	0.12	0.14	0.19*	0.11	0.08
Postsecondary (less)	0.67***	0.12	0.29	0.43***	0.11	0.19
Born mainland China (HK/other)	-0.36***	0.10	-0.16	-0.20**	0.09	-0.09
Religion very important (somewhat/not important)	-0.55***	0.13	-0.21	-0.52***	0.12	-0.20
Christian (no religion)	0.06	0.12	0.02	0.02	0.11	0.01
Buddhist (no religion)	-0.15	0.14	-0.05	-0.16	0.13	-0.06
Intercept	0.02	0.22	...	-0.42*	0.22	...
$R^2$	.227			.319		

Note. Data come from a telephone survey of the Hong Kong adult population conducted in 2013 ( $N = 772$ ). Reference categories are in parentheses. Data are weighted.

\* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ .

The results in Model 1 show that women had more favorable attitudes toward gays and lesbians compared with men ( $\beta = 0.21$ ;  $SE = 0.08$ ). People with senior secondary education and postsecondary education also reported more favorable attitudes compared with individuals with less education ( $\beta = 0.32$ ;  $SE = 0.12$  and  $\beta = 0.67$ ;  $SE = 0.12$ , respectively). Variables negatively associated with attitudes were being born in mainland China ( $\beta = -0.36$ ;  $SE = 0.10$ ) and reporting high religiosity ( $\beta = -0.55$ ;  $SE = 0.13$ ). In Model 2, the parameters suggest that interpersonal contact was positively associated with favorable attitudes toward gays and lesbians, supporting Hypothesis 1 ( $\beta = 0.86$ ;  $SE = 0.09$  for frequent contact;  $\beta = 0.68$ ;  $SE = 0.08$  for infrequent contact). A post hoc Wald test showed that individuals with frequent contact also have more favorable attitudes than people with infrequent contact ( $p = .02$ ). The coefficients for frequent and infrequent contact correspond to 83% and 66% of a standard deviation in the attitude scale, suggesting a strong association. The standardized coefficients, which show the relative importance of variables in the model, suggest that contact is the most important predictor in our model of attitudes toward gays and lesbians.

Examining changes in the coefficients between the two models shows how interpersonal contact mediates the relationship between demographic characteristics and attitudes. The negative association between age and attitudes observed in Model 1 disappears once interpersonal contact is controlled for

Table 3

*Parameters from a Logistic Regression Predicting Support for an Antidiscrimination Law*

Predictors	Model 1		Model 2	
	Odds ratio	<i>z</i>	Odds ratio	<i>z</i>
Any contact (no contact)	...	...	1.70**	2.42
Age in years	0.98***	-3.58	0.98***	-3.06
Female (male)	1.08	0.39	1.03	0.14
Senior secondary (less)	1.32	1.04	1.22	0.77
Postsecondary (less)	1.61*	1.72	1.37	1.14
Born mainland China (HK/other)	0.45***	-3.68	0.50***	-3.15
Religion very important (somewhat/not important)	0.68	-1.37	0.69	-1.31
Christian (no religion)	0.72	-1.25	0.68	-1.40
Buddhist (no religion)	0.92	-0.30	0.92	-0.31
Intercept	6.97***	4.17	5.06***	3.35

*Note.* Data come from a telephone survey of the Hong Kong adult population conducted in 2013 ( $N=805$ ). Reference categories are in parentheses. Data are weighted.

\* $p < .10$ , \*\* $p < .05$ , \*\*\* $p < .01$ .

in Model 2. This suggests that less favorable attitudes among older people can be explained in part by their lower likelihood to have contact with gays and lesbians. Similarly, the association between gender and attitudes weakens once interpersonal contact is added to the model, also suggesting that interpersonal contact partially explains why women report more favorable attitudes toward gays and lesbians.

We also explored associations among support for an antidiscrimination law, interpersonal contact, and demographic characteristics. Table 3 reports the parameters from a logistic regression model predicting support for this law. Model 1 suggests that being born in mainland China ( $OR=0.45$ ;  $z=-3.68$ ) and being older ( $OR=0.98$ ;  $z=-3.58$ ) were both negatively associated with support for the law. Individuals with postsecondary education were slightly more likely to support the law than those with less education, but this parameter is marginally significant ( $OR=1.61$ ;  $z=1.72$ ). Notably, unlike the results for attitudes toward individuals (Table 2), there was not a significant association between religiosity and support for the law.

Model 2 introduces interpersonal contact into the model. We combined frequent and infrequent contact into a single “any contact” category for reasons of parsimony because frequent and infrequent contact had the same association with support for the law [ $\chi^2(1)=0.01$ ;  $p=.94$ ]. Having any contact was significantly associated with a 70% increase in the odds of supporting the antidiscrimination law ( $OR=1.70$ ;  $z=2.42$ ). The parameters for birth place and age remained unchanged, but after controlling for interpersonal contact,

there were no longer educational differences. A supplementary analysis showed that the association between interpersonal contact and attitudes was similar across respondent subgroups.

### Effects of Imagined Contact

Next, we investigated how imagined contact influences attitudes toward gays and lesbians. We present results for each attitude item separately because the effects of imagined contact differed for each attitude item, and combining these items would mask these differences. This contrasts with the results in Table 2, where the effects of interpersonal contact were similar for each attitude item. Table 4 contains parameters from ordered logistic regressions of attitudes on the experimental condition (vignette or nonvignette group) and demographic controls, stratified by whether the respondent had interpersonal contact before the survey. The coefficients refer to the effect of imagined contact on attitudes.

As hypothesized, for individuals who had interpersonal contact with gays or lesbians before the survey, we did not observe an effect of imagining contact on attitudes toward gays and lesbians. None of the parameters in the left-hand panel are statistically significant. However, for individuals who had no interpersonal contact with gays or lesbians (right panel), imagined contact resulted in more favorable attitudes for most (but not all) items. For example, among individuals who had no previous interpersonal contact, the vignette group reported more favorable attitudes for the items measuring positive attitudes. In addition, imagined contact increased supportive attitudes toward antidiscrimination legislation ( $\beta = 0.58$ ;  $SE = 0.24$ ). Imagined contact also decreased negative attitudes that gays and lesbians are “immoral” ( $\beta = -0.52$ ;  $SE = 0.23$ ) and “should be avoided” ( $\beta = -0.48$ ;  $SE = 0.23$ ). Interestingly, imagined contact had no effects on the three relational items, such as individuals’ attitudes about friendships and familial relationships with gays and lesbians. Imagined contact also had no effect on the “make me nervous” item, which prompts respondents to think relationally in terms of how gays and lesbians make them feel. A supplementary analysis showed that the influence of the vignette on attitudes was similar regardless of whether the vignette depicted a male or female couple.

### Discussion

In this article, we investigated the relationship between contact with gays and lesbians on one hand, and attitudes toward gay people and gay rights on the other. Three sets of findings emerged. First, interpersonal contact with gays and lesbians was positively associated with favorable attitudes toward both gay people and gay rights (Hypothesis 1). In fact, the standardized coefficients

Table 4  
*Effects of Imagined Contact on Attitudes Toward Gays and Lesbians, by Whether Respondents Have Interpersonal Contact*

Dependent variables	Any interpersonal contact		No interpersonal contact	
	$\beta$	s.e.	$\beta$	s.e.
Positive attitudes				
Accept gays and lesbians	0.15	0.23	0.80***	0.21
Sexual orientation does not affect acceptance	0.21	0.27	0.84***	0.24
Policy attitudes				
Support for antidiscrimination legislation	0.15	0.24	0.58**	0.24
Negative attitudes				
Gays and lesbians are immoral	-0.16	0.23	-0.52**	0.23
Gays and lesbians should be avoided	-0.01	0.26	-0.48**	0.23
Relational attitudes				
Gays and lesbians make me nervous	0.06	0.24	-0.10	0.23
Doesn't matter if friends are gay or lesbian	-0.25	0.32	0.25	0.25
Parents should love their children, regardless if gay or straight	-0.66	0.43	-0.36	0.28

*Note.* Data come from a telephone survey of the Hong Kong adult population conducted in 2013. Coefficients refer to the effect of imagined contact (i.e., being in the vignette group vs. the nonvignette group). Results come from separate ordered logistic regressions of each attitude item on experimental condition (vignette vs. nonvignette) and demographic controls (age, gender, education, place of birth, religiosity, religion). Separate models were estimated for respondents who reported interpersonal contact with gays or lesbians and those who did not. Data are weighted.

\*\*\* $p < .05$ , \*\* $p < .01$ .

suggested that contact was the predictor with the strongest associations—more so than religion, age, and education. The strong nature of this association contrasts with relatively weak contact effects that have been found in some places where religious norms against homosexuality are prominent (e.g., Sakalli & Uğurlu, 2002; Skipworth, Garner, & Dettrey, 2010). Antigay bias in Hong Kong stems mostly from local secular norms concerning family life as opposed to religion (Chou, 2001; Chow & Cheng, 2010). The contact effects that we observed suggest that bias rooted in Hong Kong's family norms may be less resistant to change than religion-based antigay bias in some other parts of the world. Future research could examine more systematically cross-national variation in religious and cultural norms and how such variation moderates contact effects.

Our study is limited by its single-item measure of interpersonal contact, which may obscure heterogeneous effects of contact. Previous research suggests that the nature and quality of contact influence the extent to which contact affects attitudes (Pettigrew & Tropp, 2006). Future research with richer measures of contact could better describe heterogeneity in the effects of interpersonal contact in Hong Kong. In addition, our cross-sectional data cannot distinguish causal effects of contact from selection effects, whereby people with favorable attitudes choose to interact with gays or lesbians. Although research provides evidence of causal effects in other parts of the world (Binder et al., 2009; Smith, Axelton, & Saucier, 2009), additional research is needed to distinguish causal and selection effects in Hong Kong.

Our second set of findings pertains to imagined contact. For individuals who have had interpersonal contact with gays and lesbians, imagining contact did not affect attitudes (Hypothesis 3). This comports with literature suggesting that parasocial contact is less influential than interpersonal contact (Turner, Crisp, & Lambert, 2007). In contrast, for individuals who had not interacted with gays and lesbians before the survey, imagined contact increased positive attitudes about gay people and decreased negative attitudes. Notably, imagined contact had no effect on items about interpersonal relations with gays and lesbians (Hypothesis 2). This difference suggests that imagined contact may have triggered some bias-reducing mechanisms but not others. In our vignette manipulation, we asked respondents to imagine a loving and committed same-sex couple. This imagination might have induced positive affect and reduced negative stereotypes about gays and lesbians. Notably, the imagined contact was brief, and we did not ask the respondent to imagine interacting with the hypothetical same-sex couple. Because there was minimal interaction, this type of imagined contact may be limited in its ability to reduce anxiety about interacting with gays and lesbians, which might explain why the imagined contact did not affect attitudes concerning relationships with gays and lesbians. In contrast, researchers have found that highly

interactive imagined contact primarily reduces bias by reducing intergroup anxiety (Husnu & Crisp, 2010). Future research could further explore how various forms of imagined contact operate through different bias-reducing mechanisms, and also investigate how the mechanisms differ between imagined contact and other types of parasocial contact.

Several other areas of potential research on imagined contact are also worth noting. We investigated short-term effects, but future research could examine imagined contact's long-term effects. Scholars have posited that imagined contact's effects do not last as long as the effects of interpersonal contact (e.g., Crisp & Turner, 2009). However, imagined contact can serve as a helpful precursor to interpersonal contact. By reducing intergroup bias, imagined contact can encourage people to seek interpersonal contact (Husnu & Crisp, 2010). Future research could also investigate whether imagined contact prompted by a vignette like ours would reduce antigay bias in places other than Hong Kong. Cultural norms dictate how strangers interact (Berko, Aitken, & Wolvin, 2010). In places where people are accustomed to engaging strangers in highly interactive activities, a vignette that simulates greater interaction might be necessary to produce bias-reducing effects. Finally, although we did vary the gender of the couple in the vignette, we asked all respondents to imagine a single specific scenario. Future research could use "stimulus sampling" (Wells & Windschitl, 1999) and present respondents with a range of scenarios (e.g., in a location other than a restaurant, with a situation other than a car accident) to improve construct validity of imagined contact.

Our third set of findings pertains to the correlates of attitudes toward gay people and gay rights. Women, younger people, and people with more education reported more favorable attitudes toward gay people and gay rights than did their peers. Our mediation analysis shows that this is partly because women and people with more education are more likely to have interpersonal contact with gays and lesbians. Interestingly, contact mediated the association between age and attitudes toward gay people, but not the relationship between age and attitudes toward gay rights. This discrepancy suggests that some older individuals' opinions about gay rights are based on considerations other than their views about gay people. For example, one can speculate that older individuals may oppose government interventions such as legal protections, regardless of whom the interventions are intended to protect. Future research could study this potential dynamic more closely.

Finally, we found that highly religious people held more negative attitudes toward gay people than their less religious peers, but there was no difference in support for gay rights. This suggests that individuals do not necessarily form their opinions about civil rights based on their moral beliefs (Brewer, 2003). Individuals might oppose homosexuality based on their religious morality, but also believe that Hong Kong's secular government should prioritize

the principle of equal opportunity. Our findings suggest that distinguishing attitudes about gay people from attitudes about gay rights can provide a richer understanding of public opinion. We also found that people born in mainland China held more negative views about gay people and gay rights, consistent with reports that mainland China has stronger familial norms that require men and women to marry and have children to continue the family line (Chow & Cheng, 2010).

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### Biographical Notes

Holning Lau is a Professor of Law at the University of North Carolina School of Law. He has also been a Fellow at the Williams Institute at the University of California, Los Angeles, and a Visiting Fellow at the University of Hong Kong's Centre for Comparative and Public Law. Professor Lau received his JD from the University of Chicago. His research investigates the legal and cultural dimensions of sexual orientation and gender identity in Hong Kong and other parts of the world.

Charles Lau is a Survey Methodologist in the Survey Research Division at RTI International. He holds a PhD in Sociology and an MS in Epidemiology, both from the University of California, Los Angeles. Dr Lau's research focuses on cross-cultural differences in questionnaire design, interviewer effects, and the analysis of paradata.

Kelley Loper is an Assistant Professor at the Faculty of Law of the University of Hong Kong, where she is also the Deputy Director of the Centre for Comparative and Public Law. Professor Loper received her LLM from the University of Hong Kong and her BA from Yale University. Professor Loper's research explores international human rights law, with an emphasis on antidiscrimination policies.