

Inter-Group Relations and Support for Democratization: Evidence from Hong Kong

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Abstract

What motivates ordinary citizens to support pro-democracy movements? Conventional theories of democratization emphasize the mass's redistribution demands or political grievances against the elites. This article suggests a different motive based on inter-group relations. We argue that as a pro-majoritarian institution, democracy may be sought after by members of the majority as a way to defend their interests and identity against perceived threats from certain outgroups. We evaluate this argument by drawing evidence from Hong Kong, a city that has recently witnessed major waves of pro-democracy uprisings. Experimental studies on local university students reveal that priming the socioeconomic threat of mainland Chinese visitors—a significant outgroup in the city—causally increases one's support for democratization. Observational evidence from surveys and elections further shows that support for democracy is higher in localities more exposed to mainland visitors. These findings highlight the powerful yet potentially dangerous role of group-based sentiments in driving political transitions.

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1 Introduction

Active and widespread participation by the mass public has played a crucial role in propelling democratic transitions in many societies. The sight of tens or even hundreds of thousands of people pouring into the streets to challenge an incumbent authority is not only a powerful display of the popular will (Tilly 1978), but also a direct cause of the collapse of many seemingly invincible regimes (Beissinger 2002; Kuran 1991; Linz and Stepan 1996). Yet, for individual citizens, supporting an uprising against the state is an inherently costly action with no guaranteed rewards. What motivates them to engage in such an undertaking?

Existing explanations for popular participation in democratization focus mainly on the conflicts between citizens and the ruling political and economic elites. Prominent theories identify the poor's demand for wealth redistribution (Acemoglu and Robinson 2005; Boix 2003; Collier 2009) and the middle class's struggle for greater rights and freedom (Ansell and Samuels 2014; Huntington 1991; Inglehart and Welzel 2005; Moore 1966) as the two chief reasons behind mass democratic uprisings. In this article, however, we argue that pro-democracy mobilization can feed on a much wider range of resentments. Apart from mass–elite conflicts, citizens' grievances against other non-elite actors in a society—even those in relatively mundane and non-political forms—can also fuel the calls for democratization by reinforcing certain group-based sentiments. Specifically, we argue that, when faced with socioeconomic competition with a significant outgroup, members of a society's majority group may choose to support democracy, an institution that supposedly works in favor of the many, as a way to protect their ingroup's material interests and cultural status. Apart from seeking political or economic liberation, therefore, ordinary citizens' support for democratization can also be motivated by a more primordial type of sentiment derived from inter-group rivalries.

We illustrate how inter-group attitudes shape support for democratization by studying Hong Kong, a former British colony that is now a special administrative region of the People's Republic of China (PRC). Over the past decade, Hong Kong has witnessed a rising tide of demands for greater political democracy (specifically for the adoption of unconditional universal suffrage in

selecting the city's chief executive), culminating in an extended series of large-scale pro-democracy protests in 2019-2020. While conventional accounts of the causes of Hong Kong's pro-democracy movement focus on either the city's vast wealth inequality (Veg 2015) or its citizens' fear of losing rights and freedom to an authoritarian national government (Lee et al. 2019), we argue that a deeper and yet often overlooked factor to explain the movement's widespread popularity lies in the inter-group domain: Since around 2009, Hong Kong's increasing social and economic integration with a rapidly growing China has brought to the city a massive volume of visitors from the mainland (i.e., tourists and immigrants), who have competed with the local population over limited public resources and economic opportunities. The intense socioeconomic competition has aggravated local residents' dissatisfaction with the unelected local government and evoked a strong desire to defend their habitat and identity against the unwelcome (and potentially assimilating) influence from mainland China. These sentiments, as we will argue, have significantly contributed to the rise of pro-democracy activism in the city.

We substantiate this group-based argument with evidence from a series of experimental and observational studies. To shed light on the micro-level causal linkage between inter-group attitude and support for democratization, we conduct two survey experiments on local university students—a group that has been highly active in the city's pro-democracy movements. In the first experiment, we use a set of subjective distance questions (Bogardus 1926) to prime a random set of our subjects about their attitude toward mainland Chinese visitors before measuring their support for democracy. We find that subjects who hold strongly negative views of mainlanders will significantly increase both their verbal support for democracy and actual monetary donations to local pro-democracy organizations when their feelings toward the mainland outgroup are experimentally activated through priming questions. This result establishes a causal relationship between outgroup attitude and support for democratization. In the second experiment, we further explore whether the outgroup hostility that drives democratic support is founded primarily on the perception of mainlanders as socioeconomic competitors or on the belief that they are too closely affiliated with (and may therefore be potential surrogates of) the Chinese government. Using two pairs of

treatments that directly manipulate outgroup attitudes, we find that subjects' democratic support reacts strongly to the treatment that emphasizes mainlanders' socioeconomic threat, but exhibits limited change to treatments that try to vary their perceptions of mainlanders' relationship with the Chinese authorities.

To demonstrate the external validity of the survey experiment findings, we also use data from representative surveys and legislative elections to examine how the intensity of real-life exposure to mainland visitors shapes local residents' political attitudes and vote choices. Our observational study takes advantage of the fact that the bulk of the mainland visitors come to Hong Kong via two adjacent customs checkpoints (Lo Wu and Lok Ma Chau) and travel to the rest of the city through a major railway line (East Rail). This unique pattern of movement creates variations in mainland visitor presence across different parts of the city, which we exploit for causal identification. Our analyses of survey responses suggest that individuals residing in districts that are more accessible from the two customs checkpoints via public transit tend to report more negative views of mainland visitors, stronger Hong Kong identity, and, most importantly, greater demand for democracy. Analyses of outcomes in Legislative Council elections further reveal that those more mainland-accessible districts have also witnessed a more rapid decline in the electoral performance of pro-regime candidates following the boom of cross-border tourism. These findings help to corroborate the experimental results and underscore the generalizability of the group-based argument to the city's public at large.

There has been a long-standing scholarly interest in understanding the sources of popular grievances behind major political uprisings, going back as early as Tocqueville's (1955 [1856]) pioneering study of the French Revolution. Large-scale social movements, however, are inherently difficult to study because they are rare and highly disruptive. Research that probes their internal dynamics often has to be conducted in an ex post fashion, relying on archives, media publications, and personal memoirs to infer participants' motives. However, to the extent that most participants do not leave any traceable record for future researchers, this approach is often biased in favor of "master narratives" offered by more vocal elite actors. Our study addresses such bias by offering

a close-up examination of the incentives of actual (or likely) movement participants during an *on-going* pro-democracy movement. In doing so, we help to shed light on the “assumptions, hopes, needs, longings and interests of ordinary people” (Hobsbawm 1990, p11), and provide a more complete and authentic picture of what has turned ordinary citizens into democracy supporters in Hong Kong.

Our findings of how inter-group relations shape democratic support are also related to a more specific body of scholarship on the role of group identity—and nationalism in particular—in regime transitions (e.g., Beissinger 2002; Bunce 2003; Nodia 1992). Researchers have found that, contrary to the early European experience, popular uprisings in the more recent waves of democratization cases were based less on common economic interests than on shared political identities rooted in distinct national, ethnic and religious backgrounds (Beissinger 2002; Haggard and Kaufman 2016; Huntington 1991). Pioneering works on Eastern European transitions argue that nationalist sentiments played a crucial role in mobilizing anti-regime protests that eventually led to the disintegration of the Soviet bloc (Beissinger 2002; Kubik 1994). Most of these studies, however, adopt a macro-level approach that takes countries or specific protest events as the unit of analysis. Our study complements the macro-level approach by addressing the critical micro-level question of how group-based sentiments are activated in the minds of movement participants. Contrary to a common view that nationalism is primarily a reaction to the *political* domination of a foreign power (Anderson 1991; Beissinger 2002), our findings suggest that *non-political, socioeconomic* threats posed by ordinary outgroup members can also be highly effective for arousing strong collective ingroup identities. This finding helps to broaden our understanding of the range of feasible tactics that elites may use to incite nationalistic sentiment among mass followers.

Furthermore, our study also speaks to a large inter-disciplinary literature on the behavioral consequences of inter-group attitudes. Studies have shown that group-based prejudice widely exists in many different societies (e.g., Ayres and Siegelman 1995; Distelhorst and Hou 2014; Fang, Guess, and Humphreys 2019; Kasara 2013), and that, depending on the context, prejudice can influence individuals’ political preferences (e.g., Ferree 2006; Fisher et al. 2014; McConaughy et

al. 2010; Kam and Kinder 2012), economic decisions (e.g., Grossman and Honig 2017; Hedegaard and Tyran 2018; Robinson 2016), and policy stance in various areas (e.g., Gilens 1995; Newman and Malhotra 2019; Peffley and Hurwitz 2007; Winter 2006). We extend this literature in two ways. First, we extend the geographic coverage of this literature from consolidated and emerging democracies to a context where political transition is still ongoing. Second, we expand the range of outcomes being examined, from those that mainly affect individual-level well-being to one that potentially has significant collective ramifications: support for pro-democracy movements.

2 Inter-Group Competition and Support for Democratization

The existing literature offers two perspectives on what motivates citizens to support and take part in pro-democracy movements. The first perspective, drawing on theoretical insights from canonical models by Meltzer and Richard (1981) and empirical cases from the early democratizing experience of Western Europe, views democratization as essentially a process of class struggle, in which the opportunity to redistribute wealth mobilizes the (relatively poor) mass public to rise up against the wealthy ruling elites (Acemoglu and Robinson 2005; Boix 2003). The second perspective, inspired mainly by cases from the third and fourth waves of democratic transitions, emphasizes the intrinsic values that citizens place on political rights and liberties (Diamond 1999; Inglehart and Welzel 2005; Norris 1999). Research that adopts this perspective focuses on either on the macro-level structures that facilitate the rise of pro-democracy values (Inglehart and Welzel 2005; Norris 1999) or the specific local conditions that enable citizens to effectively coordinate collective actions against a repressive government (Kuran 1991; Lohmann 1994).

While these two perspectives differ in many respects, they nonetheless share one common implicit assumption—namely, that mass support for democratization is driven by grievances directly targeted at the reigning political and economic elites. While mass–elite conflicts are certainly important, we argue that they are not the *only* reason for citizens to join and fight for a pro-democracy movement. Like many other large-scale social movements, pro-democracy mobilization is a com-

plex, multi-level undertaking that involves participants with a wide range of goals and preferences, not all of which necessarily align with, or are expressed in, the master frame of the movement (Kalyvas 2003). Specifically, we argue that, in some cases, the resentment that leads individuals to want more democracy may actually be rooted in their interactions with *non-elite* actors from other competing social groups.

Our argument builds on a time-honored insight from social psychology that group affiliations are a key aspect of human beings' social life (Turner 1984). Individuals identify with various social groups and derive a sense of belonging and self-esteem from such identification. Group identities play an important role in shaping a person's self-image, her political and social attitudes, and, importantly, how she behaves and interacts with other members of society (Tajfel et al. 1971; Sambanis and Shayo 2013; Shayo 2009). The salience of a given group identity depends on a host of factors, not the least of which is the nature and extent of the competition between different groups (Barth 1969; Sidanius and Pratto 1999; Sherif 1966; Tajfel et al. 1971). Inter-group competition over scarce resources such as territory, wealth, and political power strengthens group members' identification with their ingroup (Shayo and Zussman 2011) and leads them to develop more negative perceptions of the economic and political threats posed by outgroups (LeVine and Campbell 1972; Sherif 1966). These enhanced, group-based sentiments can in turn motivate individuals to engage in collective actions aimed at protecting their ingroup's welfare and outcompeting rival groups (Klandermans 1997; Nielsen 1980; Olzak, Shanahan, and West 1994; Olzak, Shanahan, and McEneaney 1996).

Depending on the context, political actions induced by inter-group competition may take a variety of different forms. When it is the politically dominant group that feels threatened, as in the case of whites in the American South after desegregation, resentment against competing minority outgroups may translate into anti-democratic measures that seek to limit or deny the rights of those minorities (Olzak, Shanahan, and West 1994; Olzak, Shanahan, and McEneaney 1996). However, in situations where the ingroup is large in number but still politically disenfranchised, grievances against a threatening outgroup can also propel ingroup members to support greater democracy

as a way to reaffirm their own group's economic and political standing. Researchers have noted that certain institutional features of democracy may be used to support exclusionary measures that serve such purposes. As a system built on the principle of popular sovereignty, for example, democracy typically requires a much clearer definition of who "the people" are than other more hierarchically structured political systems do (Abizadeh 2012; Taylor 1998). Drawing boundaries between those who do and those who do not belong to a political community often inevitably leads to some form of differential treatment based on ethnic or cultural group affiliations (Mann 2004; Nodia 1992). The common usage of elections as a mechanism for decision-making also tends to favor large groups over small ones in both symbolic and substantive terms (Przeworski 1999). When inter-group competition is intense, these populist and pro-majoritarian aspects of democratic institutions may be especially attractive to a disadvantaged majority that wishes to defend its status and interests against influential internal minorities or significant outsiders that are not conventionally seen as part of the "people".

The democratizing experiences of many countries testify to the importance of group-based competition as a driving force. In the United States in the 19th century, for example, many reformers who campaigned for cleaner and fairer elections against urban electoral machines, like the Tammany Hall, were genuinely worried about the "threat" posed by Catholic and Irish immigrants (Golway 2014). Likewise, leaders of the women's suffrage movement during this period made the case for the urgency of (white) female enfranchisement by framing it as a way to counter the danger associated with granting similar rights first to racial minorities (Cohen 1996). Similar examples can also be found in the more recent second- and third-wave democratization cases. The discourse of democracy and popular sovereignty, for instance, featured prominently in the nationalist movements of many Asian and African countries during the post-World War II anti-colonial struggles (Emerson 1960). The pro-democracy movement in Taiwan that began in the 1970s similarly drew strength from the cleavage between the majority native Taiwanese and the mainland outsiders, who arrived in large numbers with the Kuomintang regime (Yang 2007). Moreover, studies of Estonia and Latvia have shown that ethnic nationalism played a key role in mobilizing popular support for

self-determination and democratic transition at the end of the Soviet era (Beissinger 2002; Nodia 1992).

By emphasizing the role of inter-group tension, we are certainly not suggesting that resentment against the elites is irrelevant or unimportant for mobilizing support for democratic change. On the contrary, the two types of sentiments are not only compatible with each other, but also often mutually reinforcing. When inter-group competition is intense, members of the majority group may regard the sitting government as particularly undemocratic if it is perceived as not being sufficiently helpful to the majority or, worse still, as being captured or controlled by the outgroup with which the majority is in competition. In the Baltic states, for example, the popular support for democratization and independence was built on both the historical grievances against the political domination of the Soviet regime and a more concrete and contemporary form of resentment against Russian immigrants who occupied affluent jobs in urban areas and lucrative sectors (Dakin 1992; Vetik 1993). In Taiwan, the native population's resentment of mainlanders' economic and political privileges also reinforced their negative view of the Kuomintang government as a regime imposed by outsiders (Bedford and Hwang 2006). In both cases, democratization was seen as serving the dual goals of toppling a repressive government and restoring an inter-group balance favorable to the majority group.

3 Inter-Group Contact, Local Identity, and Hong Kong's Pro-Democracy Movements

Over the last decade, Hong Kong has witnessed a rising tide of calls for democracy, culminating in large-scale campaigns like the Occupy Central Movement in 2014 and the Anti-Extradition Bill Protests in 2019-2020. The recent Anti-Extradition Bill Protests, in particular, represent the largest social movement in the city's history. This movement lasted for over six months, during which numerous rallies and demonstrations were held. Young people with some college education were the most active group in the protests, but sympathizers and supporters could be found in a broad

swath of occupations and socioeconomic backgrounds (Lee et al. 2019). One estimate suggests that over 40% of the city's population engaged in some activities in support of the protest,¹ making it one of the most widely participated pro-democracy movements the world has ever seen.

On the surface, pro-democracy uprisings in Hong Kong appear explainable by the conventional theories of democratization. The city's vast economic inequality, for example, seems to fit well with the redistribution-based explanation. The presence of both a highly developed economy and a sizable, well-educated middle class also lends some veracity to the post-materialist, value-based account. However, a closer look at the process and history of these movements reveals that neither of the conventional theories is sufficiently adequate. In contrast to the redistribution-based account, for example, the political coalition behind Hong Kong's pro-democracy movements has typically cut across class lines, despite the presence of massive wealth disparities in the city. Not only have grievances about economic inequality been remarkably absent from the recent protests, but also many activists have actually expressed strong attachment and even gratitude toward business tycoons sympathetic to the movement.² Moreover, the freedom-seeking explanation, while more relevant, is again incomplete because it cannot account for the significant variations in the intensity of mobilization over time: While Hong Kong residents have always preferred to preserve their liberty and autonomy, it is only in recent years that this preference has escalated into sustained, large-scale social movements containing intense anti-China elements. An explanation based solely on relatively static factors, such as the level of development or citizens' intrinsic institutional preferences, cannot satisfactorily account for this sudden and radical turn in public ethos.

We argue that a better explanation for the meteoric rise in the intensity of the pro-democracy demand in Hong Kong must take into account the inter-group domain. Specifically, we argue that the increasingly intense socioeconomic competition between local Hong Kong residents and mainland Chinese visitors in the last decade has played a crucial role in turning an otherwise

¹See "Seeing Dissent and the Voice of Young People from the Poll Numbers" (*in Chinese*), *Ming Pao*, September 27, 2019. Retrieved from <https://bit.ly/3b3brRP>.

²See, for example, "Li Ka Shing Hopes the Youth Sees the Big Picture And Those in Power Can Give the Young a Chance" (*in Chinese*), *Ming Pao*, September 10, 2019. Retrieved from <https://bit.ly/39JXX32>.

relatively moderate and apolitical public into active supporters of regime change. During the first few years of its handover to China, the number of mainland Chinese who visited Hong Kong was limited because of tight travel restrictions.³ From 2003, some of the restrictions were gradually relaxed to make it easier for mainland residents to visit, study, or work in the city. An especially notable policy change was the introduction of special individual-based tourist visas (Individual Visit Scheme 自由行, or IVS), which allowed mainland residents from selected cities to visit Hong Kong without having to be affiliated with any official tour groups. Initially, only a moderate number of mainlanders used IVS to visit the city, but the number of visitors began to soar after the 2008 Financial Crisis because of both the increase in the purchasing power of the Chinese Renminbi (RMB) and the further lifting of application/travel restrictions.⁴ Between 2009 and 2014, the annual number of mainland visitors more than tripled, growing from about 15 million a year to close to 50 million. Mainland visitors who come to Hong Kong on IVS visas engage in a variety of activities. Apart from typical sight-seeing tourism, many use the visa to access products and services that are unavailable on the mainland. A substantial share of the cross-border trips, for example, are made by parallel traders, who buy large quantities of (imported) cosmetics and daily necessities in Hong Kong and resell them on the mainland. Others have also used the visa to give birth to children with Hong Kong permanent resident status, to receive newly developed medical treatments or vaccines, or to purchase financial assets denominated in foreign currencies (Ma 2015).

While the rapid growth of mainland visitors has brought some new economic opportunities, studies have found that the economic gains tend to concentrate in only a few sectors (i.e., retail, tourism, and finance) and are captured disproportionately by business conglomerates and property owners (Sung et al. 2015). Meanwhile, many negative externalities associated with the increased mainland influx, such as price spikes, goods and space shortages, and social disturbances in local

³Mainland residents need to apply for an internal visa in order to visit Hong Kong, and tourist visas (for casual visitors) could only be applied for in groups before 2003.

⁴From the end of 2007 and the beginning of 2011, the exchange rate of RMB to US dollar (to which the HK dollar is pegged) rose by about 17% (data from *Chinese Statistical Yearbook*). In 2009, multiple-visit visas were introduced, allowing mainland citizens to visit Hong Kong for an unlimited number of times with just one visa application.

communities, are borne by the public at large. From 2003 to 2018, the nominal prices of residential and retail space in Hong Kong rose by more than four and six times, respectively, while nominal wages grew by only about 50% (Li, Cheung, and Han 2018). Activities such as birth/medical tourism and parallel trading also caused regular shortages of hospital beds and nursery products in high demand on the mainland, such as infant formulas and diapers.⁵ Public transit services also became excessively crowded as a result of the increased number of mainland passengers, and many shops that used to cater to local needs were forced to close, replaced by high-end retailers and pharmacies targeting the mainland clientele (Ma 2015). These economic and social changes created a widespread feeling among local residents that they were losing their own city to mainland “intruders”, which was further propagated and strengthened by the local media’s regular coverage of disruptive and uncivil behaviors by mainlanders (Wassler et al. 2018).

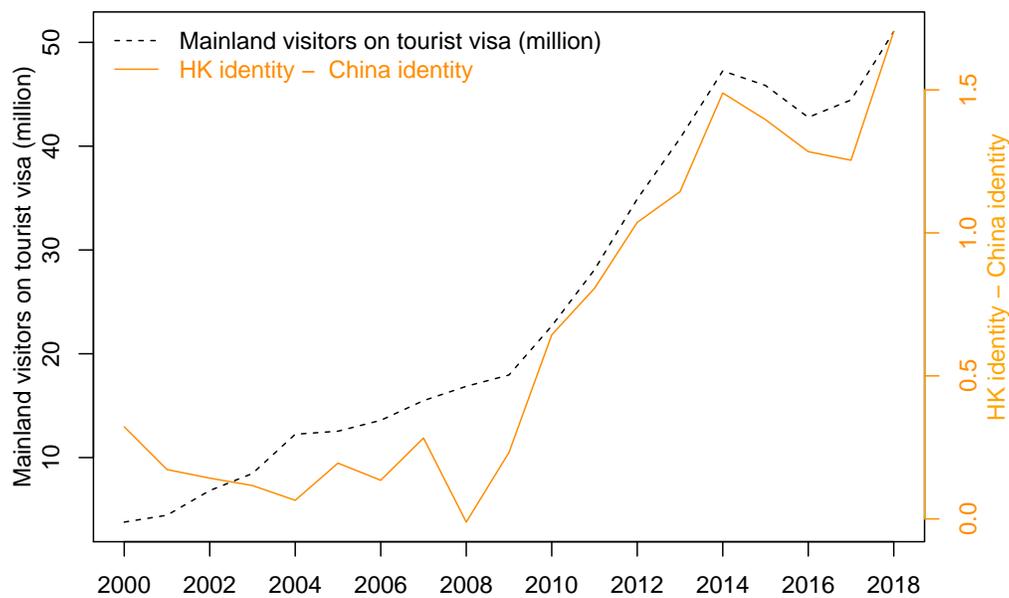
As a result of these developments, hostility toward mainland Chinese started to grow after 2009, forming the basis of a renewed collective identity for local Hong Kong residents.⁶ As illustrated in Figure 1, while the average Hong Kong resident saw him/herself as a Chinese as much as a Hong Konger before 2009, the relative salience of the Hong Kong identity rose dramatically over the same period when the growth of mainland visitors accelerated. The influx of mainland visitors and the strengthening of the Hong Kong identity fueled local residents’ support for democracy in several important ways. First, it directly contributed to the dissatisfaction with the incumbent government, which was increasingly seen as a surrogate of Beijing, rather than one representing the interests of the Hong Kong people. This reinforced a popular narrative that universal suffrage was urgently needed in order to have a government that would pay attention to the interests of local residents (Chin 2011). Second, it also created an urge to be separate and distinct from the Chinese outgroup and mainland China in general (Ma 2015). According to the influential literature on social identity, when group identity is salient, individuals will place greater importance on group norms and attributes that make their own group compare favorably to other outgroups

⁵See “Price Increase of Infant Formula Milk Higher Than Food Price Inflation Rate”, *Consumer Council of Hong Kong*, March 15, 2011. Retrieved from <https://bit.ly/31gBP6j>.

⁶For a related theoretical discussion of the politicization of collective identity, see Klandermans (1997).

(Tajfel et al. 1971; Turner 1984). To the extent that the difference in political institutions is one of the most visible distinctions between Hong Kong and the mainland (and one that many Hong Kong residents take pride in), at a time when Hong Kong was becoming increasingly close with China on socioeconomic terms, those who cared strongly about their Hong Kong identity may become especially keen to deepen the distinction in the political domain (through supporting democratization) and resist any policy change that could potentially diminish that distinction.

Figure 1: Mainland Visitors and Hong Kong Identity



Note: This figure presents the relationship between the number of mainland visitors and the strength of Hong Kong identity between 2000 and 2018. Data on Hong Kong identity are from 46 rounds of representative surveys conducted by Hong Kong Public Opinion Research Institute (averaged to year). The surveys asked respondents how much they identify as a Hong Kong citizen and as a Chinese citizen, respectively. The yellow line plots the strength of the Hong Kong identity minus that of the Chinese identity over time. Data on Chinese tourists are from *Statistical Review of Hong Kong Tourism* (multiple years). Regression analyses that control for additional covariates can be found in Table A.1.

While systematic evidence is still scant,⁷ several anecdotes suggest that resentment against the mainland influx has been visibly present in Hong Kong’s recent pro-democracy upsurges. In 2012, local activists organized several high-profile protests against parallel traders in a northern district

⁷One exception is Chan, Nachman, and Mok (2020). Using a survey experiment conducted prior to the 2019-2020 wave of protests, they show that exposure to a vignette about HK–mainland integration increases the participation propensity of Hong Kong residents who hold strong local identities.

close to the Hong Kong–mainland border. This event marked the beginning of a series of bottom-up initiatives that sought to push back against the mainland “invasion”, and produced symbols and slogans that became a key part of the repertoire for the subsequent pro-democracy protests.⁸ Scenes of furious protesters attacking individuals and companies with mainland background were seen during the recent protests, and some pro-democracy activists professed undisguised prejudice against mainland Chinese (Lowe and Ortmann 2020). There are, of course, still ongoing debates about how prevalent those acts and expressions actually were and how much of a role they have played in mobilizing participants. In the pages that follow, we provide to our knowledge the first set of systematic evidence to shed light on these issues.

4 Overview of Empirical Design

The central hypothesis that follows from the preceding discussion is that *intense resentment against the large influx of mainland visitors was a key cause behind the rapidly rising support for democratization among local Hong Kong residents in recent years*. To evaluate this hypothesis empirically, we conduct three inter-related studies. The first two studies, both of which are based on survey experiments on students from a major local university during the 2019-2020 Anti-Extradition Bill Protests, seek to provide micro-level evidence on (1) whether a person’s attitudes toward the mainland outgroup affects his/her support for democracy, and (2) what specific considerations help to induce a connection between outgroup attitude and democratic support.⁹ In the third study, we further use observational data from multiple years of representative surveys and elections to corroborate and generalize the experimental findings in the city’s broader context.

⁸For instance, the slogan of the 2012 movement, “Reclaim Sheung Shui Station” (光復上水站), was later adapted to become the first part of the main slogan in the 2019-2020 pro-democracy protest (“Reclaim Hong Kong” 光復香港). Other symbolic gestures common in this protest, such as waving a British or a colonial Hong Kong flag, also first appeared in 2012.

⁹Although Hong Kong does not have universal suffrage, its residents do enjoy a substantial degree of freedom in terms of participating in peaceful protests and publicly expressing dissent or criticism against the political authorities. Many speculated that this condition could change after the recent imposition of the Hong Kong National Security Law. However, all the data that we analyzed in this paper were collected *before* the announcement on this legal change, and none of our survey items were considered particularly sensitive at the time of fielding the surveys.

5 Study 1: Priming Outgroup Attitude

5.1 Subjects and Recruitment

The goal of our first experiment is to establish that attitudes toward mainland Chinese visitors are a causally relevant factor in shaping Hong Kong residents' support for democracy. The subjects of this study are students from a major university in the city. We choose to focus on university students because they have been highly active participants in the recent pro-democracy movement. Close to 80% of the participants in the 2019-2020 Anti-Extradition Bill Protests held tertiary degrees (Lee et al. 2019), and over 40% of those arrested during the movement were university students.¹⁰ Several local universities, including the one where we conducted the study, saw large-scale clashes between the police and the students on campus. An investigation into the mindset of university students can thus offer useful clues about the prevailing sentiment among actual and likely movement participants.

We recruited subjects by sending out university-wide mass emails to the entire student body (both undergraduate and graduate) in March 2020. Students were told that they were invited to participate in a survey on general social attitudes, which promised a guaranteed payment of 30 HKD (approximately 3.87 USD) and the chance of winning a lottery of an extra 500 HKD (64.5 USD).¹¹ We are primarily interested in responses from local students, who have a direct stake in the movement and comprise the vast majority of the student body.¹² A total of 607 students (~ 3% of the university's student population) responded to the invitation requests, of whom 94% ($n = 571$) were local. The subjects that we recruited were broadly representative of the university's student population in terms of the place of origin, gender, cohort, and academic program (see Figure A.1 in the Online Appendix). Consistent with our prior about their active involvement in

¹⁰For arrest figures, see <https://bit.ly/3dBVK42>.

¹¹For both experimental studies, participation was completely voluntary and subjects' consent was obtained at the beginning of each survey. The pay amount was set according to the local going rate for 30 minutes of work by a student research assistant. Subjects' personal information was collected to verify eligibility and process payments, but was permanently deleted shortly after each study was concluded. We provide a more extended discussion of the ethical considerations involved in Appendix A.

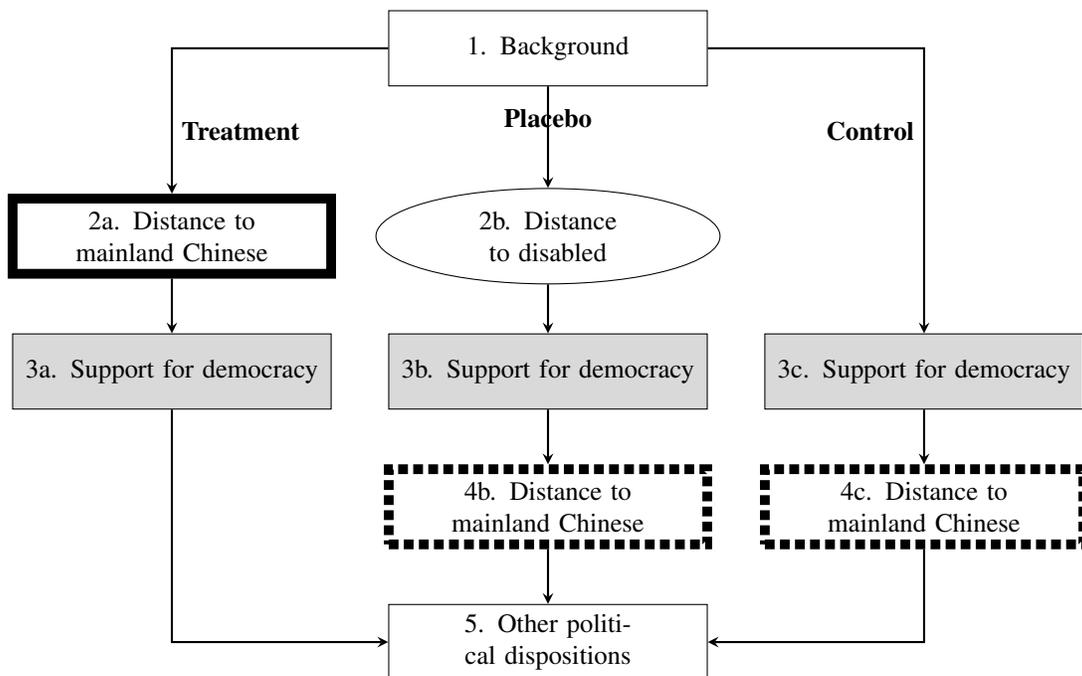
¹²Local students are defined as those who are either Hong Kong permanent residents or admitted to college from local high schools.

pro-democracy movements, close to 80% of the local students reported having participated in the 2019-2020 protests when asked, and more than half (~ 55%) reported having witnessed in person violent clashes between protesters and the law enforcement.¹³

5.2 Experimental Design

The procedures of the first survey experiment are illustrated in Figure 2. We began the survey with the same set of background questions for every subject and then randomly assigned our subjects into three groups: a treatment group where we primed their attitudes toward the mainland Chinese, a placebo group where we primed their attitudes toward a minority that was not usually seen as a threatening outgroup (i.e., the disabled), and a control group where no priming was given. We then measured respondents' support for democratic change through a number of attitudinal and behavioral questions. We then asked a few additional questions about protest participation and political predispositions before concluding the survey.

Figure 2: Experimental Procedure for Study 1



¹³We also indirectly asked about protest participation through a list experiment, and the reported participation rate was 66%. All questions about protest participation were asked after the key treatment and outcomes were measured (in Part 5 of the survey, see Figure 2).

We delivered the priming treatment through a “questions-as-treatment” approach, whereby we first asked our subjects a series of questions about their views of specific outgroups and then examined whether increasing the salience of those groups in their minds would influence their support for toward democracy.¹⁴ For the treatment group, we asked a total of six questions in the following format (original traditional Chinese text is in Appendix E):

Treatment Question There are many mainland Chinese in Hong Kong nowadays. How concerned are you if they are your [boyfriend or girlfriend] [relatives] [teachers] [roommates] [neighbors] [friends]?

For each question, subjects could choose one of the following answers: (1) not concerned at all; (2) not concerned; (3) somewhat not concerned; (4) somewhat concerned; (5) concerned; (6) very much concerned.¹⁵ Answers with higher numerical values indicate greater aversion to mainland Chinese. Responses to these questions are highly correlated within the same individual, with a reliability score (Cronbach’s α) of 0.92. To simplify the analysis, we applied principal component analysis (PCA) to extract a first dimension from these questions and use it as the main measure of mainland distance in the subsequent analysis.

For subjects in the placebo group, they were given a set of similarly worded questions about their attitudes toward disabled people.

Placebo Question There are many disabled people in Hong Kong nowadays. How concerned are you if they are your [boyfriend or girlfriend] [relatives] [teachers] [roommates] [neighbors] [friends]?

As suggested in Figure 2, the key experimental manipulation here is the *order* in which we asked the questions about attitudes toward mainlanders. In the treatment group, these questions were asked right before subjects answered the democratic support questions. In the placebo and

¹⁴For other studies using a similar approach, see Bloom, Arikan, and Courtemanche (2015) and Transue (2007).

¹⁵These questions were adapted from those that measure subjective social distance scales (Bogardus 1925) in social psychology. In the American politics literature, similar questions have been used to measure what is often considered to be “old-school”, overt racism.

control groups, the questions about mainland attitudes were still asked, but at a much later stage after all the political attitude questions had been answered (i.e., Part 4b and 4c in Figure 2). Our main goal is thus to compare, for subjects who exhibit similar levels of aversion to mainland Chinese, whether activating their outgroup attitudes in advance would affect their subsequent responses to questions about democratic support.

For our analysis to be valid, one critical assumption is that individuals of the same level of outgroup aversion in the treatment and control groups should be comparable in their counterfactual states. This assumption may be violated if subjects changed their responses to outgroup attitude questions drastically when those questions appeared in different places of the survey. When examining the expressed mainland aversion across different treatment arms, we notice that the responses across different treatment groups generally share a common support. However, the level of expressed aversion does seem somewhat higher in the treatment group than in the control and placebo groups (by about 9% of a SD). One explanation for this difference may be an anchoring effect: In the placebo and control groups, the questions about distance to mainlanders were asked after questions about distance to South Asian and LGBTQ groups, both of which tend to be met with a relatively low level of hostility among the college educated. To ensure that the imbalance does not bias our results, we compute the quartiles for the PCA-based mainland distance variable within the treatment, placebo, and control groups, respectively. This essentially removes any systematic inter-group differences that may have been induced by our experimental design. We provide a within-quartile balance check for a range of other covariates in Figure A.8, and find the balance to be quite decent.

5.3 Measurement

We measured subjects' support for democracy in two ways. First, we asked six questions about their views on the desirability or urgency of achieving democracy. The questions were as follows:

How much do you agree or disagree with the following statements?

1. Democracy is the best form of government despite its shortcomings

2. To get democracy, I am willing to withstand five years of recession, unemployment, and reduced standard of living
3. If possible, I am willing to suspend my study for a year to fight for democracy
4. I am willing to promote democratic ideas in my workplace, even if this may get me fired
5. When necessary, we can use violence against people who speak against democracy
6. Insofar as the goal is democracy, I support spreading rumors and false news to attack the authority

Each question had four choices: (1) strongly disagree, (2) somewhat disagree, (3) somewhat agree, and (4) strongly agree. To the extent that supporting democracy is the general norm among Hong Kong college students, we designed the questions in a way that would highlight the tradeoff between democracy and other important priorities or values (e.g., employment, living standards, continuation of college education, commitment to honesty and non-violence). This is intended to capture what/how much a respondent is willing to give up in order to achieve democracy. The Cronbach's α for these responses is 0.73, suggesting a high degree of internal coherence. To simplify the analysis, we once again extract the first principal component from these responses and use it as a summary measure for a person's pro-democracy stance. The first component explains about 47% of the variation in responses.

In addition to self-reported attitudes, we also constructed a behavior-based measure by giving our subjects the opportunity to make a small but real financial sacrifice in support of pro-democracy causes. Specifically, we told them that they could choose to donate part of their 30-HKD survey payment and 500-HKD lottery (if they won) to any of the following organizations:

1. DAB (民建聯)

2. HK Police Welfare Fund (香港警察福利基金)
3. 612 Humanitarian Support Fund (612 人道支援基金)
4. Power for Democracy (民主動力)
5. Stand News (立場新聞)

In the context of Hong Kong politics, these organizations carry clear and distinct political connotations. The first two, DAB and HK Police Welfare Fund, are unambiguously pro-government entities,¹⁶ whereas the other three (612 Fund, Power for Democracy, and Stand News) are organizations affiliated with the pro-democracy camp. We calculate the total share of payment/lottery that each respondent chose to donate to the last three organizations, and use it as an indicator for how strongly he/she supports pro-democracy causes.¹⁷ At the individual level, the amount of donation is highly correlated with reported attitude: A one standard deviation in pro-democracy attitude is associated with about a 12 percentage point increase in donations from payment and a 10 percentage point increase in donations from lottery.

Additional information on the experimental design of this study, including summary statistics and covariate balance checks, can be found in Appendix B.

5.4 Estimation Framework

We estimate the following heterogeneous treatment model:

$$\begin{aligned}
 \text{Democratic support}_i &= \sum_{q=1}^4 \left(\alpha_q \text{Mainland distance}_i^q \right. \\
 &\quad + \delta_q \text{Mainland distance}_i^q \times \text{Treatment}_i \\
 &\quad \left. + \pi_q \text{Mainland distance}_i^q \times \text{Placebo}_i \right) + \epsilon_i,
 \end{aligned}$$

¹⁶DAB is the largest party in the pro-establishment camp and the HK Police Welfare Fund is a government-sponsored fund that provides the police force with loans, allowances, and various other fringe benefits.

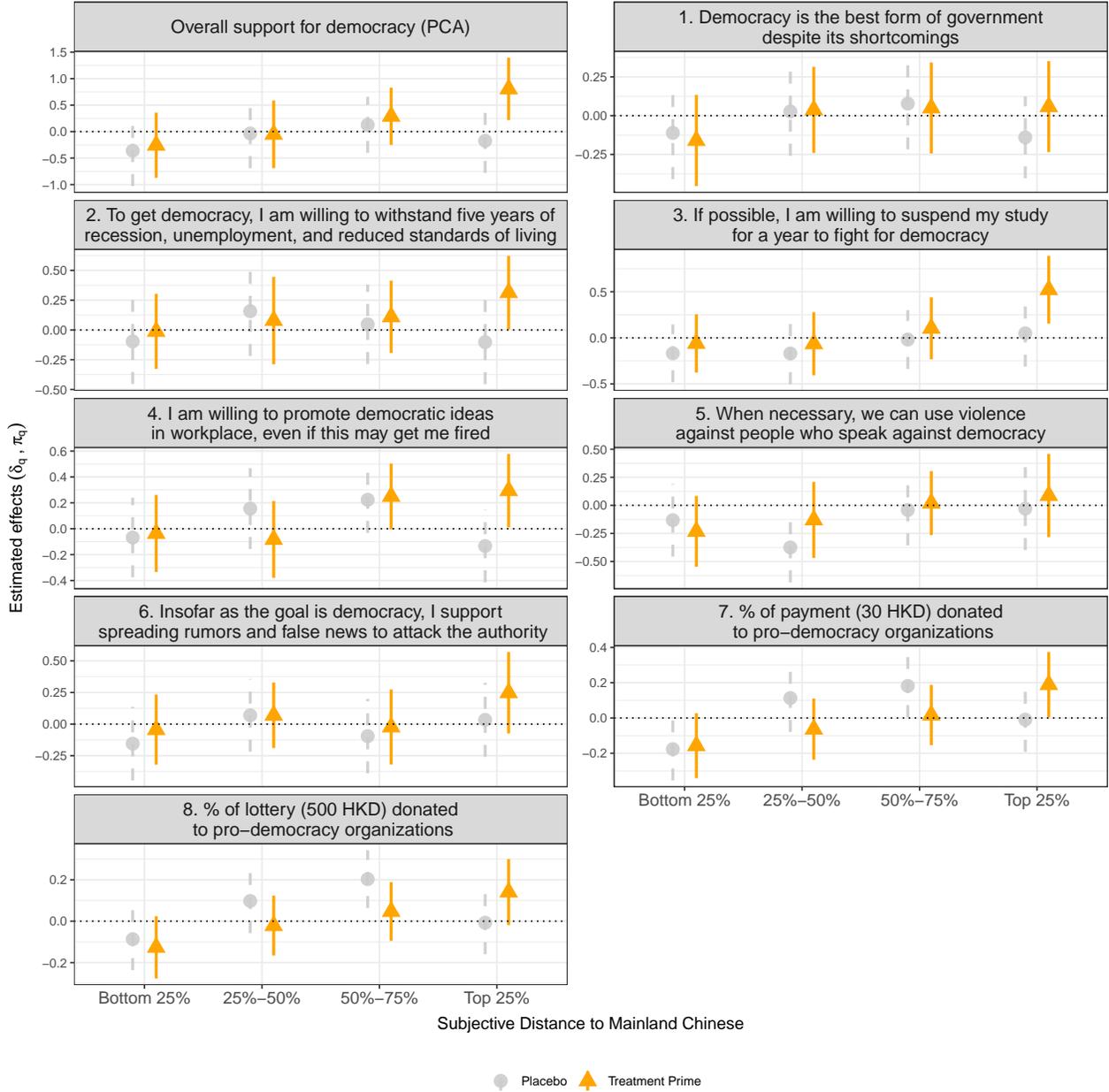
¹⁷A total of 7,299 HKD (941.8 USD) was donated to the three pro-democracy organizations, whereas only 46 HKD (5.9 USD) was donated to the two pro-regime ones. After the study was concluded, we made anonymous donations to those organizations according to our subjects' wishes.

where i indexes individuals. Mainland distance $_i^q$ ($q \in \{1, 2, 3, 4\}$) is an indicator that takes the value of 1 if respondent i belongs to the q th (within-group) quartile of mainland distance. α_q represents the average level of democratic support in mainland distance quartile q . The key quantity of interest here is δ_q , which measures the difference in democratic support between the treatment and the control groups within the q th distance quartile. If the argument about inter-group hostility driving democratic support is correct, our expectation is that δ_q will have positive and significant estimates for higher qs (i.e., individuals with greater mainland aversion).

5.5 Results

Figure 3 displays the estimated treatment and placebo effects of outgroup attitude on democratic support (δ_q and π_q). Each panel represents a questionnaire item and the yellow (gray) circles represent the mean difference in responses between the treatment (placebo) group and the control group for subjects who express similar attitudes toward mainland Chinese. As expected, we see that the effect of the treatment prime (i.e., questions about attitudes toward mainland Chinese) on democratic support increases progressively with subjects' underlying mainland aversion. While those who harbor no or relatively low prejudice against mainlanders show very little change (in some cases, even negative changes) in democratic attitude after receiving the prime, those who hold strongly negative views about mainlanders often substantially increase their support for democracy after receiving the treatment. Focusing on the first panel on overall democratic support, the coefficient estimates suggest that priming attitude toward mainland Chinese in advance increases expressed support for democracy by about 0.78 units among those whose reported mainland distance belongs to the top quartile group. The effect is not only statistically significant ($p = 0.007$) but also substantively large, amounting to almost half of the outcome variable's sample standard deviation ($SD = 1.58$). By contrast, the placebo prime (i.e., questions about attitudes toward the disabled) does not seem to register a similar effect on those with high mainland aversion. The estimated coefficient is weakly negative ($\pi_4 = -0.17$, $p = 0.57$) and statistically different from the actual treatment effect ($p = 0.052$).

Figure 3: Baseline Results



The next six panels of Figure 3 present estimates individually for each of the democratic attitude items. This enables us to examine in greater detail which aspect of democratic attitude our treatment has the greatest influence on. Interestingly, we find that priming outgroup attitude does not significantly change respondents' view on the desirability of democracy relative to other systems (Item # 1). Instead, the effect seems to be mainly on changing the *intensity of preference*

for democracy among the high-aversion respondents, making them more willing to bear heavy personal costs such as economic recessions (Item #2), suspension of academic study (Item #3), and loss of employment (Item #4). There is also some evidence that priming outgroup attitude increases high-aversion respondents' support for using rumors and misinformation to fight the authority (Item #6), but the effect on their support for violence (Item #5) is less pronounced.

The last two panels of Figure 3 (Items #7 and 8) present the effect of outgroup priming on donations. Item 7 is based on donations from the 30-HKD payment (which they would get for certain) and Item 8 is based on donations from a possible 500-HKD lottery win. Consistent with what we find for attitudes, we see that, for both outcomes, the effect of priming mainland attitude increases monotonically as respondents' mainland aversion increases. In particular, for those who belong to the top quartile of mainland aversion, priming results in a 19 percentage point (or 5.7 HKD, $p = 0.045$) increase in payment donation and a 14 percentage point (or 70 HKD, $p = 0.083$) increase in lottery donation. Taken together, these results suggest that, at least for the subset of individuals who already harbor intense hostility toward mainland visitors, activating such hostility can substantially increase their support for pro-democracy struggles.

We conducted a series of additional tests to ensure the robustness of our findings. To check whether our results are driven by the specific way we construct the moderating variable, we re-estimate the baseline regressions with several alternative measures of distance to mainlanders. Reassuringly, these alternative models yield very similar results (Tables A.2, A.3, and A.4). In addition, we also try to control for a host of pre-treatment covariates on respondents' demographic, academic, and family background (as well as their interactions with the treatment indicator). The main results remain largely unchanged with the inclusion of these additional controls (Table A.5). The details of the robustness results can be found in Online Appendix D.

6 Study 2: Manipulating Outgroup Threat

6.1 Design

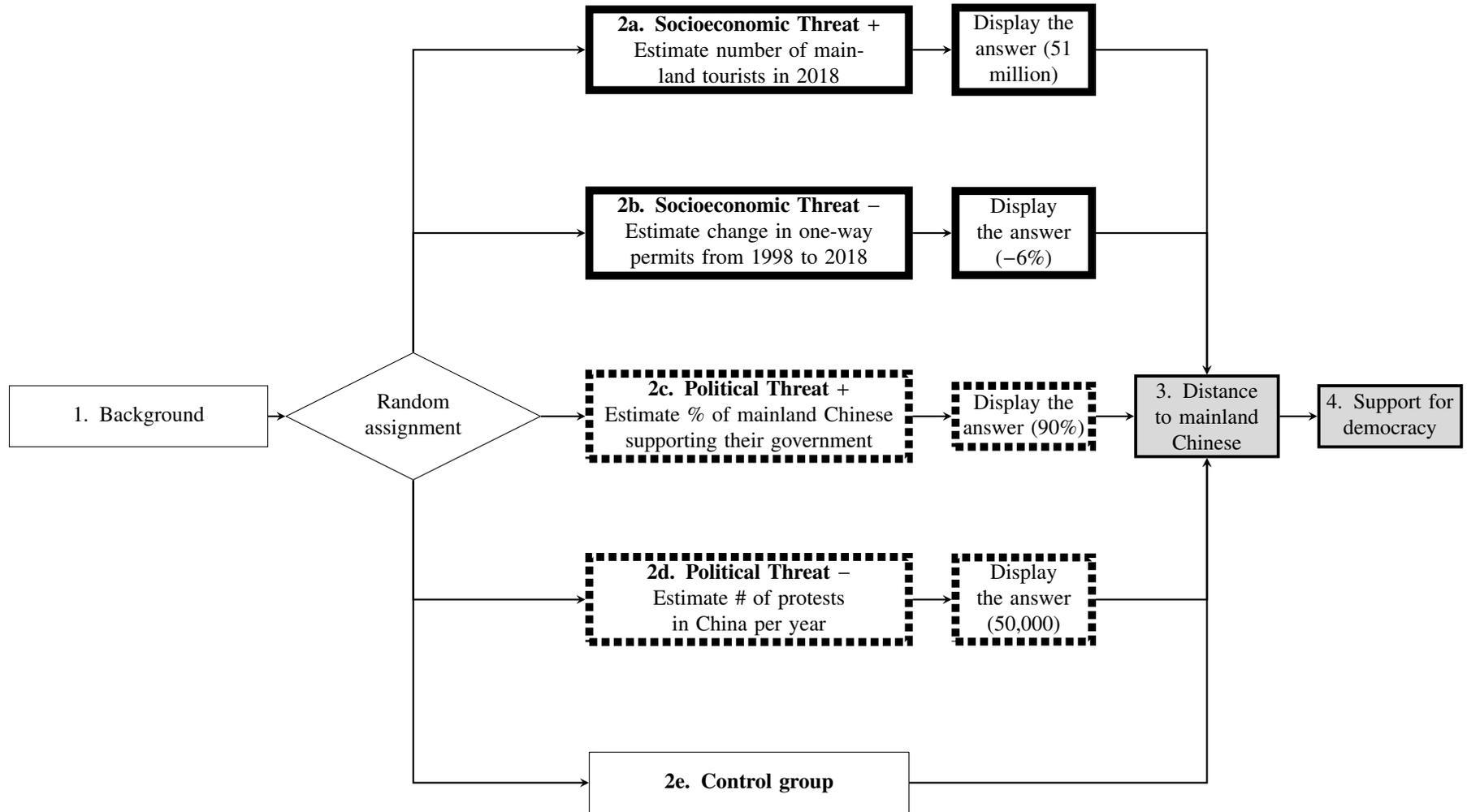
The results from Study 1 suggest that Hong Kong students' support for democracy is causally influenced by their attitudes toward mainland Chinese visitors. However, it is still unclear what specific considerations were being activated when mainland aversion was translated into democratic support. To explore this issue, we conducted a second study that experimentally manipulated subjects' outgroup aversion and examined the effectiveness of different manipulations in changing their support for democracy. The follow-up study was fielded at the same university three months after the first study, and subjects were recruited using the same method of mass email.¹⁸

The procedure for the second study is illustrated in Figure 4. Like the first study, we began the survey with a battery of background questions and then randomly assigned survey respondents into five groups: one control group and two pairs of treatment groups. In all treatments, we first asked respondents to estimate a specific statistic/quantity that could be interpreted as reflecting the level of a given kind of threat posed by mainland visitors, and then provided the respondents with the actual figure. We deliberately chose those quantities for which the actual figures tend to be more extreme than the popular belief (either much higher or lower). The expectation is that the combined experience of answering a question about certain characteristics of mainlanders and receiving a relatively extreme figure will either elevate or ameliorate (depending on the context) our subjects' perceptions of the threat from mainland visitors and subsequently influence their support for democratization.¹⁹

¹⁸About 25.2% of the subjects recruited also participated in the previous study. However, all our results hold when excluding this subset of respondents (see Table A.7). We did not include the donation questions in this round of study due to budget restrictions from the funding source.

¹⁹For a similar approach, see Huang (2015). As shown in Figure A.10, the vast majority of the responses tend to either underestimate or overestimate the quantity of interest, and the biases are all in the expected directions.

Figure 4: Experimental Procedure for Study 2



The first pair of treatments (Group A and Group B) aimed at manipulating subjects' perceptions of the *socioeconomic threat* posed by mainland visitors. For Group A, we tried to elevate this threat (socioeconomic threat +) by first asking subjects to estimate how many mainland Chinese visited Hong Kong on tourist visas each year and then providing the actual number (51 million) along with a brief mention of several types of visitors that are particularly disruptive to local residents' livelihoods (e.g., parallel traders, property speculators, and parents who engage in birth-tourism). In Group B, by contrast, we tried to downplay the threat by asking respondents to guess the rate of change in the arrival of one-way permit holders (i.e., mainland immigrants coming for family reunification), another group of mainlanders often blamed for Hong Kong's socioeconomic problems. In reality, the number of people coming on one-way permits is actually quite small compared to what is usually portrayed in the local media, and this type of immigrant is often highly keen on integrating into the local culture. We provided this information to respondents after they gave their estimates, with the expectation that it would make them less likely to view mainlanders as a socioeconomic threat. The vast majority of our subjects underestimated the number of mainland tourists and overestimated the rate of change in one-way permit arrivals (Figure A.10).

In addition to the socioeconomic threat, another factor that may drive both mainland aversion and democratic support is perceived *political threat*. Some Hong Kongers may hold resentment against mainland visitors because of their close association with the Chinese government, which is seen to be continually trying to take away the city's freedom and autonomy. It is also well-documented that mainland immigrants to Hong Kong are less likely than the native born to vote for the pro-democracy camp in elections (Wong, Ma, and Lam 2018), suggesting that mainlanders may hold political values different from the locals. To evaluate whether political threat plays a role, we designed a second pair of treatments (Group C and D) that focused on manipulating subjects' perceptions of the relationship between mainland Chinese and their government. In Group C, we emphasized the closeness between the two by priming the subjects about the widespread support for the Chinese government among mainland citizens (over 90%). The expectation is that this treatment would activate the prevailing local stereotype of mainland visitors as "autocracy-lovers"

in the minds of our respondents. In Group D, by contrast, we primed respondents about the presence of significant conflict between Chinese citizens and their government by stressing the high frequency of collective protests in mainland China (over 50,000 a year). If animosity toward the Chinese regime explains the link between mainland aversion and democratic support, we should expect both aversion and support to be higher in Group C than in Group D. Appendix F provides the detailed question texts and comparisons between respondents' guesses and the actual figures for all treatments.

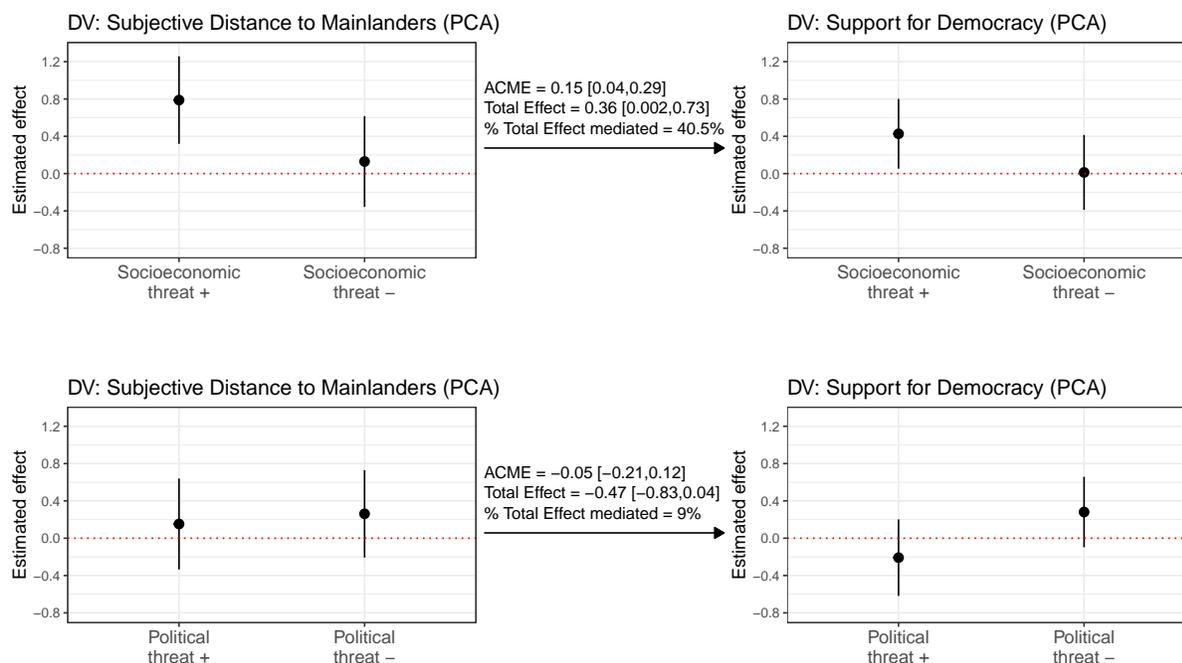
6.2 Results

The results from the second experiment are displayed in Figure 5. The two sub-graphs on the left show the estimated effects of the four treatments on outgroup attitudes, and the two on the right show the treatment effects on support for democracy. Here, we clearly see that *socioeconomic threat +* is the one that has the most visible effect on both outgroup aversion and democratic support. Compared to the control group, the group that received the prime about the large influx of mainland visitors reported significantly greater hostility toward mainlanders (16% of an SD, $p < 0.001$) and stronger support for democracy (11% of an SD, $p = 0.02$). A mediation analysis following the procedures recommended by Imai et al. (2011) suggests that about 40% of this treatment's effect on democratic support is mediated by increased mainland aversion.²⁰ By contrast, neither the *socioeconomic threat -* treatment nor the two *political threat* treatments appear to have any significant influence on subjects' expressed attitudes. Within the *political threat* treatments, the one that aims at lowering the threat actually appears to be slightly more effective in raising democratic support than the one that increases the threat. However, little of the difference seems to be channeled by outgroup aversion. While the lack of significant results does not allow us to rule out political threat as a relevant factor, what these findings do appear to suggest is that socioeconomic grievances against an unwelcome outgroup can be a powerful stimulus to energize ingroup

²⁰As a manipulation check, we also asked subjects questions about their views on immigration policy after delivering the treatment. Subjects in the *socioeconomic threat +* group were significantly more likely to support restricting immigration than those in the *socioeconomic threat -* group. Results are available upon request.

members' support for democracy, even in the absence of direct, explicit political cues.

Figure 5: Experimental Results from Manipulating Outgroup Threat



Note: This figure presents estimated effects of the four treatments (relative to the control group) on mainland distance and democratic support from Study 2. The top row presents the treatment effects of varying socioeconomic threat, and the bottom row presents the effects of varying political threat. The circles represent point estimates and the vertical lines 95% confidence intervals. The numerical results are reported in Columns 1 and 3 of Table A.6. ACME = average causal mediation effect

7 Corroborating Observational Evidence

The results from the experimental studies demonstrate that, within our sample of local Hong Kong university students, (1) one's attitude toward mainland Chinese causally influences his/her attitude toward democracy and (2) priming students about the socioeconomic threat posed by mainland visitors can lead to a significant increase in both their outgroup aversion and democratic support. While these patterns seem consistent with our argument, an important question that remains is whether the experimental findings can be extended beyond university students to the general public. To address this question, we provide additional corroborating evidence from observational studies

using survey and election data.

Our observational studies leverage the spatial variation in exposure to mainland visitors within Hong Kong. A unique fact about the cross-border movements between Hong Kong and the mainland is that the bulk of the mainland visitors (~ 60%) to Hong Kong come through two adjacent customs checkpoints: Lo Wu and Lok Ma Chau.²¹ Both checkpoints are located at the northern end of Hong Kong and are connected to the rest of the city by the East Rail, the only cross-border metro line. Given this spatial setup, many mainland visitors who enter Hong Kong via these checkpoints often choose to dwell in areas that are close to the border or accessible through the East Rail Line because of convenience and low travel cost. This implies that, compared to those in more distant areas, local residents living in the checkpoint region or East-Rail-accessible areas will have more frequent encounters with mainland visitors, and may consequently develop greater outgroup resentment and stronger support for democracy.

We test this implication by looking at two types of outcomes. First, we use multiple years of the Hong Kong Election Studies (HKES <http://hkelectionstudy.org>) to examine how district-level mainland presence (measured by proximity to the checkpoints and the East Rail line) correlates with individual-level ingroup/outgroup attitudes and democratic support. We provide a visual illustration of this relationship in the top row of Figure 6. Consistent with the expectation stated above, we see that in districts that are closer to the checkpoints (denoted by white diamonds) and the East Rail (red line), respondents are more likely to agree with the statement “there are too many mainland immigrants in Hong Kong” and to identify themselves more as Hong Kongers than as Chinese; they are also more likely to agree with the suitability of democracy for Hong Kong and report greater dissatisfaction with the current state of democracy in the city. In Appendix G.3, we subject these findings to a more rigorous set of regression tests. The regression results confirm that closeness to those cross-border transportation hubs is positively associated with localist sentiment and pro-democracy attitude, even after controlling for a variety of individual and environmental

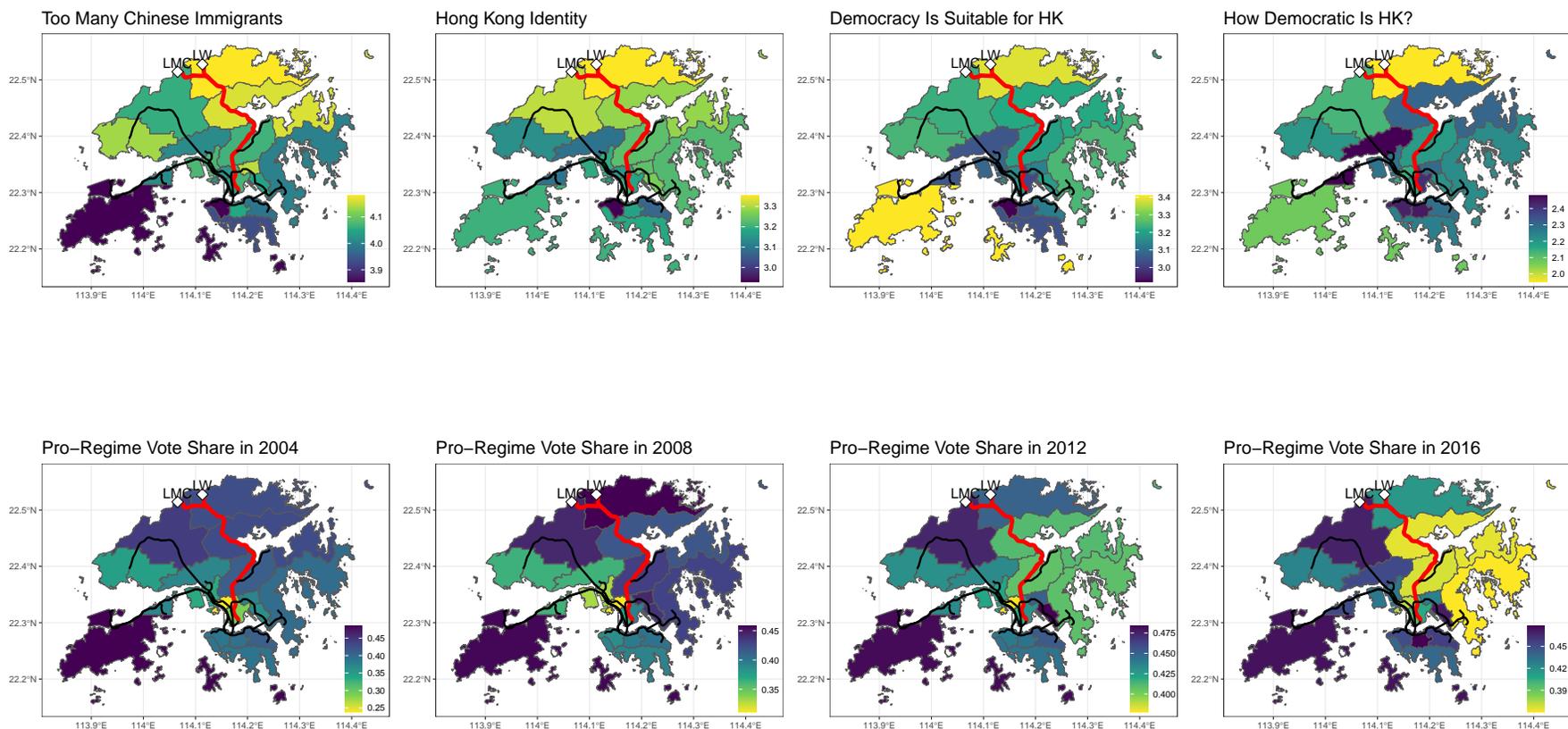
²¹Legislative Council Secretariat, “Land-based Cross Boundary Passenger Trips”, November 11, 2019. Retrieved from <https://bit.ly/2PdsF4T>

covariates.²²

In addition to public opinion, we also examine outcomes of competitive elections. The bottom row of Figure 6 displays the district-level variations in vote shares won by pro-regime political candidates in Hong Kong's four most recent Legislative Council elections (2004, 2008, 2012, and 2016). We can clearly see that in the northern districts that intersect with the East Rail Line, the electoral performance of the pro-regime candidates deteriorated considerably in the 2012 and 2016 elections, a period that coincided with the massive influx of mainland visitors. To ensure that this pattern is not spurious, we again use regressions to estimate the relationship between closeness to checkpoints and pro-regime candidate vote share over time, controlling for a host of constituency-level covariates (see Table A.11 for details). As shown in Figure 7, the estimated relationship was initially positive (i.e., northern districts were more pro-regime) when the number of mainland visitors was relatively small, but turned negative after the growth of mainland visitors accelerated. Taken together, the observational evidence paints a picture remarkably similar to the experimental results: The spatial distribution of mainland visitors corresponds closely with both the intensity of outgroup resentment and the strength of electoral support for opposition candidates.

²²Appendix G provides the details for constructing the closeness measure, the texts and coding rules of the questions, and numerical results from the regression analysis (Table A.10). It also provides technical details for our analysis of legislative council elections.

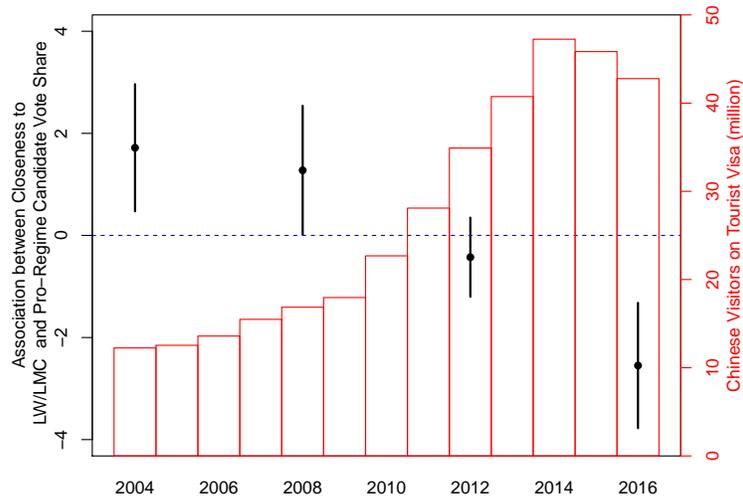
Figure 6: East Rail Line and Spatial Variations in Attitudes & Electoral Outcomes



30

Note: This figure illustrates the district-level variations in political attitudes (top row) and electoral performance of the pro-regime candidates over time (bottom row). Attitudinal data are drawn from Hong Kong Election Studies (fielded in 2015–2017). Each sub-figure presents aggregate responses from one survey question. The detailed question texts and coding rules can be found in Table A.8. Yellow (lighter) color indicates responses that reflect stronger localist/pro-democracy preferences, and blue (darker) color indicates the opposite. The red line denotes the East Rail Line and the black lines denote the rest of the rail/subway network (as of December 2016). The two border checkpoints, Lo Wu (LW) and Lok Ma Chau (LMC), are marked by white diamond shapes.

Figure 7: Estimated Association between Closeness to Lo Wu on and Pro-Regime Candidates' Vote Share in Legislative Council Elections, 2004–2016



Note: This figure presents the estimated relationship between closeness to Lo Wu (measured by 1/travel time on public transportation) and pro-regime candidates' vote share for the last four Legislative Council elections. The vertical lines indicate 95% confidence intervals. The red bars indicate the number of mainland visitors each year. For the numerical results, see Column 2 of Table A.11. LW = Lo Wu; LMC = Lok Ma Chau

8 Conclusion

The question of what motivates ordinary citizens to join the fight for democracy is crucial for understanding both the nature of pro-democracy mass movements and their likely consequences. A central claim of this article is that even the relatively mundane, non-political form of inter-group grievances can sometimes generate powerful impetus for political change. Focusing on Hong Kong as a case, we conducted an array of experimental and observational studies to evaluate how socioeconomic resentment against the influx of mainland visitors contributed to local residents' rapidly rising demand for democratic change. Our first experiment shows that those who harbor strongly negative feelings about the mainland Chinese are more likely to raise their support for democracy when their outgroup attitudes are made salient. The second experiment elucidates the specific considerations that connect outgroup aversion and democratic support; it demonstrates that the treatment that elevates the socioeconomic threat of mainland visitors is most effective

in raising local subjects' outgroup aversion and support for democratization. Furthermore, we provide corroborating observational evidence from representative surveys and elections, showing that both group-based sentiments and support for democracy are stronger in areas more physically accessible to mainland visitors.

Our study has several implications. First, the finding that inter-group competition is an important driving force for democratization helps us to understand why in many cases, democratic transitions have failed to improve, and have sometimes even exacerbated, ethnic and racial tensions. While existing explanations emphasize political elites' role in creating cleavages for electoral gains under new democracies (Mann 2004; Snyder 2000), our results suggest that another possible explanation could be that the transition to democracy itself might have been enabled or catalyzed by the presence of certain inter-group cleavages. If group-based conflict is what motivated individuals to support democratization in the first place, it would not be entirely surprising for them to demand exclusionary policies against the outgroups once their own group comes to power.

Second, the finding that deepened socioeconomic integration with mainland China has helped to create powerful demand for democratization in Hong Kong also enriches our knowledge about the (indirect) impact of China's rise on the domestic politics of other countries and regions. Existing studies on the "China shock" in the U.S have found that job loss caused by import competition with Chinese products has resulted in rightward shifts in ideological affiliation and voting patterns among non-Hispanic whites (Autor et al., [Forthcoming](#)) and changes in public preferences toward protectionism and isolationism (Bisbee 2020). Our analysis of Hong Kong suggests a similar nativist turn in popular sentiment in response to rising socioeconomic competition with Chinese visitors. Interestingly, however, instead of creating support for anti-democratic, authoritarian platforms, as it has done in the West, this sentiment has translated into more vocal demand *for* democracy in Hong Kong. To the extent that many other countries are now witnessing a rapid increase in the number of Chinese immigrants and visitors, a potentially fruitful direction for future research would be to explore how local politics reacts to the growing Chinese presence and how those reactions vary across different political and institutional contexts.

Finally, on a normative note, it is important to stress that by highlighting the non-political, inter-group aspect of Hong Kong's pro-democracy movement, our intention is certainly not to trivialize the movement in any way. Many who participated in the movements were indeed genuinely inspired by democracy's noble promises and have made great personal sacrifices for those causes. However, our findings do suggest that a more sober view is needed for understanding how democratization occurred on the ground in Hong Kong as well as elsewhere. Instead of accepting a simplistic view that all participants who took part in the movement were inspired by democracy's universalistic appeals, researchers who wish to understand the actual process of mobilization need to work hard to unpack the concrete experiences and incentives that drove individual-level actions. While democracy as an ideal is certainly worth pursuing, mobilizing for democracy may nonetheless involve appealing to interests and emotions that are not perfectly aligned with key democratic principles. The flowers of a universal, inclusive institution sometimes grow out of the soil of parochial, exclusionary sentiments.

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Online Appendix (Not for Publication) for *Inter-Group Relations and Support for Democratization: Evidence from Hong Kong*

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A Ethical Considerations

Our research was approved by our institution's institutional review board. In this section, we discuss how we have approached the main ethical issues as outlined by APSA's Principles and Guidance for Human Subjects Research.

For both survey experiments, participation was completely voluntary. Participants were recruited via university mass mail, with no consequence if they choose not to participate. At the very beginning of the survey, participants were informed about the length, pay, and the nature (i.e. a study of Hong Kong students' social attitudes) of the study. They were also informed of the identity of the PIs and of the channels to seek redress (by either contacting the PIs or by lodging a complaint to the institutional review board). Participants had to give explicit consent (by checking the response "I agree to continue" in a multiple choice question) in order to proceed with taking the survey. They could discontinue the survey at any time. There was no deception involved in the survey.

Participants were paid a minimum of HK\$ 30 (US\$ 3.9) for Study 1 and HK\$ 55 (US\$ 7.0) for Study 2. Both studies took, on average, 20-30 minutes to finish. The hourly rate we offer is on par with the going rate for 30 minutes of work by a student research assistant, and significantly higher than the hourly minimum wage in Hong Kong in 2020 (HK\$ 37.5, or US\$ 4.8 per hour).

In terms of potential harm, there are several issues that we considered. First, since we had to collect subjects' personal information in order to verify their eligibility and process payments, data confidentiality is a natural concern. Some of our survey questions, such as those that asked about participants' protest experiences and donations to pro-democracy organizations, also elicit information that may be considered politically or legally sensitive in certain context. To protect the identity of our participants, we stored all the experiment data offline in on-campus, password-protected computers while the study was still on-going, and permanently deleted all the identifying information of our participants as soon the payments/lotteries have been processed. During the survey, we also avoided directly questioning our participants about their participation in police-protester clashes or any illegal activities. Instead, we asked if our participants had *witnessed* any

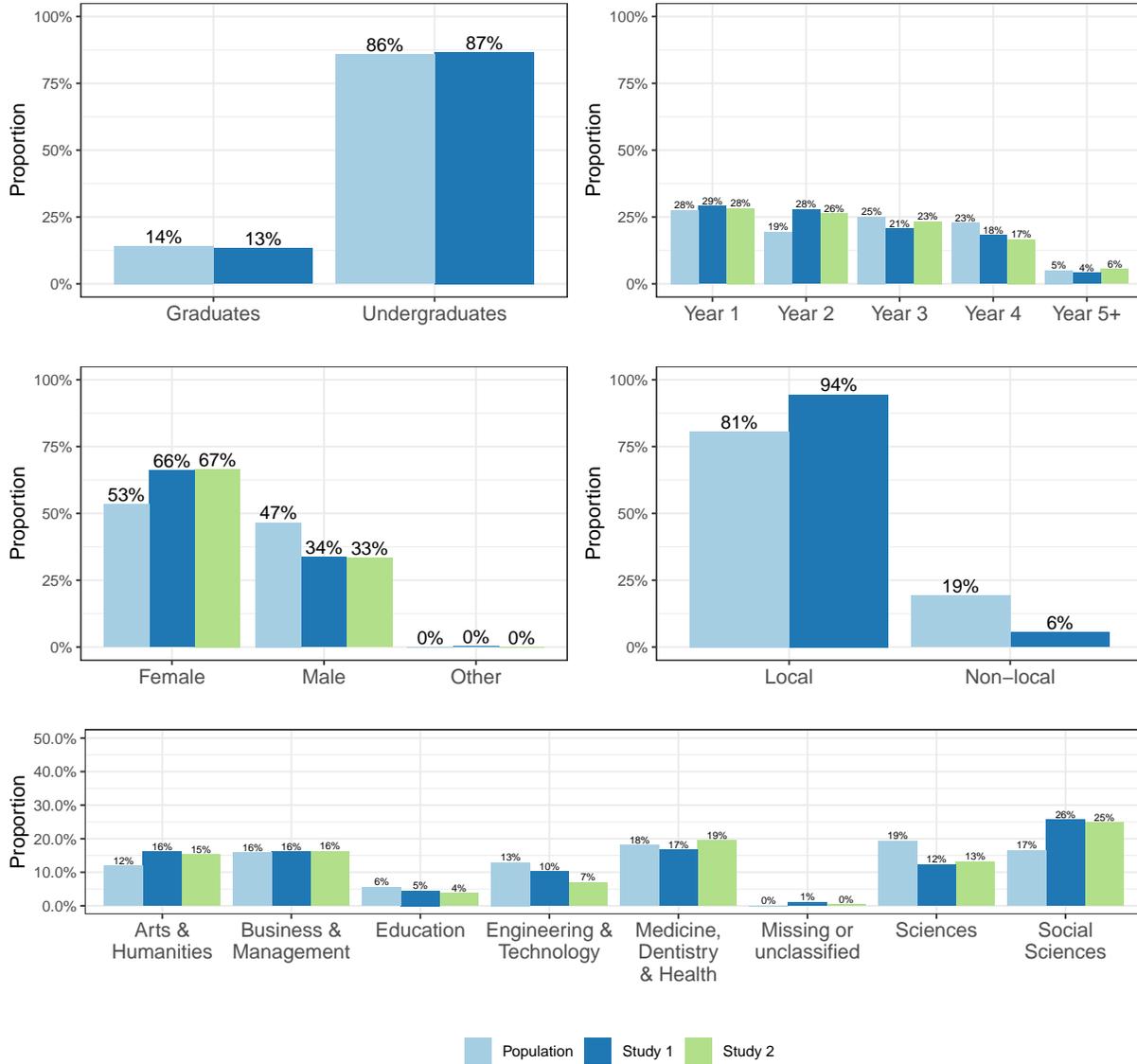
clashes, and elicited their responses to sensitive questions using the item count technique.

Another concern is that our project might influence participants' preferences toward certain groups (i.e., mainland Chinese) or their propensity to participate in protests. Given that our treatments are relatively mild and brief, we do not expect that they would significantly affect our respondents' attitudes in any permanent ways. As a precautionary measure, we debriefed our participants at the end of the experiment, emphasizing that the information presented to them during the study was tailored specifically to the study, and that our subjects should not change their opinions about any groups or issues simply based on such information alone. Moreover, at the time when our surveys were fielded (after March, 2020), large-scale offline protests had largely ceded (and much of the resistance were moved online) because of the coronavirus outbreak in the city. It is thus unlikely that our brief treatments would make our subjects more likely to engage in risky offline protests.

B Summary Statistics for Two Survey Experiments

B.1 Descriptive Statistics

Figure A.1: Comparing the Survey Sample with University Student Population



Note: This figure compares the key demographic characteristics of our sample with the characteristics of the student population at the university where the survey was conducted. We therefore do not report the breakdown for level of study (undergraduate vs. graduate) and local origin for the second study because we only recruited local undergraduate students for that study (due to specific restrictions on the funding source). The population statistics were obtained from the University Grants Committee of Hong Kong (<https://bit.ly/2WT1ron>).

Figure A.2: Distribution of Responses to Mainland Distance Questions (Study 1)

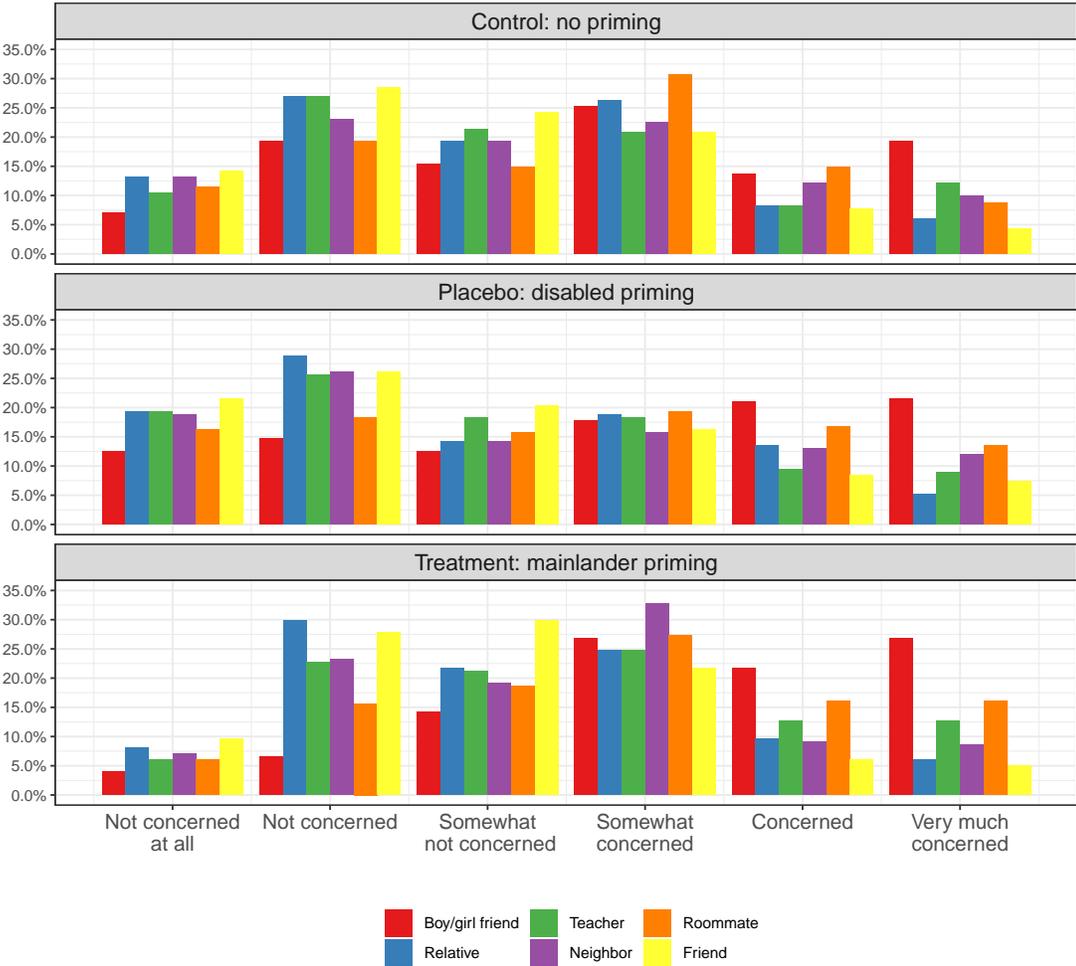


Figure A.3: Distribution of Responses to Mainland Distance Questions (Study 2)

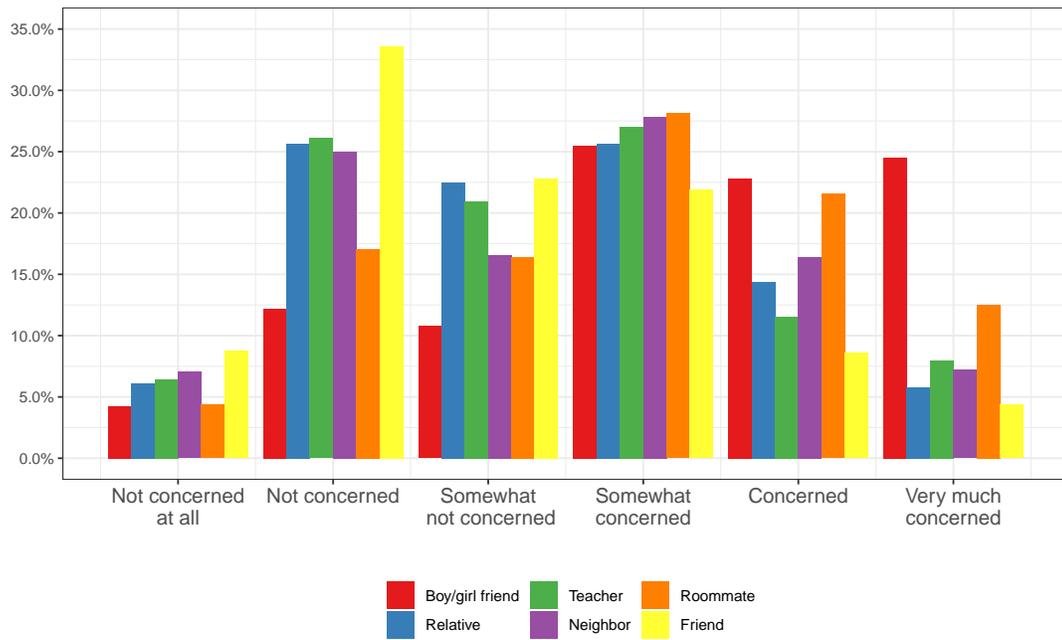
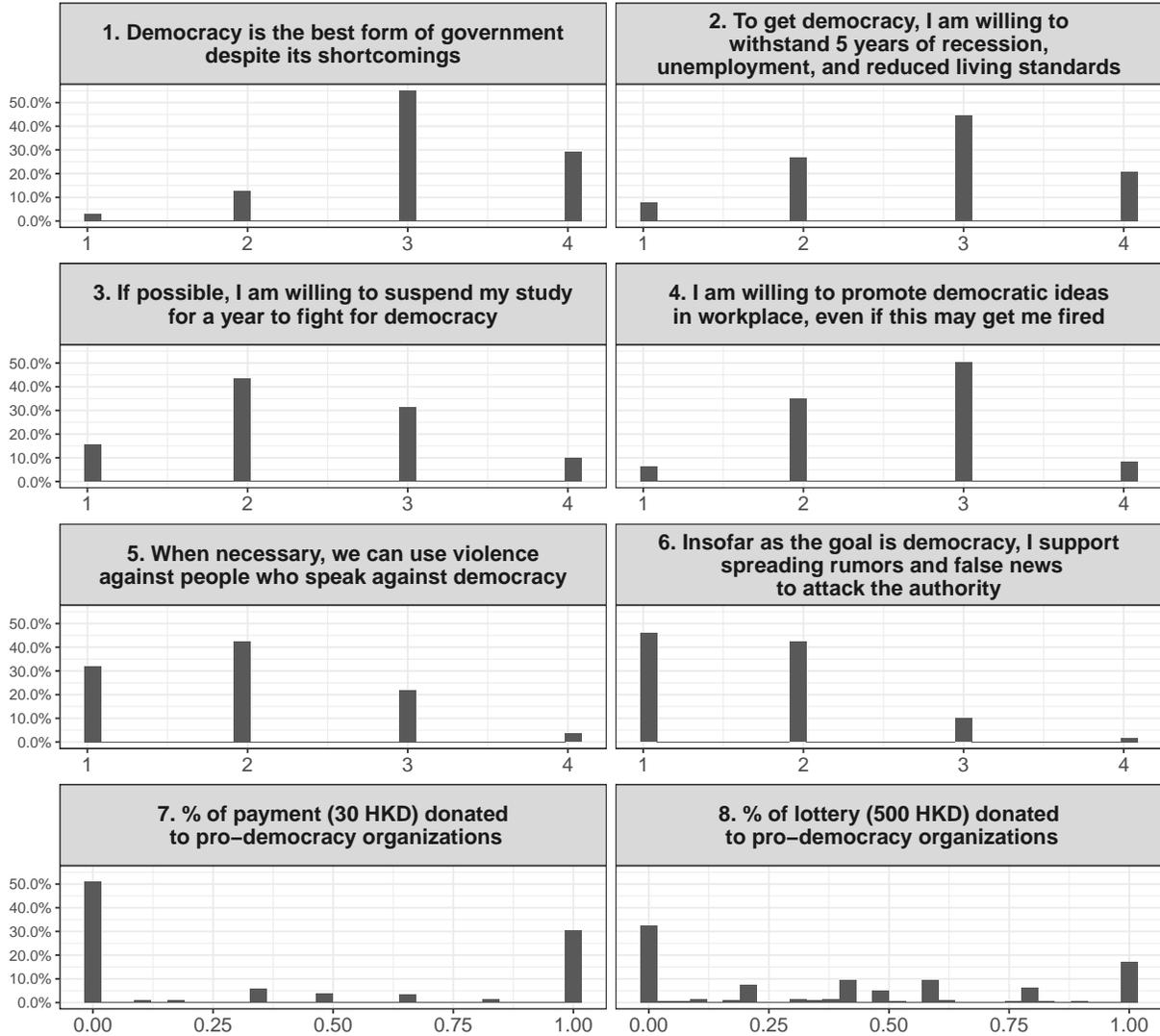
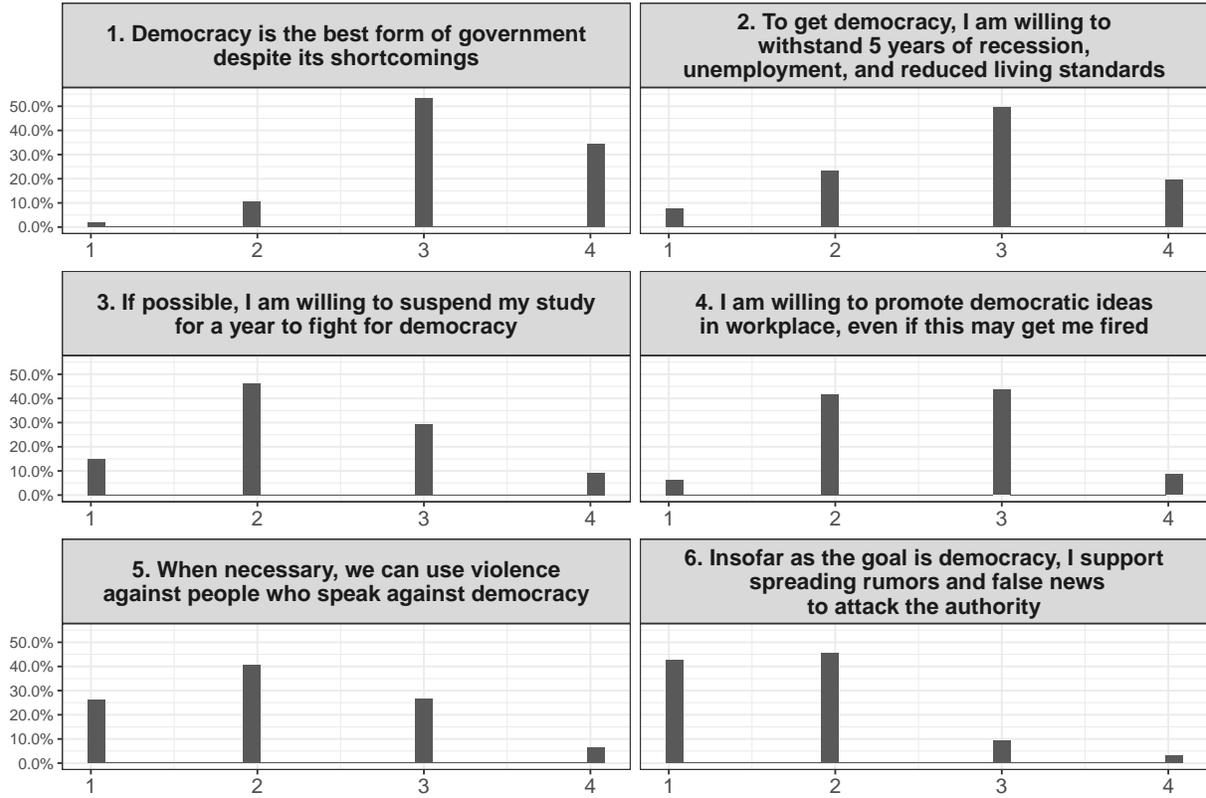


Figure A.4: Distribution of Key Outcome Variables (Study 1)



Note: This figure presents the distribution of key outcome variables for Study 1. For the first six panels, numerals 1 through 4 represent “strongly disagree”, “somewhat disagree”, “somewhat agree”, and “strongly agree”, respectively.

Figure A.5: Distribution of Key Outcome Variables (Study 2)



Note: This figure presents the distribution of key outcome variables for Study 2. For the first six panels, numerals 1 through 4 represent “strongly disagree”, “somewhat disagree”, “somewhat agree”, and “strongly agree”, respectively.

B.2 PCA results

Figure A.6: Screeplots from PCA Analyses: Support for Democracy

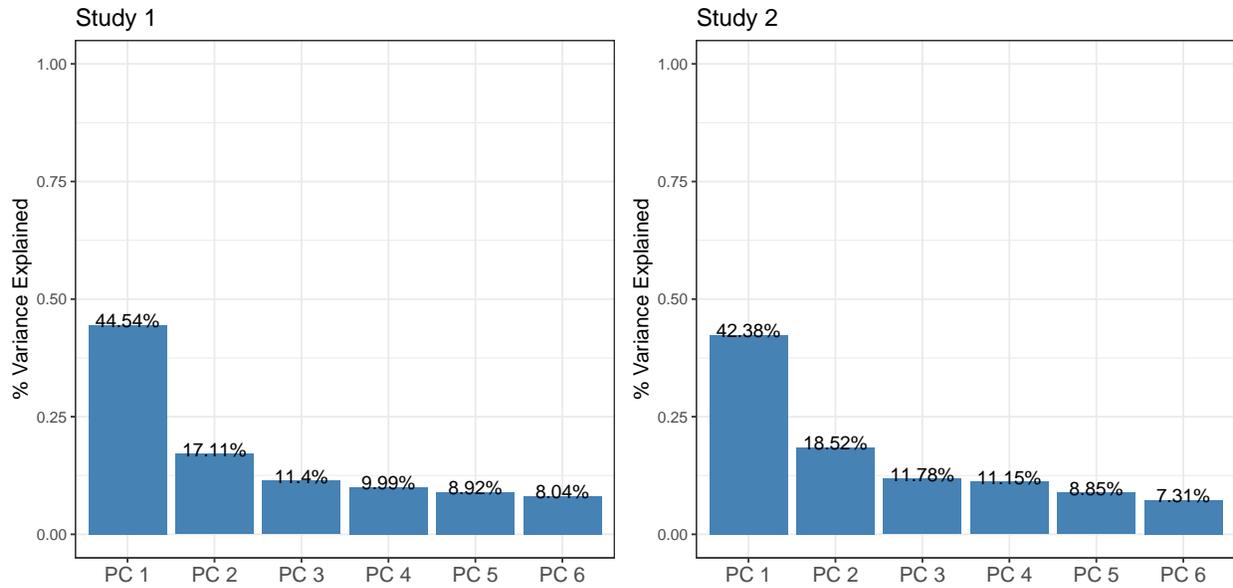
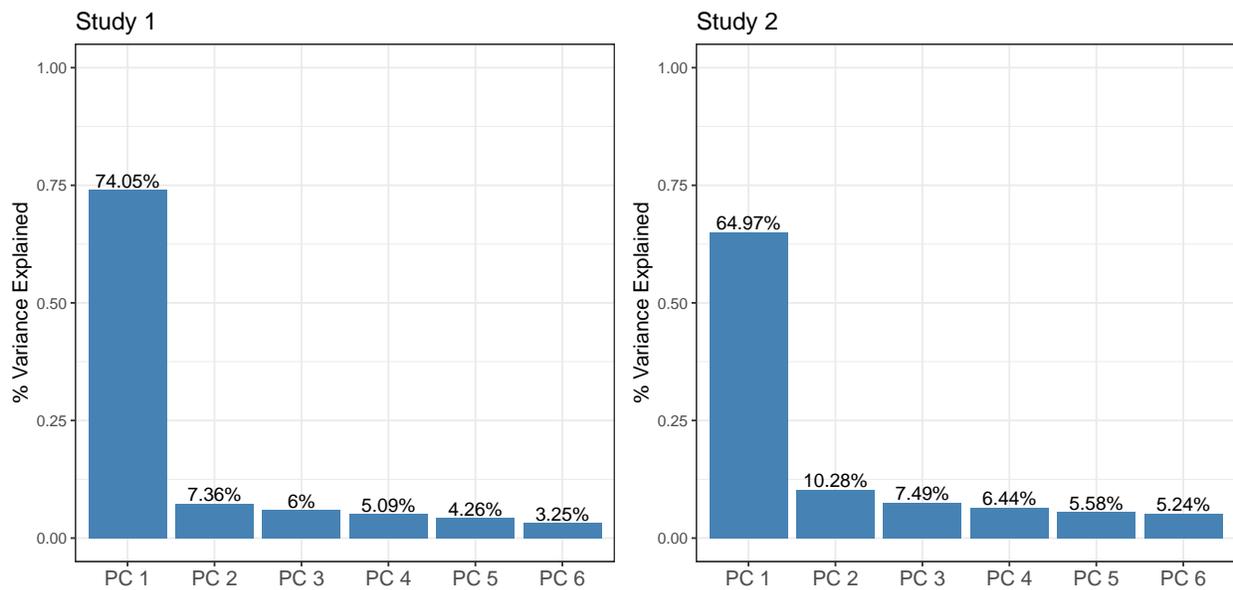


Figure A.7: Screeplots from PCA Analyses: Subjective Distance to Mainland Chinese



B.3 Balance Checks

Figure A.8: Balance Checks: Study 1

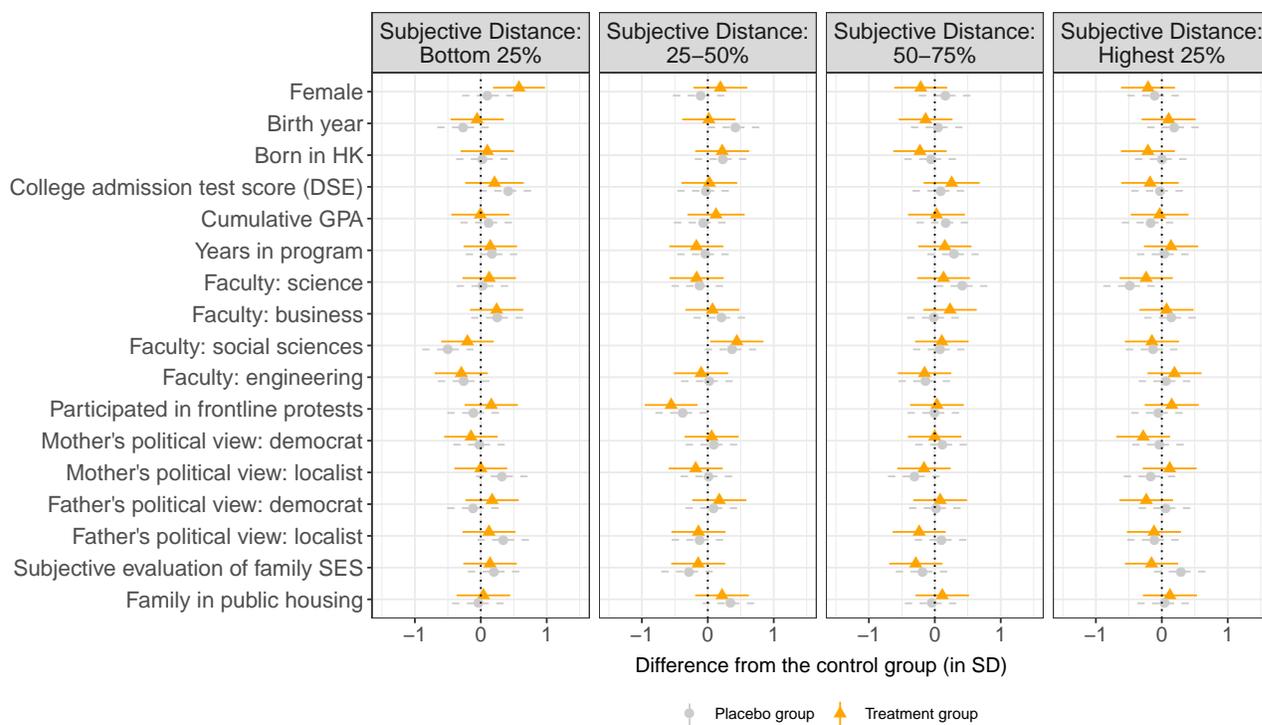
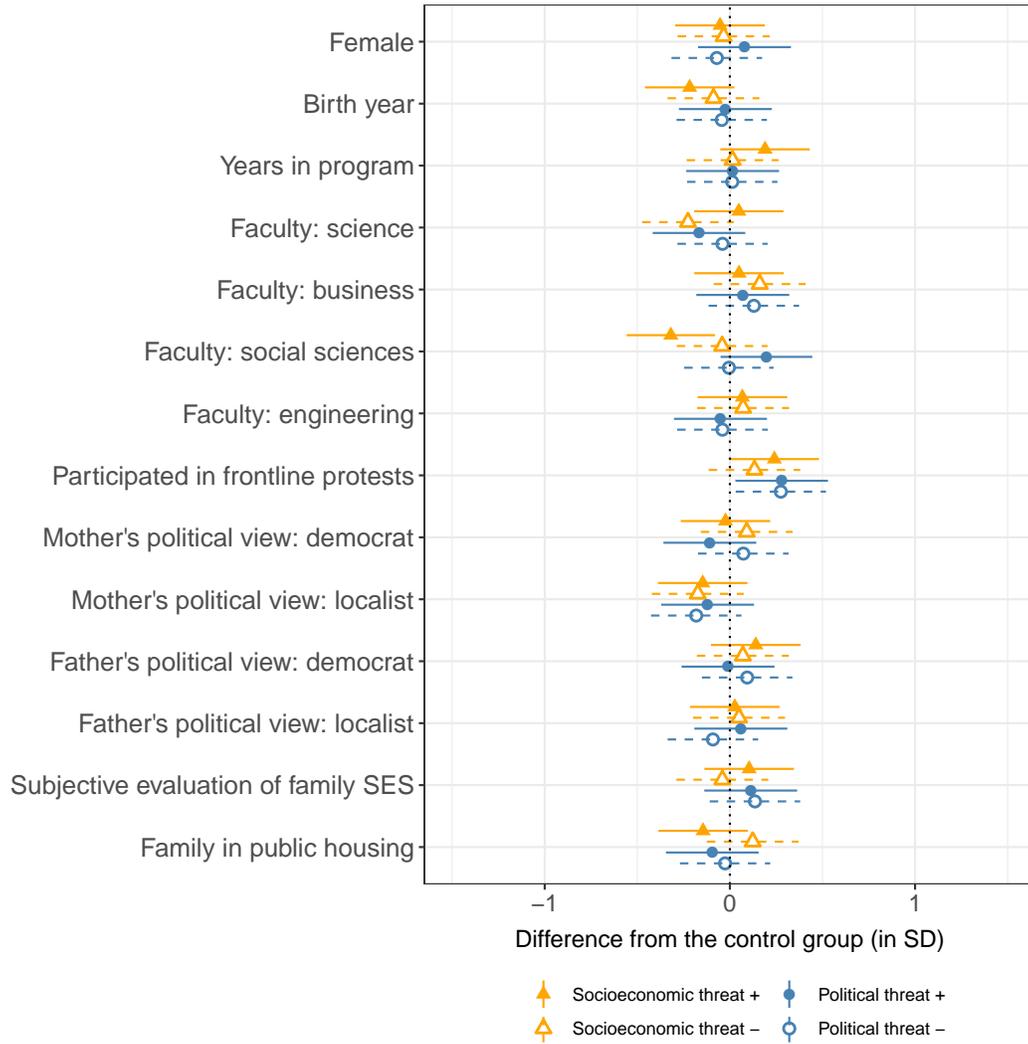


Figure A.9: Balance Checks: Study 2



C Results from Time-Series Regressions

Table A.1: Size of Chinese Tourists and Strength of Hong Kong Identity Over Time

| | DV = HK Identity - Chinese Identity | | | | |
|---|-------------------------------------|--------------------|--------------------|--------------------|-------------------|
| | (1) | (2) | (3) | (4) | (5) |
| # of Chinese tourists (in million) | 0.034** (0.002) | 0.039** (0.004) | 0.031** (0.010) | 0.032** (0.007) | 0.029* (0.011) |
| # of non-Chinese tourists (in million) | | -0.044 (0.034) | -0.025 (0.039) | -0.036 (0.034) | -0.029 (0.041) |
| Freedom of expression index (V-Dem) | | | -2.160 (2.367) | | -1.005 (2.459) |
| Political civil liberties index (V-Dem) | | | | -1.832 (1.213) | -1.456 (0.999) |
| Adjusted R ² | 0.91 | 0.92 | 0.92 | 0.92 | 0.91 |
| Observations | 19 | 19 | 19 | 19 | 19 |

Note: This table presents the same relationship between Chinese tourists and Hong Kong identity (shown in Figure 1) in terms of regression estimates. Data on Hong Kong identity are from 46 rounds of surveys conducted by Hong Kong Public Opinion Research Institute (averaged to year). The surveys asked respondents the degrees to which they identify as a Hong Kong citizen and as a Chinese citizen, respectively. We use the difference in aggregate response to these two questions as the dependent variable. Data on Chinese tourists are from *Statistical Review of Hong Kong Tourism* (multiple years), and data on press and political freedom are from the Variety of Democracy Project (V-Dem). Robust standard errors are in parentheses.

⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test)

D Additional Robustness Checks for Study 1

Table A.2: Robustness: Using Within-Group Tertile

| | Overall Support for Democracy (PCA) | % Donated to Pro-Democracy Organizations (from 30 HKD payment) | % Donated to Pro-Democracy Organizations (from 500 HKD Lottery) |
|---|--|---|--|
| Treatment effect by mainland distance tertile | (1) | (2) | (3) |
| Top 1/3 | 0.677** (0.220) | 0.121+ (0.070) | 0.058 (0.060) |
| 33% to 66% | 0.278 (0.224) | -0.075 (0.067) | -0.023 (0.058) |
| Bottom 1/3 | -0.180 (0.247) | -0.090 (0.066) | -0.077 (0.054) |
| Observations | 571 | 571 | 571 |

Note: This table presents the heterogeneous treatment effects using the within-group tertile of distance to mainlanders as the moderating variable. Robust standard errors are in parentheses.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test)

Table A.3: Robustness: Using Original Mainland Distance Quartile as the Moderating Variable

| | Overall Support (PCA) | % Donated from 30 HKD payment | % Donated from 500 HKD Lottery |
|--|--------------------------|----------------------------------|-----------------------------------|
| Treatment effect by dist. to mainlanders | (1) | (2) | (3) |
| Top 25% | 0.861*** (0.242) | 0.194* (0.079) | 0.101 (0.068) |
| 50% to 70% | -0.062 (0.231) | -0.138 (0.075) | -0.041 (0.066) |
| 25% to 50% | -0.031 (0.255) | -0.022 (0.072) | -0.054 (0.058) |
| Bottom 25% | -0.350 (0.323) | -0.126 (0.089) | -0.119 (0.074) |
| Observations | 571 | 571 | 571 |

Note: This table presents the heterogeneous treatment effects. The distance quartile is based on the entire sample instead of on each treatment group. Robust standard errors are in parentheses.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test)

Table A.4: Robustness: Using a Continuous Measure for Mainland Distance

| | Overall Support for Democracy (PCA) | % Donated to Pro-Democracy Organizations (from 30 HKD payment) | % Donated to Pro-Democracy Organizations (from 500 HKD Lottery) |
|--------------------------------------|--|---|--|
| | (1) | (2) | (3) |
| Mainland distance \times treatment | 0.273** (0.084) | 0.051* (0.025) | 0.041+ (0.021) |
| Mainland distance \times placebo | 0.005 (0.083) | 0.019 (0.023) | 0.016 (0.019) |
| Mainland distance (PCA) | 0.142* (0.058) | -0.009 (0.017) | 0.000 (0.014) |
| Treatment | -0.016 (0.157) | -0.030 (0.047) | -0.014 (0.038) |
| Placebo | -0.104 (0.159) | 0.020 (0.047) | 0.046 (0.038) |
| Observations | 571 | 571 | 571 |

Note: This table presents the heterogeneous treatment effects using a continuous measure of distance to mainlanders. The measure is based on the first principal component from the six mainland distance questions. Robust standard errors are in parentheses.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test)

Table A.5: Robustness: Controlling for Additional Covariates

| | Overall Support for Democracy (PCA) | | | | % Donated to Pro-Democracy Organizations (from 30 HKD payment) | | | | % Donated to Pro-Democracy Organizations (from 500 HKD Lottery) | | | |
|---|-------------------------------------|--------------------|--------------------|--------------------|--|-------------------|--------------------|--------------------|---|-------------------|--------------------|--------------------|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) |
| Treatment effect by distance to mainlanders | | | | | | | | | | | | |
| Top 25% | 0.840** (0.247) | 0.944** (0.247) | 1.010** (0.246) | 1.037** (0.259) | 0.194* (0.082) | 0.175* (0.083) | 0.262** (0.082) | 0.241** (0.090) | 0.153* (0.071) | 0.127+ (0.073) | 0.210** (0.070) | 0.208** (0.075) |
| 50% to 75% | 0.150 (0.243) | 0.204 (0.249) | 0.255 (0.245) | 0.230 (0.253) | -0.065 (0.079) | -0.064 (0.082) | -0.080 (0.080) | -0.091 (0.087) | -0.040 (0.065) | -0.057 (0.068) | -0.076 (0.064) | -0.083 (0.066) |
| 25% to 50% | -0.011 (0.265) | -0.081 (0.281) | -0.100 (0.254) | -0.048 (0.250) | -0.126+ (0.074) | -0.113 (0.074) | -0.161* (0.076) | -0.152+ (0.078) | -0.067 (0.062) | -0.071 (0.063) | -0.115+ (0.064) | -0.103 (0.065) |
| Bottom 25% | -0.025 (0.283) | -0.092 (0.275) | -0.198 (0.301) | -0.098 (0.296) | -0.083 (0.081) | -0.095 (0.078) | -0.066 (0.083) | -0.096 (0.086) | -0.112+ (0.065) | -0.083 (0.066) | -0.076 (0.068) | -0.094 (0.071) |
| Treatment × demographics | ✓ | | | ✓ | ✓ | | | ✓ | ✓ | | | ✓ |
| Treatment × academic background | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ | | ✓ |
| Treatment × family background | | | ✓ | ✓ | | | ✓ | ✓ | | | ✓ | ✓ |
| Observations | 570 | 571 | 571 | 570 | 570 | 571 | 571 | 570 | 570 | 571 | 571 | 570 |

Note: This table presents the heterogeneous treatment effects with additional controls. Demographic controls include one's year of birth, gender, whether the person was born in Hong Kong, and whether he/she has visited mainland China in the past. Academic background includes controls for one's level of study, number of years in the program, faculty affiliation, and cohort year. Family covariates include subjective evaluation of family socioeconomic status, mother's and father's education and places of birth.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test)

E Original Texts of the Treatment and Outcome Questions for Study 1

E.1 Treatment

現時香港有許多來自中國內地的人士，如果他們作為你的【男/女朋友】【親戚】【老師】【鄰居】【室友】【好友】，你會感到？

1. 非常不介意
2. 不介意
3. 有點不介意
4. 有點介意
5. 介意
6. 非常介意

E.2 Placebo

現時香港有許多殘疾人士，如果他們作為你的【男/女朋友】【親戚】【老師】【鄰居】【室友】【好友】，你會感到？

1. 非常不介意
2. 不介意
3. 有點不介意
4. 有點介意
5. 介意
6. 非常介意

E.3 Democratic Attitudes

Item # 1 你對於以下陳述有甚麼看法？雖然民主政治有缺陷，但比任何一個政制為佳

1. 非常不同意
2. 比較不同意
3. 比較同意
4. 非常同意

Item # 2 你對於以下陳述有甚麼看法？為了實現民主，我願意承受超過五年的經濟衰退、失業、和生活質量下降

1. 非常不同意
2. 比較不同意
3. 比較同意
4. 非常同意

Item # 3 你對於以下陳述有甚麼看法？如果條件允許，我願意停學一年，把時間用於爭取民主

1. 非常不同意
2. 比較不同意
3. 比較同意
4. 非常同意

Item # 4 你對於以下陳述有甚麼看法？為了爭取民主，我願意在工作場所宣傳我的理念，就算這有可能會令我被解雇

1. 非常不同意
2. 比較不同意
3. 比較同意
4. 非常同意

Item # 5 你對於以下陳述有甚麼看法？必要情況下，可以用武力對付發表反對民主言論的人

1. 非常不同意
2. 比較不同意
3. 比較同意
4. 非常同意

Item # 6 你對於以下陳述有甚麼看法？只要目的是爭取民主，我支持通過散佈謠言和假新聞來打擊當局

1. 非常不同意
2. 比較不同意
3. 比較同意
4. 非常同意

F Additional Information & Robustness Checks for Study 2

F.1 Original Treatment Text

[Socioeconomic Threat +] 在全球化浪潮下，人口流動比以往便捷及頻繁。各種形式的人口跨國和跨境流動，產生了經濟效益，但也可能給當地帶新的問題。我們想知道你對香港的人口流動模式的了解情況。你估計，在2018年有多少內地訪客通過旅遊簽證來港？請在下面填入你覺得最有可能的數字，以萬為單位。我們只想知道你個人的估計，無需查閱其他資料

你的答案是：[X]

(Next Page)

對於2018年內地訪客數字，剛才您的答案是 **x**。根據旅遊發展局的數據，2018年從內地來港的人數為5103萬。為香港常住人口（約745萬）的7倍。值得一提的是，許多水客，內地炒房者，以及早年的雙非來港生子，也都是通過一簽多行的旅遊簽證來港

[Socioeconomic Threat -] 在全球化浪潮下，人口流動比以往便捷及頻繁。各種形式的人口跨國和跨境流動，產生了經濟效益，但也可能給當地帶新的問題。我們想知道你對香港的人口流動模式的了解情況。你認為，從2002年到2018年，內地新移民(持單程證來港)的人數變化情況是怎麼樣的？請選擇你認為最有可能的個百分比變化(percentage change)。我們只想知道你個人的估計，無需查閱其他資料。

你的答案是：[X]

(Next Page)

對於2002年到2018年單程證來港人數變化情況，剛才您的答案是 **x**。根據統計處數據，2018新移民來港人數約為4.2萬人，比起2002年(約4.53萬人)減少了約6%。根據香港大學社會學系最近的一份研究顯示，新移民的對本地工資和就業市場影響十分有限，且他們往往有很強的意願去學習和融入本地文化。

[Political Threat +] 在不同的國家和地區，公民的政治參與程度和對政府的態度會有不同。我們想知道你對中國內地公民和政府的關係了解多少。你估計，有多大比例的中國內

地民衆信任中國政府？我們只想知道你個人的估計，無需查閱其他資料。

你的答案是：[X]

(Next Page)

你認為，中國內地民衆信任政府的比例是 **x**。根據2014年世界價值觀調查和2016年的亞洲晴雨表調查的數據顯示，大約90%的中國內地民衆表示信任或非常信任政府。相較而言，美國，英國，和德國民衆中信任政府的比例分別是47%，41%，和53%。

[Political Threat -] 在不同的國家和地區，公民的政治參與程度和對政府的態度會有不同。我們想知道你對中國內地公民和政府的關係了解多少。你認為，中國內地每年大約會發生多少起公民集體示威或反抗政府不公政策的活動？請在下面輸入你的估計。我們只想知道你個人的看法，無需查閱其他資料。

你的答案是：[X]

(Next Page)

你認為中國每年會發生 **x** 起集體抗爭活動。根據美國普林斯頓大學和斯坦福大學研究團隊的最新測算，保守估計，中國內地在2013至2017年間發生了超過250,000起針對地方或中央政府政策的集體抗爭活動，平均每年超過5萬起。中國民衆抗爭行為的頻率之高，手段之多，在學術界也已有豐富的研究。

F.2 English Translation of the Treatment Text

[Socioeconomic Threat +] In a time of globalization, the movement of people has become more convenient and frequent. Different forms of cross-regional immigration can create economic benefits but may also produce new problems for the destination. We would like to learn a bit about your view on population movements concerning Hong Kong: According to your own estimate, how many mainland Chinese visited Hong Kong on tourist visas in 2018? Please input below the figure that you think is most likely. We just want to know your personal estimate. There is no need to search for additional information.

Your estimate is: [X] (to be given by the subject)

(Next Page)

Your answer is X. According to data from the Tourism Bureau, the actual number is 51.03 million, which is about 7 times the size of the permanent population in Hong Kong (about 7.45 million). It is also worth noting that many parallel traders, property speculators, and those who came for birth tourism in the earlier days all came to Hong Kong on tourist visas.

[Socioeconomic Threat –] In a time of globalization, the movement of people has become more convenient and frequent. Different forms of cross-regional immigration can create economic benefits but may also produce new problems for the destination. We would like to learn a bit about your view on population movements concerning Hong Kong: According to your own estimate, between 2002 and 2018, how has the number of new mainland immigrants (individuals coming with one-way permits) changed? Please choose the most likely percentage change figure. We just want to know your personal estimate. There is no need to search for additional information.

Your estimate of the percentage change is: [X] (to be given by the subject)

(Next Page)

Your estimate is X. According to data from the Statistics Bureau, the number of new mainland immigrants in 2018 was about 42 thousand, which is about 6% less than the figure in 2002 (45.3 thousand). According to a recent study by HKU, new mainland immigrants have limited impact on the local wage and labor market, and they have a strong willingness to learn and integrate into the local culture.

[Political Threat +] Citizens have different views and ways to engage with their government in different countries. We would like to know how much you know about the citizen-government relationship in mainland China. According to your estimate, what percentage of mainland Chinese trust the Chinese government? Please input below the percentage figure that you think is most likely. We just want to know your personal estimate. There is no need to search for additional information.

Your estimate of the percentage is: [x] (to be given by the subject)

(Next Page)

Your answer is X. According to data from the 2014 World Values Survey and the 2016 Asian Barometer Survey, about 90% of the mainland Chinese indicated that they somewhat trust or strongly trust the government. From a comparative perspective, the percentage of public who trust the government is 47% in the U.S, 41% in the U.K., and 53% in Germany.

[Political Threat -] Citizens have different views and ways to engage with their government in different countries. We would like to know how much you know about the citizen-government relationship in mainland China. According to your estimate, in each year, how many times do citizens in mainland China collectively protest against unjust government policies? Please input below the figure that you think is most likely. We just want to know your personal estimate. There is no need to search for additional information.

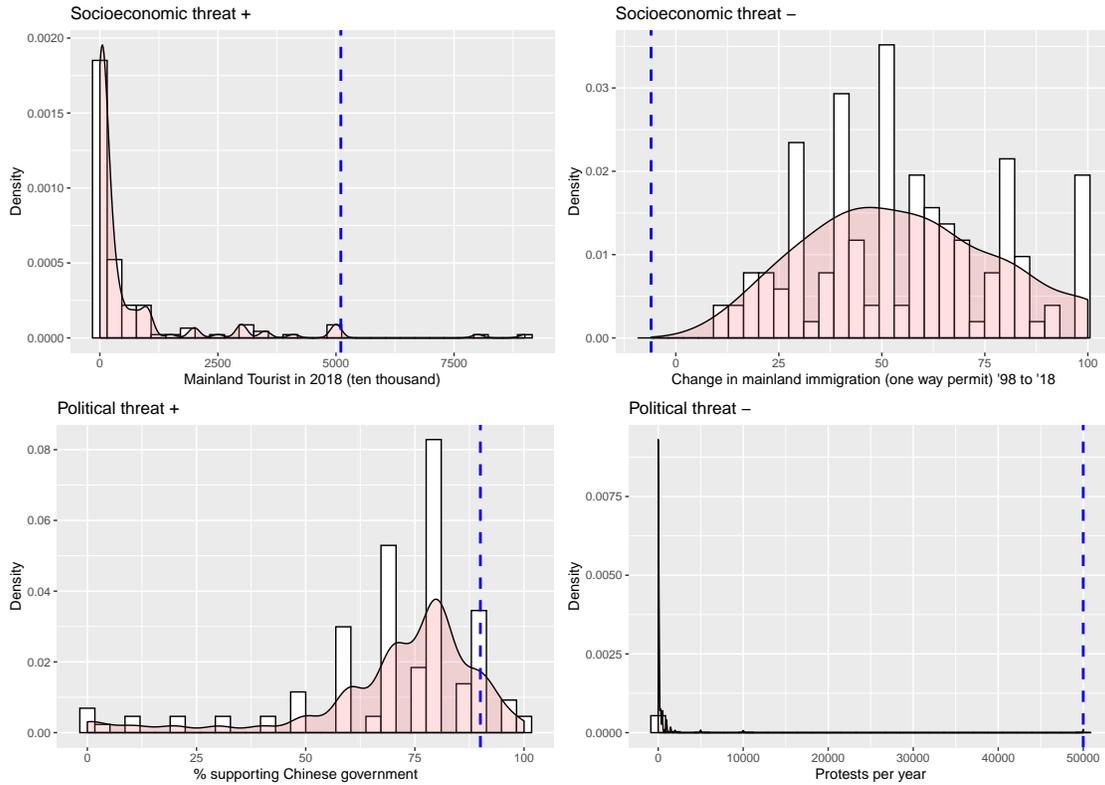
Your estimate is: [X] (to be given by the subject)

(Next Page)

Your answer is X. According to a recent estimate by researchers from Princeton and Stanford, the most conservative estimate is that there were over 250,000 collective protests against local or central government policies between 2013

and 2017, with an annual average of over 50,000. There is a rich body of academic scholarship on the high frequency and diverse means of resistance by Chinese citizens.

Figure A.10: Distribution of Respondents' Estimates and the Answer Provided



Note: This figure presents the distribution of subjects' answers to the four treatment questions in study 2 relative to the actual answer provided. The histogram represents the distribution of subjects' answers and the blue dashed line represents the value of the answer we provided. We can see that the actual answers are typically more extreme than what the beliefs of the vast majority of the subjects.

Table A.6: Numerical Results for Experimental Study 2

| | DV: Subjective Distance to Mainland Chinese (PCA) | | DV: Overall Support for Democracy (PCA) | |
|------------------------|--|--------------------|--|-------------------|
| | (1) | (2) | (3) | (4) |
| Socioeconomic threat + | 0.769** (0.235) | 0.726** (0.233) | 0.437* (0.188) | 0.490* (0.191) |
| Socioeconomic threat – | 0.108 (0.243) | 0.095 (0.249) | 0.091 (0.200) | 0.079 (0.203) |
| Political threat + | 0.128 (0.245) | 0.163 (0.249) | -0.178 (0.206) | -0.220 (0.208) |
| Political threat – | 0.264 (0.231) | 0.213 (0.237) | 0.297 (0.187) | 0.239 (0.186) |
| Covariates | | ✓ | | ✓ |
| Observations | 640 | 640 | 640 | 640 |

Note: This table presents the numerical results for the estimated effects of the four treatments in the second experimental study (visualized in Figure 5). Additional covariates include *gender*, *birth year*, *number of years in the program*, *residing district fixed effects*, *faculty/school fixed effects*, and *subjective evaluation of family socioeconomic status*. Robust standard errors are in parentheses.

⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test)

Table A.7: Robustness Check: Excluding Repeated Takers from Study 1

| | DV: Subjective Distance to Mainland Chinese (PCA) | | DV: Overall Support for Democracy (PCA) | |
|------------------------|--|-------------------|--|-------------------|
| | (1) | (2) | (3) | (4) |
| Socioeconomic threat + | 0.718* (0.281) | 0.647* (0.274) | 0.400+ (0.227) | 0.483* (0.234) |
| Socioeconomic threat – | 0.275 (0.294) | 0.278 (0.300) | 0.146 (0.245) | 0.211 (0.251) |
| Political threat + | 0.240 (0.298) | 0.272 (0.306) | -0.198 (0.256) | -0.281 (0.260) |
| Political threat – | 0.531+ (0.272) | 0.513+ (0.276) | 0.345 (0.221) | 0.331 (0.226) |
| Covariates | | ✓ | | ✓ |
| Observations | 467 | 467 | 467 | 467 |

Note: This table presents the numerical results for the estimated effects of the four treatments in the second experimental study, excluding subjects who also participated in Study 1. Additional covariates include *gender*, *birth year*, *number of years in the program*, *residing district fixed effects*, *faculty/school fixed effects*, and *subjective evaluation of family socioeconomic status*. Robust standard errors are in parentheses.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test)

G Additional Information for the Observational Studies

G.1 Data and Variable Construction

In our analysis of the survey data, we use data from the Hong Kong Election Studies (HKES), which include a series of representative surveys fielded between 2015 and 2017.²³ HKES provide geographical information of respondents to the district level (i.e. each respondent was coded to belong to one of the 18 districts.), which enables us to incorporate district-level characteristics into the analysis. We use four survey questions to measure respondents’ inter-group attitude and support for democracy. The detailed wordings of these questions are shown in Table A.8.

²³The survey data are publicly available at <https://hkelectionstudy.org/>.

Table A.8: Original Question Texts from the HKES

| Question Text (English) | Question Text (Cantonese) | Years | Choices |
|---|---------------------------|------------------|--|
| “Hong Kong has too many immigrants coming from Mainland China.” | 「香港有太多來自中國大陸的新移民。」 | 2015, 2016 | Strongly disagree (1) to strongly agree (5) (<i>kept the original scale</i>) |
| “Generally speaking, do you think of yourself as:” | 「總括來說，您認為自己是：」 | 2015, 2016, 2017 | Chinese (1), Chinese, but also Hong Konger (2), Hong Konger, but also Chinese (3), Hong Konger (4) (<i>kept the original scale</i>) |
| “Western-style democracy is not suitable for Hong Kong.” | 「西方的民主制度不適合香港。」 | 2015, 2016, 2017 | Strongly disagree (1) to strongly agree (5) (<i>inverted the original scale so that larger values indicate perceptions of greater suitability</i>) |
| “In your opinion how much of a democracy is Hong Kong today?” | 「一般來說，您覺得目前香港有幾民主呢？」 | 2016, 2017 | Not a democracy (1), a democracy with major problems (2), a democracy but with minor problems (3), a full democracy (4) (<i>kept the original scale</i>) |

For our analysis of the election data, we obtain Legislative Council (LegCo) election results from the Electoral Affairs Commission of Hong Kong (www.eac.gov.hk). Hong Kong's Legislative Council (LegCo) elections were organized along two groups of seats: geographical constituency seats elected directly by voters and functional constituency seats elected by corporations and individuals representing different interest sectors.²⁴ Our analysis focuses only on the geographical constituency seats, which are generally more competitive and can be easily matched to our location-based mainland exposure measure. Hong Kong has a total of 5 multi-member geographical constituencies, each electing 5 to 9 members by proportional representation. Each geographical constituency is partitioned into 18 districts, which are further partitioned into 452 district council constituencies. The LegCo election results that we obtain are disaggregated at the district council level.

The election data contain the full list of individuals who have run in the last four LegCo elections. Due to the nature of the Hong Kong electoral system (Hare quota with small district magnitudes), it is common for the two major political camps to field multiple candidates in multiple lists, with some of them not declaring a political affiliation. While successful candidates can be coded by their voting pattern in the legislature, there were many unsuccessful candidates who were clearly supported by one of the political camps. In light of these challenges, we classify their political stance (pro-regime vs. pro-democracy) using the following system. Firstly, if a candidate belongs to a pro-regime or pro-democracy political party, we will code their political affiliation as such. This is defined by whether a majority of its elected representatives²⁵ had ever cast a no vote on the government budget (Appropriation Bill) or against the symbolic 'motion of thanks' on the policy address. For 'independents' who were successfully elected, we code their political camp by this rule as well. However, for candidates whose election bid was unsuccessful and who do not declare a political affiliation, we first examine whether they had (or will) belong to a

²⁴Since 2012, 5 functional constituency seats were elected in a multi-member territory-wide at-large constituency by voters who are otherwise ineligible to vote for the other 30 'traditional' functional constituency seats. Our analysis focuses on the geographical constituency seats.

²⁵For simplicity, we ignore party change during a legislative session and only focus on representatives elected from the directly elected seats (geographical constituencies)

pro-establishment or pro-democracy party. If that is unsuccessful, we use information from Hong Kong's newspaper of record, the South China Morning Post. Our research assistant coded a candidate as being pro-regime or pro-democracy if the Post ever described the candidate as pro-regime or pro-democracy.

In Table [A.9](#), we list all political parties winning at least one directly elected seats between 2004 and 2016, and we also list whether a majority of its legislators voted against the appropriation bill (budget) or the motion of thanks on the policy address, between 2004 and 2017. Note that the two representatives running on the AllinHK alliance (#) were barred from serving in the legislature before the first meeting due to the oath taking saga; as such, they did not vote on any bills. We coded them as part of the opposition pro-democracy camp as they were disqualified by a lawsuit brought forth by the government. In the four columns representing the four elections, the abbreviations' meanings are as follows: 'W' - ran and won at least one seat; 'F' - ran, did not win any directly elected GC seats, but won at least one seat overall; 'R' - ran, but did not win any seats.

Table A.9: List of political parties winning at least one GC seat from 2004 to 2016

| Party Name (English) | Party Abbreviation | Camp | 04 | 08 | 12 | 16 | Predecessor | Voted against appropriation | Voted against 'motion of thanks' |
|--|--------------------|-----------|----|----|----|----|---------------|------------------------------------|--|
| Democratic Alliance for the Betterment of Hong Kong | DAB | Regime | W | W | W | W | | | |
| Democratic Party | DP | Democracy | W | W | W | W | | 09, 10, 11, 13, 15, 17 | 05, 09, 10, 13, 14, 15, 16, 17 |
| Article 45 Concern Group | 45 Concern | Democracy | W | | | | | | 05, 06 |
| Liberal Party | Liberal | Regime | W | F | W | F | | | |
| Hong Kong Federation of Trade Unions | FTU | Regime | W | W | W | W | | | |
| The Frontier | Frontier | Democracy | W | W | | | | 06, 09, 10, 11 | 05, 07, 08, 09, 10 |
| Hong Kong Association for Democracy and People's Livelihood | APDL | Democracy | W | W | W | R | | 09, 10, 11, 12, 13, 15, 16 | 05, 06, 08, 09, 10, 11, 13, 14, 15, 16 |
| Hong Kong Confederation of Trade Unions | CTU | Democracy | W | W | | | | 05, 09, 10, 11, 12 | 05, 06, 07, 09, 10, 11 |
| April Fifth Action | April Fifth | Democracy | W | | | | | 05, 06, 08 | 05, 06 |
| Neighbourhood and Worker's Service Centre | NWSC | Democracy | W | W | W | F | | 06, 07, 08, 09, 10, 12, 13, 15, 16 | 05, 06, 07, 09, 10, 11, 13, 14, 15, 16 |
| Civic Party | Civic | Democracy | | W | W | W | 45 Concern | 09, 10, 11, 12, 13, 14, 15, 16, 17 | 09, 10, 11, 13, 14, 15, 16, 17 |
| League of Social Democrats | LSD | Democracy | | W | W | W | April Fifth | 09, 10, 11, 12, 15, 16, 17 | 08, 09, 10, 11, 13, 14, 15, 16, 17 |
| Civic Act-up | CA | Democracy | | W | W | R | | 09, 10, 11, 12, 13, 15, 16 | 08, 09, 10, 11, 13, 14, 15, 16 |
| New People's Party | NPP | Regime | | | W | W | | | |
| Kowloon West New Dynamic | KWND | Regime | | | W | | | | |
| Labour Party | Lab | Democracy | | | W | W | | 13, 15, 16, 17 | 13, 14, 15, 16, 17 |
| People Power | PP | Democracy | | | W | W | LSD (partly) | 15, 16, 17 | 13, 14, 15, 16, 17 |
| Neo Democrats | ND | Democracy | | | W | R | Dem (partly) | 13, 14, 15, 16 | 13, 14, 15, 16 |
| Business and Professionals Alliance for Hong Kong | BPA | Regime | | | | W | KWND (partly) | | |
| ALLinHK / Youngspiration | ALL | Democracy | | | | W | | # | # |
| Civic Passion-Proletariat Political Institute-Hong Kong Resurgence Order | CP | Democracy | | | | W | | 17 | 17 |
| Demosistō | DTO | Democracy | | | | W | | 17 | 17 |
| Democracy Groundwork | DGR | Democracy | | | | W | | 17 | 17 |

G.2 Calculating Closeness to Checkpoints (via Public Transit)

We use Google’s Distance Matrix API to calculate the public transport travel time at 11 a.m. on a Wednesday from Lo Wu Station to the polling station(s) of each of the district council constituencies. Since travel time from Lo Wu is highly collinear with that from Lok Ma Chau (as the two checkpoints are adjacent terminals of the same railway line), we choose to focus on Lo Wu (the busier station) without loss of generality. If there is more than one polling station within a district council, we take the arithmetic mean of the transit time to all polling stations produce the district council constituency travel time. We use the inverse of the (average) district council travel time ($\frac{1}{\text{travel time}}$) as the main closeness measure. For the survey analysis, we first aggregate travel time to district-level (by averaging across all district councils within a district) and compute a similar inverse travel time variable at the district level.

G.3 Results

Table A.10: Residential Proximity to Lo Wu and Social & Political Attitudes

| | HK has too many immigrants from mainland | Identify as Hong Konger (as opposed to Chinese) | Democracy is suitable for HK (higher value = more suitable) | How democratic is HK (higher value = more democratic)? |
|--------------------|--|--|--|---|
| | (1) | (2) | (3) | (4) |
| Closeness to Lo Wu | 0.090** (0.030) | 0.090** (0.033) | 0.096* (0.044) | -0.145** (0.048) |
| Waves covered | 15,16 | 15,16,17 | 15,16,17 | 16,17 |
| Covariates | ✓ | ✓ | ✓ | ✓ |
| Observations | 8204 | 11761 | 11613 | 9491 |

Note: This table uses representative data from Hong Kong Election Studies to illustrate how attitudes toward mainland Chinese and democracy vary with respondents’ residential closeness (1/travel time) to the Lo Wu checkpoint between Hong Kong and mainland China. The regression models we estimate take the form: $\text{Attitude}_{id} = \delta \text{Closeness to Lo Wu}_d + \mathbf{X}_{id} + \epsilon_{id}$, where i indexes individual respondent and d the district. The following variables are controlled for in all regressions but not shown: survey wave fixed effects, *age*, *gender*, *college education*, *income level*, and *closeness to HK airport*. Robust standard errors clustered at the survey–constituency level are in parentheses.

+ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test)

Table A.11: The Effect of Closeness to Checkpoints on Pro-Regime Candidates' Vote Share, 2004–2016

| | DV: Pro-Regime Party Vote Margin | | | |
|---|----------------------------------|---------------------|---------------------|---------------------|
| | (1) | (2) | (3) | (4) |
| Closeness to Lo Wu (1/travel time) | 0.953** (0.319) | 0.859** (0.318) | -0.501 (0.579) | -1.248 (0.939) |
| 2008 × Closeness to Lo Wu (1/travel time) | -0.201 (0.263) | -0.221 (0.252) | -0.254 (0.247) | -0.306 (0.232) |
| 2012 × Closeness to Lo Wu (1/travel time) | -1.038** (0.323) | -1.072** (0.305) | -1.176** (0.310) | -1.392** (0.374) |
| 2016 × Closeness to Lo Wu (1/travel time) | -2.104** (0.451) | -2.133** (0.431) | -2.259** (0.477) | -2.499** (0.502) |
| Geographic constituency FE | ✓ | ✓ | | |
| District FE | | | ✓ | |
| District council FE | | | | ✓ |
| Socioeconomic controls | | ✓ | ✓ | ✓ |
| Observations | 2337 | 2337 | 2337 | 2336 |

Note: This table presents the results on the relationship between closeness to Lo Wu and pro-regime candidates' vote share in the last four Legislative Council elections (2004, 2008, 2012, 2016). Closeness is calculated by the inverse of the average travel time (on public transportation) from Lo Wu to polling stations within each district. The regression models we estimate takes the form: $\text{Pro-regime vote share}_{ctg} = \delta \text{Closeness to Lo Wu}_c \times \text{Year}_t + \gamma \text{Closeness to Lo Wu}_c + \mathbf{X}_{ctg} + \tau_t + \eta_g + \epsilon_{ctg}$, where i represents district councils, t represents *year*, and g represents geographical constituencies or districts (larger territorial units encompassing multiple district councils). The following variables are controlled for in all regressions but not shown: district fixed effects, *median income*, *% of public housing*, *% of private housing*, *% of Cantonese speakers*, and *% of college educated*. The control variables are based on the 2016 Population By-census disaggregated at the district council constituency level (publicly available at <https://www.byccensus2016.gov.hk/en/>). Robust standard errors clustered at the constituency level are in parentheses.

⁺ $p < 0.1$, * $p < 0.05$, ** $p < 0.01$ (two-tailed test)