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Using Deliberation to Reduce Polarization and Build Consensus: An Experimental Study

利用慎思型討論緩解極化和建立共識：一項實驗研究

Project Number: 2021.A1.113.21A

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Executive Summary

1. Abstract of the Research

In the wake of the Anti-Extradition Bill Movement, the government has emphasized the need for conversation, communication, and dialogue. However, there is much evidence that, without proper implementation, communication and discussion can easily lead to more radical ideas and negative emotions.

In a pilot PPR project I conducted, findings suggest that after discussion, issue attitude and issue polarization remained largely the same, but people's attitude toward others with opposing views became more favorable, and affective polarization was reduced. And the effects were more prominent in the deliberation group than in the causal discussion group.

The current project expanded the pilot project and obtained the following findings. First, strictly speaking, the current project did not fully replicate the results from the pilot project, but the overall conclusion is pretty clear; that is, deliberation delivered a more substantial effect than casual discussion in reducing issue polarization and affective polarization. Second, the current project found weak to moderate longitudinal effects of deliberation. Third, the findings suggest that the best combination of design factors in attitude moderation is formal face-to-face deliberation with balanced opinion climate design on young or middle to high-income participants.

2. Layman summary on policy implications and recommendations

It is recommended that the government provide opportunities and set up platforms for initiating dialogues among people in Hong Kong. First, government institutions shall focus more on reducing affective polarization and nurturing a harmonious and mutually understanding social environment when setting communication goals. Second, communication without rules could lead to undesirable effects. Government-citizen dialogue and citizen to citizen conversation needs deliberative rules. Third, in addition to rules, form of deliberation matters. It is important to make sure that face-to-face discussion could be arranged, and the number of people with different views shall be balanced. Fourth, to achieve the optimal effects of conversation, deliberation could be first conducted among young and middle to high-income citizens.

行政摘要

1. 研究摘要

反送中運動之後，政府強調了對話和溝通的必要性。然而，如果沒有適當的規則和設計，溝通和討論很容易導致更極端想法和負面情緒。

在我主持的先導項目中，實驗發現慎思型討論和自由討論對減少政治極化有一定效果。討論後，參與者對議題的態度和態度極化程度基本保持不變，但是對持反對意見的人的態度更加正面，情感極化程度也有所減少。相比自由討論組，上述效果在慎思型討論組中效果更為顯著。

本研究項目擴大了先導研究的範圍，並且得到了以下的研究發現。第一，嚴格來說，本研究並沒有獲得和先導研究發現完全一樣的結果，但是總體的結論不變，即，慎思型討論比自由隨意討論組對於弱化態度極化和情感極化的效果更好。第二，本研究發現了一些關於慎思型討論的長期效果。第三，研究檢驗了不同的因素組合，發現面對面的平衡意見人數的慎思型討論設計組合對年輕人和中高收入人群的效果最佳。

2. 研究項目對政策影響和政策建議的摘要

我們建議政府應提供相應機會及平臺，以鼓勵持不同政見香港市民之間的慎思型對話。首先，政府機構的傳播目標應該以減小態度極化和促進和諧與互相理解的社會環境為主。其次，無規則的對話只會引起負面效果。無論是政府與市民還是市民與市民對話，都可以使用慎思型對話的原則來進行。第三，除了對話規則，對話的形式也會影響結果。組織慎思型對話最好的是面對面進行，同時，持不同觀點的人數需要平衡。最後，為達到最好的慎思型對話效果，可以先邀請年輕人群和中高收入人群參與對話。

Introduction

Hong Kong society has undergone several dramatic transitions since the 1980s (Lau, 1982). The sovereignty handover in 1997 triggered a series of social and political upheavals that have continued for the last two decades (Lau, 2017; Lee, 2015). In 2014, the outbreak of the Umbrella Movement introduced civil disobedience to Hong Kong's history of social movements. Protesters occupied the streets to express their frustration with the government. In the wake of the Umbrella Movement, many pundits and critics claimed that Hong Kong society had been torn apart, arguing that it was becoming increasingly difficult for the Hong Kong public to achieve a consensus on a wide range of issues, especially political issues (Rowse, 2020).

Supporting the media's depiction of a divided Hong Kong, empirical studies have found evidence of polarization. Lee (2016) investigated opinion poll data and found that opinion polarization in Hong Kong, measured in terms of attitudes toward government performance, increased between 2003 and 2014. Using time series data from public opinion polls, a previous study (Wu & Shen, 2020) found that in the last 15 years, Hong Kong's public opinion has become increasingly polarized in the political, economic and livelihood domains. Public opinion on political issues is particularly divided. Between 2012 and 2017, the public approval ratings of the former Chief Executive Leung Chun-Ying moved sharply away from the neutral/central position. Differences in opinion on this issue between males and females, and between the older and younger generation, also increased. The gap in scores between male and female respondents increased from 2.13 to 5.4, and between older and younger respondents risen from 4.86 to 9.59 (Wu & Shen, 2020).

The Growth of the Problem: The Anti-Extradition Bill Movement

The Anti-Extradition Bill Movement is a series of demonstrations and protests in Hong Kong that began in March 2019. In February 2019, the Hong Kong government proposed the Fugitive Offenders Amendment Bill to allow Hong Kong to detain and transfer fugitives wanted in countries and territories with which it has no formal extradition agreements, including Taiwan and mainland China. The proposed bill triggered a huge controversy. The widespread opposition to the bill and the Chief Executive's hardline stance on the issue sparked massive protests. On June 9, 2019, more than a million people marched peacefully to the government headquarters to protest against the bill. This was the largest street protest in Hong Kong in 15 years. Under the pressure of public opinion, the government suspended the bill indefinitely, claiming that it was "dead." However, an increasing number of citizens showed strong antipathy to the movement, creating groups opposing the protests and supporting the police. Peaceful demonstrations gradually turned violent.

According to a survey report released by the Centre for Communication and Public Opinion Survey at The Chinese University of Hong Kong, approximately 22 percent of Hong Kong citizens had completely lost faith in the Hong Kong government before the Anti-Extradition Bill Movement began. On September 4, more than 40 percent of the respondents stated that they did not support the government. The survey also showed that 99 percent of localist groups and 95 percent of pro-democracy camps supported an independent inquiry into the issue of police brutality. But, approximately 70 percent of the pro-establishment respondents felt that the government did not need to set up an independent investigation committee. The gap in attitudes between the pro-democracy and pro-establishment camps was even wider over the issue of whether the Chief Executive should resign. Approximately 82 percent of the pro-democracy respondents said that Carrie Lam should resign, compared with only 6.5 percent of the pro-establishment respondents.

Political polarization tends to have negative consequences, such as exacerbating social inequality and impeding the development of democratic politics (Barber et al., 2015). The controversy surrounding the proposed Extradition Bill has accelerated social and political polarization in Hong Kong. Even worse, political polarization has led to various kinds of incivility, intolerance, and violence. Is there a way to "cure" polarization? Many scholars, activists, and politicians have attempted to find effective ways to reduce the polarization of opinions and attitudes. Among the many possible cures, deliberative communication is a promising option.

Deliberation: Pathways to Political Depolarization and Attitude Moderation

In the last two decades, deliberation has received much attention from researchers in fields such as philosophy, social psychology, communication, political science, and public opinion (Chambers, 2003; Landmore & Mercier, 2010; Min, 2009). The current understanding of deliberation in the communication context can be traced back to Habermas's discourse theory of democracy. Habermas defined deliberation as a "higher-level intersubjectivity of processes of reaching understanding that take place through democratic procedures or in the communicative network of public spheres" (Habermas, 1996, p. 299). This definition has been adopted and developed by many deliberation theorists. Cohen (1989) further specified four crucial principles of deliberation: argumentativeness, inclusiveness, freedom from coercion, and rationality.

Deliberation is expected to attenuate the polarization of public attitudes and opinions. Exposure to different political views through deliberation increases individuals' awareness of the underlying reasons for opposing views and thus their political tolerance (Mutz, 2006). This increase in awareness and tolerance makes individuals more open to opposing viewpoints and attitudes, which helps to depolarize their attitudes. For instance, a recent study explored a citizens' forum in a Finnish municipality and found that deliberation between citizens and politicians on the issues of closing village schools and building a school center reduced differences of opinion and promoted opinion convergence among the deliberators (Strandberg & Berg, 2020).

Prior empirical studies have provided robust evidence that deliberation reduces public attitude polarization. For example, Luskin, Fishkin, and Hahn's (2007) study of nine deliberation polls in the U.S. showed that online deliberation between more diverse groups was more likely to reduce both within-group homogenization and between-group polarization, compared with deliberation involving less diverse groups and offline deliberation. This finding has two important implications. First, it points to the potential of deliberation for inducing political depolarization. Second, it indicates that different forms of deliberation can exert distinct effects on depolarization. More research is needed to unravel the differences between these effects.

Deliberative communication (or, more simply, deliberation) may play a long-lasting role in attenuating polarization. The argumentative theory of reasoning holds that receiving information from people who have different perspectives has epistemic and transformative benefits, encouraging the recipients to modify their opinions and reducing their prejudice and extreme attitudes (Landmore & Mercier, 2010). This suggests that attitude moderation induced by deliberation may persist in the long term. Deliberation is widely practiced around the world as a means of attenuating political polarization. A number of social organizations are dedicated to organizing deliberation sessions to promote social harmonies in the U.S., such as the National Coalition for Dialogue and Deliberation, Better Angels and a Living Room Conversation, and the Center for Deliberative Democracy.

Existing Political Communication Programs in Hong Kong

There exist two main types of dialogue-oriented communication programs addressing political and policy issues in Hong Kong. The first type comprises government-organized direct dialogue programs. For instance, in September 2019, the Chief Executive, Mrs. Carrie Lam, together with a few Principal Officials, attended community dialogue sessions with the public. Approximately 150 participants chosen from among 20,000 individuals participated in a 2-hour dialogue with government officials. Programs in the second category are usually organized by media organizations. For instance, the programme This Week (視點 31), run by Radio Television Hong Kong, invites people with different views to debate or discuss social and political issues. Two episodes that received city-wide attention in 2019 featured Natalis Chan vs. Chapman To on police brutality and Junius Ho vs. Lam Cheuk-ting on the 2019 Yuen Long attack.

I argue that the abovementioned political dialogue programs played a very limited role in reducing political polarization (if not worsening it), due to their designs. First, communication between the government and the people tends to involve very few individuals. When a big crowd communicates with just a few people, emotion tends to dominate. Second, communication between elites and celebrities is seldom productive. Elites rarely change their views or even acknowledge their opponents' arguments during debate sessions broadcast by the media for fear that they will be perceived as weak or vacillating by their supporters. Accordingly, debate programs usually have an entertainment function rather than showcasing rational communication. They tend to reinforce existing opinions and thus increase antagonism between camps. Hong Kong lacks programs that encourage and enable ordinary people to talk with ordinary people. In a pilot PPR project, I demonstrated that well-regulated political deliberation by ordinary people could help to reduce political polarization in Hong Kong.

Pilot Project: Mixed but Promising Results

In a pilot project funded by the PPR special round, I conducted two experiments to compare the impact of deliberation and discussion on political polarization.

In Study 1, I invited participants with opposing views on Article 23 of Hong Kong's Basic Law to attend a 90-minute discussion session. The participants were divided into two groups: deliberation and casual discussion. The deliberation group received an information booklet on the issue and had to strictly follow pre-established rules for deliberation, whereas the casual discussion group had no such stimulus or restriction. In Study 2, I presented video recordings from Study 1 to another two groups of participants. One of these groups watched a video of the deliberation process, and the other group watched a video of the casual discussion. In both experiments, a pretest and posttest surveys were administered to the participants to elicit information on their attitudes toward the focal issue, attitudes toward people holding opposing views, knowledge of the issue, and sense of local and national identity.

The pilot project found that participating in deliberation and discussion did not necessarily change people's views on a political or social issue but had the potential to greatly change people's views on the opposition group, reduce their affective polarization, and increase their national identification (Shen & Yu, 2021). Deliberation had a stronger effect than casual discussion. Watching other people discussing politics delivered a much weaker effect, although in the same direction.

The Need for a Follow-up Study

Despite its promising findings, the pilot project raised some questions.

Study 1 from the pilot project involved only 12 individuals. Six participated in the deliberation group and six participated in the ordinary discussion group. Although random assignment ensures internal validity,

the use of such a small sample made it difficult to determine whether the effects detected in the pilot project were systematic or idiosyncratic. In order to ensure that the findings are meaningful and can be generalized to the Hong Kong population as a whole, a study with a larger sample is needed. Therefore, the first task of the current project will be to replicate the previous study with a larger sample with more diverse demographic features to perform a robustness check.

In addition, even if its findings are robust and sound, the pilot project only measured the immediate effects of discussion and deliberation due to the 6-month time constraint of the pilot project. It is necessary to test their longitudinal influence if we expect discussion and deliberation to reduce affective polarization in real social settings. Many communication effects only last for a short time. Ideally, the effects of deliberation will last for a long time, such as six months or even one year. If the longevity of the impact can be guaranteed, executing plans for deliberation and discussion in natural social settings will be highly effective. Therefore, the second task of the current project will be to check the longitudinal effects of discussion and deliberation.

Most importantly, given budget constraints, the pilot project was only able to carry out one experiment, with all possible experimental parameters set at unique values. For instance, only one topic (Article 23 legislation) was discussed; the gender combination was fixed; the participants were all from a certain age range (30-40); and the percentages of people from supporting and opposing sides were the same. But, many other factors can sway the outcomes of deliberation and discussion. The sizes of the effects for other experimental setups could be larger or smaller, depending on the combinations of myriad factors.

Generally, the effects of deliberation and discussion depend on four clusters of factors: the form(s) of deliberation/discussion, the conditions under which the deliberation/discussion takes place, the different social relationships between the participants, and the topic(s) of deliberation/discussion.

First, the form of deliberation matters. Deliberation is a special form of group discussion that traditionally emphasizes rationality, autonomy, and equality (Min, 2009). To achieve an effective deliberative process, deliberation organizers introduce specific rules, such as providing fair and balanced information and requiring participants to give reasons for their opinions (Hansen & Anderson, 2004). These rules distinguish deliberation from casual political discussion. Previous studies have found that compared with regular group discussion, deliberation with rules can more effectively alleviate polarization among participants (Strandberg, Himmelroos, & Grönlund, 2019). The pilot project's findings are consistent with those of existing studies, which have indicated that deliberation delivers better results than discussion.

Second, the conditions under which deliberation takes place can influence its effects on polarization. Social presence theory states that the degree of social presence provided by a platform can influence the social effects of communication on that platform (Short, William, & Christie, 1976). A high level of social presence provides more verbal and non-verbal cues for communicators regarding their interaction partners, helping to ensure participants' civility, respect, and psychological well-being (Min, 2007; Restrepo, 2018). Therefore, compared with an online setting, an offline setting for deliberation allows participants to obtain more cues about interactors and gives them increased social presence, which leads to a greater reduction in polarization (Restrepo, 2018). The pilot project was conducted solely in face-to-face settings. However, given the low cost of online communication, deliberation via online channels could be an attractive option.

Third, the social relationships of the participants in deliberation are important. Research has shown that deliberators who have similar viewpoints and close social relationships are likely to express similar extreme views (Grönlund, Herne, & Setälä, 2015). During deliberation by a group of like-minded people (known as "enclave" deliberation), individual cognitive bias will be magnified due to the lack of

presentation of conflicting arguments (Sunstein, Hastie, & Schkade, 2007). Simply put, opinions and attitudes are likely to polarize if participants hear only arguments supporting their original position. If participants expose themselves to different opinions and views, they will be more likely to reflect on and revise their views (Himmelroos & Christensen, 2018). In short, people are more disposed to moderate their prior opinions during deliberation that includes multiple viewpoints than during like-minded deliberation. In the pilot project, I set the ratio of people with opposing and supporting views at 1:1. Therefore, it will be valuable to explore the impact of the environment of deliberation on its outcomes.

Finally, the effect of deliberation on polarization may be contingent on the topic of deliberation. Topics that are general, ideological, or identity-oriented (e.g., gun control) touch on people's core values and lack clear solutions. Deliberating on these topics is less likely to moderate people's attitudes than it is to polarize their opinions because disagreement on such topics intensifies biased processing (for a review, see Wojcieszak, 2008). For example, abortion became a topic of political debate in the U.S. during the lifestyle revolution in the 1960s and created a value divide in American society (Knuckey, 2007). Deliberation on more specific or policy-oriented topics that are less closely related to core values (e.g., whether to build a nuclear station) seems to be more likely to result in attitude change (e.g., Min, 2007; Setälä et al., 2010). Presumably, this is also true for Hong Kong. Changing people's attitudes through deliberation would be relatively difficult for sensitive political issues such as Article 23 and the national security law, but for issues such as housing policy, discussion and deliberation may be capable of moving people's thoughts in different directions.

To summarize, deliberation has the potential to moderate opinions on social issues and/or attitudes toward people holding opposing views, as suggested by the pilot project. Yet a more rigorous examination of this topic is required. The current project thus conducts a robustness check, tests the longitudinal influence of the variables, and explores possible effect variation.

Project Objectives

In line with the ideas presented in the introduction, four project objectives are proposed in the current project. The first objective is to replicate the pilot project with a larger sample to check the robustness of its findings. The second objective is to examine the longitudinal effects of deliberation and discussion on attitude moderation using experiments in the Hong Kong context. The third objective is to determine the best combination of design factors in attitude moderation using experiments in the Hong Kong context. Lastly, based on the findings for the previous three objectives, the current project suggests protocols for effective political discussion that can lead to attitude moderation and social depolarization in Hong Kong.

Research Methodology

Following the pilot project, the proposed project will use controlled experiments to study the effects of deliberation on depolarization. Social interaction is a complicated process. Laboratory experiments provide researchers with high levels of control, allowing them to make causal inferences.

Study Design

As indicated above, the current project's purposes are to check robustness, test longitudinal effects, and explore effect variation. Thus, several factors need to be taken into consideration when designing the project.

Factor 1: Deliberation vs. casual discussion

Following the pilot project, the current project further investigates whether deliberation can outperform casual political discussion in terms of moderating attitudes toward the focal issue and toward people holding opposing views. Two conditions were created: a deliberation group and a casual discussion group.

Factor 2: Computer-mediated deliberation vs. face-to-face deliberation

The second factor differentiates two modes of communication: computer-mediated communication and face-to-face communication. Online deliberation groups were invited to use Zoom to conduct the deliberation session. For the face-to-face communication group, the experimental setup was the same as that in the pilot project. Each small group was invited to a conference room, where the participants sat around a table and deliberated together.

Factor 3: Opinion environment—enclave vs. exclave deliberation

Almost all previous studies of deliberation groups have studied participants from only one opinion camp or groups containing a 1:1 mix of opinions. The current project treats the proportion of participants on each side as a continuous variable. We are able to observe how the effect of deliberation changes as the number of participants on one side increases or decreases. Accordingly, three conditions were created: 75% enclave, 50% enclave, and 100% enclave.

Factor 4: Sensitive political issues vs. social policy issues

In addition to deliberation on political issues, the study includes fewer political topics for deliberation testing. Therefore, factor 4 contains two conditions. The project selected two issues to be discussed: a political issue and a less political topic.

Factor 5: Short-term vs. long-term

Technically, “short-term” and “long-term” are not experimental stimuli design factors but measurement design factors. In order to detect the long-term effects of our experiments, participants from selected experiment conditions were invited to complete a second-wave post-experiment survey six months after the deliberation session, in addition to the first-wave post-experiment survey immediately after the deliberation. By comparing the results of surveys from different time points, the current study is able to determine whether deliberation results in long-term depolarization.

A full factorial design including all of the stimuli factors will lead to a 2×2×3×2 design with repeated measures. Although each condition has only two groups of participants, a full factorial design would demand at least 48 groups of participants, which would incur an extremely high cost for data collection. As interaction effects are not the main concern of the proposed study, a more streamlined study design was adopted for cost efficiency concerns.

Table 1. Study design

<i>Study 1 Deliberation vs. discussion with repeated measures and multiple age groups</i>		
	Condition 1	Condition 2
	Deliberation	Discussion
	Group 1 (20–30 years old)	Group 5 (20–30 years old)

	Group 2 (31–40 years old)	Group 6 (30–40 years old)
	Group 3 (41–50 years old)	Group 7 (40–50 years old)
	Group 4 (51–60 years old)	Group 8 (50–60 years old)
<i>Study 2 Communication mode and communication topic</i>		
	Communication mode	
Communication topic	Online deliberation	Face-to-face deliberation
political issue	Condition 1 (two groups: young, old)	Condition 3 (two groups: young, old)
social policy issue	Condition 2 (two groups: young, old)	Condition 4 (two groups: young, old)
<i>Study 3 Opinion environment with differences in social status</i>		
Opinion environment		
Condition 1	Condition 2	Condition 3
50% enclave	75% enclave	100% enclave
Group 1 (high-income)	Group 4 (high-income)	Group 7 (high-income)
Group 2 (mid-income)	Group 5 (mid-income)	Group 8 (mid-income)
Group 3 (low-income)	Group 6 (low-income)	Group 9 (low-income)

As shown in Table 1, three studies were conducted with different combinations of factors. Study 1 focuses on the difference between deliberation and discussion with repeated measures for short-term and long-term effects. While the pilot experiment involved only people between 31 and 40 years old, Study 1 includes four groups of different ages for each condition.

Study 2 is an experiment with a 2×2 design. There are two conditions for communication mode: face-to-face deliberation and online deliberation. There are two conditions for communication topics: a political topic and a social policy topic. The selected political topic is Lantau Island development plan, and the selected social policy topic is the municipal solid waste charging scheme. A 2×2 design yields four conditions. For each condition, the study includes two groups of participants belonging to different age ranges (young: 20–40 years old; old: 41–60 years old).

Study 3 explores the influence of the opinion environment on deliberation. Three conditions are included: 50% enclave, 75% enclave, and 100% enclave. As social status is a demographic factor that may influence deliberation outcomes, three groups are used for each condition: high-income, mid-income, and low-income. In total, 25 groups of participants were recruited for this project.

Participant recruitment, data collection, and quality control

In the current project, participant recruitment and data collection were contracted out to a qualified market research company. To run the experiments, the PI and the research assistant designed detailed instructions for the company to follow. Before the project started, the PI and research assistant held several rounds of meetings to brief the company in detail on the setups of the study. The PI was in charge of the study

design, questionnaire design, discussion questions, discussion flow design, etc. PI trained the moderator to ensure that the rules of deliberation were followed. The PI and research assistants monitored the entire process of data collection.

Deliberation rules and materials

All of the deliberation groups in the study strictly followed discussion guidelines. Before the formal deliberation, we provided the participants with reading materials to enable them to familiarize themselves with points from both sides. Specifically, the participants were provided with “for” and “against” arguments regarding the issues to be deliberated. We collected the reading materials from mainstream Hong Kong media and controlled the tone and length of the information given so that the opinions on both sides seemed as reasonable as possible. During the deliberation, there are three rules: all participants have an equal chance to express their opinions, are required to use civil language, and must respect speakers with views opposing their own. A trained moderator was assigned to each group to maintain the rationality, civility, and quality of the deliberation.

The information booklet will contain a detailed introduction to the focal issue under deliberation and discussion. The booklet was designed based on information from a diverse range of sources. The booklet has three parts: a background section, details of the issue, and information regarding relevant topics in other countries or societies (see Appendix 1). The booklet also included “for” and “against” arguments on the issues to be deliberated. The facilitator used different approaches to moderate the sessions and played different roles in different conditions. The rules for deliberation were based on a previous study (Strandberg et al., 2019). Before the deliberation, the facilitator announced the rules to ensure fairness and encourage mutual respect (see Appendix 2). The facilitator was trained to intervene when the rules are broken (e.g., when speakers go over time). In all conditions, the facilitator asked a set of prepared questions for the participants to discuss (see Appendix 3).

Experimental procedure

The project recruited only Cantonese speakers who are permanent residents of Hong Kong. Previous studies typically recruited 5–16 participants to form a deliberation group. The current research assigned six participants to each group to organize an in-depth conversation. When the participants signed up for the experiment, they took a pre-experiment survey to measure their existing opinions on and attitudes toward the focal topic, such as their partisanship, the strength of their attitudes, and their knowledge of the topic. The research team then assigned the participants to small groups based on their self-reported political stances. In each group, the number of participants on the two sides of the debate was equal. Individuals with neutral opinions were excluded from the study. These procedures applied to all of the studies conducted except Study 3, which manipulated the opinion environment. Selected participants were invited to join a 90-minute deliberation/discussion experiment. They were randomly assigned to the experimental conditions. The participants then took a post-experiment survey. The questions in this survey were similar to those in the pre-experiment survey. In Study 1, the participants took two post-experiment surveys: one immediately after the deliberation and the other six months after.

Measurements

Attitude toward issue. The participants’ attitudes toward a selected issue were measured by one question. Participants were asked to indicate their attitude on a scale of 0 to 10, where 0 indicates “strong opposition” and 10 indicates “strong support.”

Issue polarization. The level of polarization was measured by the degree of variance within the group in terms of their attitudes toward the issue. In other words, issue polarization was a group-level measure, calculated by the standard deviation of issue attitude scores within a group.

Attitude toward people holding opposing views. Individuals were asked to indicate how favorably they regard those who hold opposing views on a scale of 0 to 10, where 0 indicates “very unfavorable” and 10 indicates “very favorable.”

Affective polarization. Affective polarization was measured by the level of variance within the group in terms of members’ attitudes toward people holding opposing views. Similar to issue polarization, affective polarization was a group-level measure, calculated by the standard deviation of attitudes toward people holding opposing views.

Issue knowledge. Knowledge of the focal issue was measured using a few questions about the topics discussed. The participants were presented with multiple-choice questions to test their familiarity with the issue. A correct answer was coded as 1, and an incorrect answer was coded as 0. The total number of correct answers was calculated for each participant and taken as the participant’s knowledge of the issue.

Sense of local and national identity. Local identity and national identity were measured using two items. Local identity was measured by inviting the participants to indicate their level of identification with being a Hong Konger on a scale of 0 to 10, where 0 means “no identification” and 10 means “high identification.” Similarly, national identity was measured in terms of the participants’ level of identification with being Chinese on a scale of 0 to 10, where 0 means “no identification” and 10 means “high identification.”

Social trust. The participants were asked to rate the statement that most of the time, people can be trusted on a scale of 0–10 (0 = “strongly disagree,” 10 = “strongly agree”).

Evaluation of group discussion. The participants were asked to rate their experience of the group discussion on a scale of 0–10 (0 = “strongly disagree,” 10 = “strongly agree”) in the following dimensions: fairness, activeness, effectiveness, friendliness, informativeness, usefulness, civility, and mutual respect. The scores for the eight items were averaged to form an overall evaluation of the discussion experience.

All the above measures, except for the last one, were administered in the pretest and post-test survey. The evaluation of group discussion questions was only asked in the post-test survey (see Appendix 4).

Research Findings

Study 1 Deliberation vs. discussion with repeated measures and multiple age groups

The analysis took three steps. First, the study examines the difference between the discussion group and the deliberation group. Second, the study examines the long-term effects of the experiment stimuli. Third, the study examines the differences between younger and older adults.

Deliberation vs. discussion

Table 2 below presents the overall findings from Study 1. The T1 and T2 columns refer to survey results before and after the discussion or deliberation. The T3 columns refer to the survey results six months after the experiments. The experiment topic is Lantau Tomorrow Vision.

Table 2. Differences between Deliberation and Discussion Groups (Study 1)

	Deliberation groups			Discussion groups		
	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>	T3 <i>M(SD)</i>	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>	T3 <i>M(SD)</i>
Issue Attitude	4.87 (3.21)	5.12 (3.21)	5.92 (2.89)	5.04 (3.28)	4.96 (3.41)	4.46 (3.28)
Attitude toward people holding opposing views	3.88 (2.95)	3.68 (3.03)	4.28 (2.85)	3.88 (2.48)	3.65 (2.75)	4.38 (2.54)
Knowledge	3.25 (1.26)	3.17 (0.96)	3.33 (1.20)	3.54 (0.83)	3.21 (0.83)	3.25 (0.99)
Local Identity	8.13 (1.90)	8.25 (1.82)	7.75 (1.85)	8.29 (1.63)	7.75 (2.23)	7.96 (1.73)
National Identity	6.08 (3.30)	6.17 (2.27)	5.67 (3.17)	5.96 (2.90)	6.04 (2.58)	5.63 (2.73)
Social Trust	5.24 (1.55)	5.72 (1.58)	4.96 (1.63)	5.23 (1.28)	5.27 (1.18)	4.97 (1.24)
Overall Evaluation of Discussion Experience	-	7.90 (1.51)	7.24 (1.23)	-	7.38 (1.70)	6.61 (1.77)

Note: 4 groups were recruited for each condition, and each group has 6 participants.

First, speaking of issue attitude, there is a slight increase in terms of support for the issue in the deliberation group. Before deliberation, the average support was 4.87, but after deliberation, the average support was 5.12. In contrast, there is a slight decrease in terms of support for the issue in the discussion group. Before the discussion, the average support was 5.04, but after the discussion, the average support was 4.96.

Second, in terms of issue attitude polarization, the deliberation groups did not show any changes. Before deliberation, the standard deviation for issue attitude was 3.21. After deliberation, the standard deviation for issue attitude remained the same. But the discussion groups experienced an increase in issue polarization. Before the discussion, the standard deviation for issue attitude was 3.28. After discussion, the standard deviation for issue attitude was 3.41.

Third, there is a decrease in attitude toward people holding opposing views after discussion and deliberation. For the deliberation groups, before the experiment, the average rating toward people holding opposing views was 3.88; after the experiment, the rating decreased to 3.68. For the discussion groups, before the experiment, the average rating toward people holding opposing views was 3.88; after the experiment, the rating decreased to 3.65.

Fourth, the levels of affective polarization increased slightly after the discussion and deliberation. For the deliberation groups, before the experiment, the standard deviation for rating people holding opposing views was 2.95, but after the experiment, the number increased to 3.03. For the discussion groups, before the experiment, the standard deviation for rating people holding opposing views was 2.48, but after the experiment, the number increased to 2.75.

Fifth, in terms of issue knowledge, a very small decrease was detected. Before deliberation, on average, participants answered 3.25 questions correctly. After deliberation, the number was 3.17. Before the discussion, on average, participants answered 3.54 questions correctly. After discussion, the number was 3.21.

Sixth, for the sense of identity, a slight increase of local (8.13 to 8.25) and national identity (6.08 to 6.17) was observed in the deliberation groups. The discussion groups observed a decrease of local identity and an increase in national identity.

Seventh, social trust in both deliberation and discussion groups increased after the experiment. For the deliberation groups, before the experiment, the average social trust was 5.24; after the experiment, the rating increased to 5.72. For the discussion groups, before the experiment, the average social trust was 5.23; after the experiment, the rating increased slightly to 5.27.

Finally, deliberation experiences were rated more positively than discussion experiences. The average ratings for the experiment experience were 7.90 and 7.38 for the deliberation condition and the discussion condition, respectively.

Long term effects

After six months, will the experiment effects still last? According to Table 2, the following findings could be observed. The comparisons were made between T2 (right after the experiment) and T3 (6 months later).

First, the deliberation groups had a strong increase in support for the issue (from 4.87 to 5.12 to 5.92), but the discussion groups decreased further (from 5.04 to 4.96 to 4.46). Second, issue attitude polarization decreased (from 3.21 to 2.89) in the deliberation groups and discussion groups (3.41 to 3.28) after six months. Third, for attitudes toward people holding opposing views, both deliberation groups (3.68 to 4.28) and discussion groups (3.65 to 4.38) witnessed increases. Fourth, affective polarization decreased for both deliberation groups (3.03 to 2.85) and discussion groups (2.75 to 2.54). Fifth, levels of knowledge increased very slightly for both deliberation groups (3.17 to 3.33) and discussion groups (3.21 to 3.25). Sixth, for deliberation groups, local identity decreased (8.25 to 7.75), and national identity (6.17 to 5.67) decreased as well. But for discussion groups, local identity increased (7.75 to 7.96), and national identity decreased (6.04 to 5.63). Seventh, social trust decreased for both deliberation (5.72 to 4.96) and discussion groups (5.27 to 4.97). Finally, the overall evaluation of the discussion experience decreased for both deliberation groups (7.90 to 7.24) and discussion groups (7.38 to 6.61).

Age difference analysis

Table 3 presents the differences between younger and older adults in terms of experiment results.

Table 3. Differences between Younger and Older Adults (Study 1)

	Younger adults			Older adults		
	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>	T3 <i>M(SD)</i>	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>	T3 <i>M(SD)</i>
Issue Attitude	5.25 (3.08)	5.08 (2.95)	4.75 (3.11)	4.67 (3.37)	5.00 (3.64)	5.63 (3.19)
Attitude toward people holding opposing views	3.24 (2.69)	3.99 (2.99)	4.18 (2.58)	4.51 (2.60)	3.35 (2.75)	4.47 (2.81)
Knowledge	3.08 (1.14)	2.79 (0.66)	3.04 (0.86)	3.71 (0.91)	3.58 (0.93)	3.54 (1.25)
Local Identity	8.29 (1.57)	7.87 (2.09)	7.67 (1.55)	8.13 (1.94)	8.12 (2.01)	8.04 (1.99)
National Identity	5.21 (3.08)	5.13 (2.83)	5.13 (2.97)	6.83 (2.90)	7.08 (2.70)	6.17 (2.85)

Social Trust	5.16 (1.25)	5.23 (1.43)	4.82 (1.57)	5.31 (1.57)	5.77 (1.35)	5.11 (1.30)
Overall Evaluation of Discussion Experience	-	7.83 (1.53)	7.49 (1.28)	-	7.45 (1.70)	6.35 (1.59)

Note: 4 groups were recruited for each condition, and each group has 6 participants.

First, the analysis focuses on the differences between younger and older adults before the experiment stimuli (T1). In general, younger adults (5.25) had a more favorable attitude toward the issue than older adults (4.67). Younger adults (3.24) showed more negative attitudes toward people holding different opinions than older adults (4.51). Younger adults (3.08) had less issue knowledge than older adults (3.71). Younger adults (8.29) had a stronger local identity than older adults (8.13), and their national identity (5.21) was weaker than older adults (6.83). Younger adults' social trust (5.16) was lower than older adults (5.31).

Second, the analysis examines the differences between younger and older adults after the experiment. Overall, for most of the measures, the differences between younger and older adults remained the same direction. There are a few exceptions, though. Before the deliberation, younger adults (3.24) showed more negative attitudes toward people holding different opinions than older adults (4.51). However, after the deliberation, younger adults (3.99) showed more positive attitudes toward people holding different opinions than older adults (3.35). In addition, before the deliberation, younger adults (8.29) had a stronger local identity than older adults (8.13). Yet, after the deliberation, younger adults (7.87) had a weaker local identity than older adults (8.12). In short, deliberation worked better on younger adults in terms of decreasing affective polarization and local identity. Finally, younger adults (7.83) evaluated the discussion experience more favorably than older adults (7.45).

Study 2 Communication mode and communication topic

The data analysis procedures for Study 2 follow two steps. First, the study compares deliberation effects between face-to-face and online deliberation. Second, the study examines the deliberation effect differences between the two topics: Lantau Tomorrow Vision and Solid Waste Charging Scheme.

Online deliberation vs. Face-to-Face deliberation

Table 4 presents findings regarding the differences between online and face-to-face deliberation.

Overall speaking, the deliberation effects found in Study 2 were roughly similar to those in Study 1. But there were a few exceptions. First, in Study 1, issue attitude increased after deliberation, but in Study 2, issue attitude decreased in both online groups (4.88 to 4.79) and face-to-face groups (5.04 to 4.92). Second, in Study 1, local identity increased after deliberation, but in Study 2, local identity decreased after deliberation in both online groups (8.46 to 8.25) and face-to-face groups (8.17 to 8.04).

In addition, online and face-to-face deliberation had very similar effects, with two exceptions. First, in online deliberation groups, attitudes toward people holding opposite views decreased after deliberation (3.97 to 3.67). In contrast, in face-to-face deliberation groups, attitudes toward people holding opposite views increased after deliberation (3.50 to 4.28). Second, in online deliberation groups, national identity decreased after deliberation (5.00 to 4.88), but in face-to-face groups, national identity increased after deliberation (4.62 to 5.29). These two findings showed that face-to-face deliberation had better effects than online deliberation, despite the fact that participants from the online groups (7.90) rated their experience higher than participants from the face-to-face groups (7.79).

Table 4. Differences between Online and Face-to-Face Deliberation Groups (Study 2)

	Online		F2F	
	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>
Issue Attitude	4.88 (3.30)	4.79 (3.51)	5.04 (2.97)	4.92 (3.01)
Attitude toward people holding opposing views	3.97 (2.56)	3.67 (2.14)	3.50 (2.13)	4.28 (2.52)
Knowledge	2.54 (1.25)	2.21 (1.38)	2.46 (1.22)	2.38 (1.17)
Local Identity	8.46 (1.79)	8.25 (1.94)	8.17 (1.71)	8.04 (1.73)
National Identity	5.00 (3.38)	4.88 (3.11)	4.62 (3.39)	5.29 (3.13)
Social Trust	4.96 (1.38)	5.20 (1.46)	5.05 (1.58)	5.38 (1.44)
Overall Evaluation of Discussion Experience	-	7.90 (1.38)	-	7.79 (1.67)

Note: 4 groups were recruited for each condition, and each group has 6 participants.

Political issue vs. social policy issue

Table 5 presents findings regarding the differences between discussion topics. For political issues, the project team selected the Lantau Tomorrow Vision; for social policy issues, the project team selected the Solid Waste Charging Scheme.

Table 5. Differences between Lantau Tomorrow Vision (LTV) and Solid Waste Charging Scheme (SWCS) Groups (Study 2)

	LTV		SWCS	
	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>
Issue Attitude	4.75 (3.45)	4.63 (3.52)	5.17 (2.76)	5.08 (2.98)
Attitude toward people holding opposing views	3.67 (2.36)	4.11 (2.43)	3.81 (2.37)	3.83 (2.29)
Knowledge	3.00 (1.18)	2.83 (0.87)	2.00 (1.06)	1.75 (1.39)
Local Identity	8.21 (1.74)	8.33 (1.88)	8.42 (1.77)	7.96 (1.78)
National Identity	5.67 (3.45)	6.17 (3.13)	3.96 (3.09)	4.00 (2.70)
Social Trust	5.35 (1.57)	5.47 (1.66)	4.66 (1.29)	5.11 (1.19)
Overall Evaluation of Discussion Experience	-	8.08 (1.10)	-	7.60 (1.83)

Note: 4 groups were recruited for each condition, and each group has 6 participants.

Overall speaking, the deliberation effects between the two topics were very similar. There are two differences. First, in the Lantau Tomorrow Vision groups, local identity increased after deliberation (8.21 to 8.33), but in the Solid Waste Charging Scheme groups, local identity decreased after deliberation (8.42 to 7.96). Second, the Lantau Tomorrow Vision groups (8.08) rated their deliberation experience as more favorable than the Solid Waste Charging Scheme groups (7.60).

Study 3 Opinion environment with differences in social status

The data analysis procedures for Study 3 follow two steps. First, the study compares deliberation effects across different opinion environments: 50% enclave, 75% enclave, and 100% enclave. Second, the study examines the deliberation effect across different income groups: low-income, middle-income, and high-income.

Opinion environment: 50% enclave vs. 75% enclave vs. 100% enclave

The three opinion environment conditions demonstrated prominent differences in terms of deliberation effects. The 100% enclave group was the outlier. First, in terms of issue attitude change, the 100% enclave condition demonstrated an increase in issue attitude (3.94 to 4.06), but the other two conditions showed decreases. Second, regarding attitude toward people holding different views, the 100% enclave condition showed an increase in issue attitude (3.81 to 4.57), but the other two conditions showed decreases. Third, the 100% enclave condition demonstrated a decrease in issue knowledge (3.33 to 3.22), but the 75% enclave condition showed an increase (3.11 to 3.17). Fourth, in terms of local identity, the 100% enclave condition increased (7.78 to 7.89), but the other two conditions decreased. Finally, the 100% enclave condition demonstrated a decrease in social trust (5.63 to 5.37), but the other two conditions showed increases. In short, when people holding similar viewpoints deliberate together, the effects are not so desirable.

Table 6. Differences among Groups in different opinion environments (Study 3)

	50% Enclave		75% Enclave ^a		100% Enclave ^b	
	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>
Issue Attitude	4.94 (2.80)	4.44 (3.49)	5.11 (2.89)	5.06 (3.19)	3.94 (3.39)	4.06 (3.83)
Attitude toward people holding opposing views	4.19 (2.69)	4.07 (2.86)	4.06 (2.37)	3.87 (1.58)	3.81 (2.34)	4.57 (2.22)
Knowledge	3.00 (1.08)	3.00 (0.97)	3.11 (0.96)	3.17 (0.79)	3.33 (0.69)	3.22 (0.73)
Local Identity	8.78 (1.48)	8.50 (1.69)	7.39 (2.06)	7.28 (1.99)	7.78 (2.53)	7.89 (1.45)
National Identity	4.72 (3.10)	4.28 (2.91)	4.94 (2.10)	4.61 (2.83)	5.11 (2.89)	5.00 (3.11)
Social Trust	5.29 (1.15)	5.52 (1.21)	5.11 (1.07)	5.51 (0.93)	5.63 (0.98)	5.37 (1.00)
Overall Evaluation of Discussion Experience	-	8.22 (1.33)	-	6.68 (1.40)	-	7.68 (1.19)

Note: 3 groups were recruited for each condition, and each group has 6 participants. ^aFour out of six did not support the policy in recruitment test. ^bAll participants did not support the policy in recruitment test.

Income group comparison

Table 7 shows the differences in deliberation effects across three income groups. Overall, the differences were prominent. First, in terms of issue attitude, only the middle-income condition increased (4.00 to 4.33), whereas the other two conditions decreased. Second, in terms of attitude toward people holding different views, the high-income condition became more favorable (3.35 to 4.57), but the other two conditions became less favorable. Third, for knowledge, the high-income condition increased their issue knowledge after deliberation (3.22 to 3.44) but the other two conditions decreased their issue knowledge. Fourth, for local identity, the low-income condition increased their local identity (7.44 to 8.05) but the other two conditions decreased local identity. Fifth, as for social trust, the low-income condition increased their social trust, but the middle- and high-income groups decreased their social trust.

Table 7. Differences among Groups of different incomes (Study 3)

	Low		Middle		High	
	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>	T1 <i>M(SD)</i>	T2 <i>M(SD)</i>
Issue Attitude	3.44 (2.98)	2.72 (3.06)	4.00 (2.72)	4.33 (2.83)	6.56 (2.53)	6.50 (3.54)
Attitude toward people holding opposing views	5.09 (2.38)	4.67 (2.28)	3.61 (2.09)	3.28 (1.98)	3.35 (2.56)	4.57 (2.34)
Knowledge	3.17 (1.10)	3.06 (0.87)	3.06 (1.06)	2.89 (0.68)	3.22 (0.55)	3.44 (0.86)
Local Identity	7.44 (2.75)	8.50 (1.65)	8.50 (1.33)	7.67 (1.46)	8.00 (2.00)	7.50 (2.07)
National Identity	4.83 (2.88)	4.56 (2.92)	4.72 (2.32)	4.67 (2.25)	5.22 (2.94)	4.67 (3.58)
Social Trust	5.06 (0.99)	5.64 (1.27)	5.27 (1.10)	5.13 (0.99)	5.70 (1.07)	5.63 (0.76)
Overall Evaluation of Discussion Experience	-	8.09 (1.23)	-	7.10 (1.50)	-	7.40 (1.46)

Note: 3 groups were recruited for each condition, and each group has 6 participants.

Policy implications and recommendations

In total, the current project has four objectives. The first objective of the project is to replicate the pilot project with a larger sample to check the robustness of its findings. The pilot project found that participation in deliberation and discussion could not change people's views toward a political or social issue but could change people's views toward the opposing party, reduce affective polarization, and increase people's national identification. Strictly speaking, the current project did not fully replicate the findings from the pilot project.

For example, Study 1 found that deliberation increased people's issue attitude, but casual discussion decreased people's issue attitude. In addition, people's view toward the opposing party were slightly reduced after deliberation and discussion. The mixed findings produced by the current project could be explained by a few possible factors. On the one hand, the topics for deliberation changed. In the pilot study, the topic is highly politically sensitive. On the other hand, the overall public opinion climate could be changed after the introduction of the National Security Law in Hong Kong. Nevertheless, despite the fact that a full replication of findings was not obtained, one overall conclusion is pretty clear, that is,

deliberation delivered a stronger effect than casual discussion in terms of reducing issue polarization and affective polarization.

The second objective of the current project is to examine the longitudinal effects of deliberation. According to the findings from Study 1, the current project found relatively weak to moderate longitudinal effects of deliberation. Issue attitude continued increasing after six months in the deliberation groups, whereas issue attitude continued decreasing in discussion groups. Similarly, participants from both deliberation and discussion groups developed more favorable attitudes toward people holding opposing views after six months. These two are moderate-level longitudinal effects. As for weak longitudinal effects, the project found knowledge increased slightly, and evaluation of both deliberation and discussion experience decreased slightly after six months. It is important to note, though, one has to be cautious of the interpretation of the longitudinal effects because the changes observed could be interpreted as history effects induced by the external environment changes.

The third object is to determine the best combination of design factors in terms of attitude moderation. The factors examined in the current project include deliberation-related factors and individual demographic differences. Deliberation-related factors are deliberation vs. casual discussion, online vs. face-to-face, deliberation topics, and deliberation opinion environments. Individual demographic factors include age and income.

The broad conclusions regarding deliberation-related factors based on the three studies are: formal deliberation works better than casual discussion, face-to-face deliberation works better than online deliberation, and balanced opinion climate works better than unbalanced opinion climates. In addition, the conclusions regarding individual demographic factors are: deliberation effects are more prominent in younger adults than older adults, and deliberation effects are more prominent in the middle to high-income groups than low-income groups. Based on these findings, it is concluded that the best combination of design factors in terms of attitude moderation is formal face-to-face deliberation with balanced opinion climate design on young or middle to high-income participants.

The last objective of the proposed project is to suggest protocols for effective political discussion that can lead to attitude moderation and social depolarization in Hong Kong. Based on the findings of this project, four major implications could be discussed. First, providing people with chances to talk to the opposite camp is beneficial in curing social cleavage. Second, deliberation consistently demonstrates its advantage over causal discussion. When having people discuss politics, a facilitator who makes sure that the rules of opinion exchange are enforced is crucial to desirable outcomes. Third, it is difficult to change people's view toward a political issue in the short run in the desirable direction. It is important to look beyond attitude changing as communication objectives, such as foster a harmonious and mutually understanding social environment. Fourth, the effects of deliberation are contingent on the deliberation's design and the participants' background; careful deliberation design is needed to achieve optimal effects. To elaborate these points, the finding summary and policy recommendations could be summarized in the following table for ease of reference.

Table 8. Experiment finding summary and policy recommendations

	Findings	Recommendations
1	The experiments found that changing issue attitude through discussion is difficult to achieve.	Opinion differences will always exist. Government institutions shall focus more on reducing affective polarization and nurturing a harmonious and mutually understanding social environment when setting communication goals.
2	The experiments found that deliberation showed stronger effects than casual discussion in terms of reducing issue polarization and affective polarization.	Communication without rules could lead to undesirable effects. Government-citizen dialogue and citizen to citizen conversation needs deliberative rules: equal participation, respect people with different views, arguments to be supported by evidence, see things in different perspectives, etc.
3	The experiments found that relatively weak to moderate longitudinal effects of deliberation.	
4	The experiments found that face-to-face mode of deliberation showed stronger effects than online deliberation.	In addition to rules, form of deliberation matters. When organization deliberation sessions, special attention needs to be paid to the design of deliberation sessions. It is important to make sure that face-to-face discussion could be arranged, and the number of people with different views shall be balanced.
5	The experiments found that balanced opinion climate works better than unbalanced opinion climates for deliberation groups.	
6	The experiments found that deliberation effects are more prominent in younger adults than older adults; deliberation effects are more prominent in the middle to high-income groups than low-income groups.	To achieve the optimal effects of conversation, deliberation could be first conducted among young and middle to high-income citizens.

Overall speaking, the government shall provide opportunities and set up platforms for initiating political dialogues or promote resources and opportunities for incubating such organizations and institutions promoting conversation at the societal level. In the past, most people spoke of political dialogues with government officials and debating between celebrities or professional politicians. These talks rarely end up with satisfactory results. Conversation among the public is more important in terms of fostering a healthy civic culture. Simply put, people need to talk to people more. But the natural dialogue settings that political conversation takes place has its limitations. This is mainly because the main setting of the discussion took place in a household where currently, in Hong Kong, the older generations disagree with the younger generations. With such a setting, most conversations ended up with silence and conflict.

When organizing talks among people, two basic elements are needed. First, a small group discussion requires people with opposing views. Second, an impartial moderator familiar with the rules of deliberation is needed for small group discussions. It is recommended that political and social policy dialogue activities could be held at the community level. For each event, participants need to be separated into small groups of around 6-8 individuals. A pre-discussion poll could be taken to find out participants' policy preferences. With the polling results, each discussion group shall have the same number of opposing and supporting individuals. A trained moderator will then facilitate each group; the discussion could last between 60-90 minutes. Another alternative is to organize online deliberation if the resource is limited. The advantage of conducting online deliberation is its low cost. But the effects are less than ideal.

Conclusion

The project found that the best combination of design factors in attitude moderation is formal face-to-face deliberation with balanced opinion climate design on young or middle to high-income participants. Therefore, to achieve the best effects, in terms of demographic priority, deliberation could be first conducted among young people or people with middle to high income. At the same time, we shall not forget low-income groups and older adult groups. These groups of people demonstrated weak effects of deliberation. Future research could focus on these groups to find ways of influence other than deliberation.

Public dissemination of findings

According to the proposal, a public seminar for disseminating the findings of the study will be held on CityU campus. A seminar entitled “Using Deliberation to Reduce Polarization and Build Consensus: Findings from Hong Kong” is scheduled on March 20, 2023. The PI will present the details of the finding to CityU and public audiences during the seminar.

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Appendix

Appendix 1. Information Booklet

商議項目平衡簡介資料

明日大嶼願景

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第一章 背景

明日大嶼願景（簡稱「明日大嶼」），是香港特別行政區行政長官林鄭月娥在 2018 年度施政報告中提出的大嶼山發展計劃。「明日大嶼」可追溯至早年由港英政府提出的多項大嶼山發展計劃。現時建議興建人工島的交椅洲、喜靈洲一帶水域，早在 1980 年代初期的《North Lantau Development Investigation》（NLDI）研究中已有大型填海工程的倡議（「East Lantau Island」）；政府亦曾於 1980 年代後期建議於交椅洲及竹篙灣一帶填海發展港口的計劃，及後因貨運需求增長放緩，以及保護海港條例生效等而擱置。2011 年，發展局、土木工程拓展署及規劃署展開《優化土地供應策略：維港以外填海及發展岩洞》的研究，初步評估在中部水域有發展人工島的潛力，在 2013 年進行第二階段公眾參與活動時，亦提及在中部水域興建人工島的機遇和限制，當時亦有提及連接堅尼地城與東大嶼都會的運輸基建技術性研究亦已於二零一七年大致完成，當中提出了在堅尼地城接駁公路及鐵路的可能方案。2014 年 1 月 15 日，時任香港行政長官梁振英在立法會上宣讀《2014 年度香港行政長官施政報告》，公佈「東大嶼都會」之計劃，表示香港政府將會研究進一步開發大嶼山東部對開水域及鄰近地區，打造「東大嶼都會」，以容納新增人口，並且作為中區及九龍東（於 2010 年代起透過《起動九龍東》轉型中）以外、香港第三個核心商業區。同年 3 月，「東大嶼都會」概念提出僅兩個月，政府便在未有進行任何公眾諮詢的情況下，向立法會申請進行中部水域人工島策略性研究的撥款，研究涉及 2 億 2,690 萬港元。撥款於立法會工務小組委員會審議時，因項目存有巨大爭議，討論一直未能達成共識。在顧及當前有其他工務項目更急切需要撥款的情況下，發展局於 2014 年 11 月 26 日暫時撤回申請。2016 年初，大嶼山發展諮詢委員會發佈「全民新空間」工作報告，羅列多項大嶼山的發展策略建議，當中「東大嶼都會」已被視為用作「長遠策略性增長區」的空間規劃框架。2016 年 10 月 27 日，政府發佈「香港 2030+：跨越 2030 年的規劃遠景與策略」（香港 2030+），「東大嶼都會」被列作香港其中一個策略增長區，建議填海面積 1000 公頃，此乃「東大嶼都會」首次包括在政府有關土地規劃和城市發展的諮詢文件中。在當中的專題資料冊中，政府指出了興建東大嶼都會需面對生態、環境、海上交通航道、漁業資源等限制。

2018年12月31日，土地供應專責小組在經過5個月公眾諮詢之後，專責小組主席黃遠輝和副主席黃澤恩向行政長官林鄭月娥提交報告。經整理及研究所收集的公眾意見後，小組向政府提出三個短中期選項及五個中長期選項作優先研究及推展，當中包括「東大嶼都會」。發展局在2019年3月向立法會發展事務委員會提交文件，為中部水域人工島相關研究申請撥款，研究期為2019年中至2023年，需時42個月，研究費用為5億5040萬，研究內容最少包含兩項基建項目的法定環境影響評估。研究撥款於2019年5月25日獲立法會工務小組委員會通過，曾有計劃於同年6月呈交財務委員會審議，惟因應「逃犯條例」修訂的社會氣氛，項目被重新編訂至財務委員會會議議程中較後的位置。

2020年7月，政府有意在本屆立法會會期結束前，再次把中部水域人工島的研究撥款呈交立法會財務委員會審議，最後未能趕及會議結束前處理。撥款本來需在下屆立法會重新提交事務委員會作討論，但政府後來因應2019冠狀病毒病疫情而推遲立法會選舉，現任立法會的會期延長一年，政府把撥款申請再次呈交財務委員會，並於2020年12月4日獲通過。研究將探討中部水域人工島的交通、財務融資安排，如研究順利及社會支持，會在2025年作分區大綱圖修訂等法定程序，社會將於2025至26年視乎數據作決定。如決定推展，填海工作會在2027年開始，預計2至3年時間會有第一組土地可以建屋，2034年可以入伙。

第二章 「明日大嶼」計劃內容及其關注要點

2.1 「明日大嶼」計劃內容

2.1.1 交椅洲人工島

「明日大嶼」的主要工程乃在香港的中部水域作大規模填海，分期興建總面積約 1700 公頃的人工島，當中在交椅洲附近的 1000 公頃人工島將屬「首階段」工程，預計可於 2025 年開展工程；而餘下的 700 公頃工程，政府則多番表示暫時未有建造時間表。林鄭月娥在 2021 年 10 月 18 號刊出的《星島日報》報章專訪中表示第二期 700 公頃工程「慢慢先喇……第二日再諗」，又指「都要為香港籌謀，第二日如果做得好好，人口又好多，需要進一步發展，都要有個空間。」

2.1.2 近岸填海和屯門沿海地帶發展區

除人工島填海外，計劃亦將位於北大嶼山及周邊地區的填海工程包括在內：

- 於欣澳填海約 80 公頃，作為休閒和娛樂匯點等用途；
- 於龍鼓灘填海 200 公頃，用作工業用途，以安置棕地作業
- 於小蠔灣作小規模填海，發展為公、私營房屋及社區設施。
- 另外，計劃亦包括重新規劃屯門沿海地帶發展區，包括屯門內河碼頭地段。

2.1.3 交通運輸

計劃提倡交通運輸基建先行。發展概念中會設策略性道路及鐵路網絡，包括連接屯門沿海各地區及交椅洲人工島的西部海岸鐵路、連接交椅洲及欣澳的鐵路、交椅洲及大嶼山連接路、連接交椅洲及香港島的道路和鐵路，以及推展一條與北大嶼山公路並行的 P1 高速公路和改善位於屯門西南部龍門路。

2.1.4 可持續發展

另一方面，政府以東涌新市鎮擴展區作首個試點，逐步在大嶼山推行智慧、環保及對環境氣候具抗禦力的城市概念。包括智慧燈柱、智能水管網絡系統、生態海岸線設計、區域供冷系統及可持續城市排水系統等。

可持續發展和環境保護方面，包括延續「可持續大嶼藍圖」的發展方略，保留郊野公園和具特殊科學價值地點、設立東涌自然文化歷史展覽中心和建造東涌河畔公園等。同時，於 2017 年施政報告宣告設立的 10 億元「大嶼山保育基金」，將繼續用作推動及落實保育工作。包括保育大嶼山的自然資源，包括豐富物種、優美景觀、珍貴生態及生境，以及文物資源，如寶貴文化遺產、豐富歷史及傳統和鄉郊特色。目前可持續大嶼辦事處已建議落實多項自然資源保育措施，包括在大嶼山水域劃定總面積約 5000 公頃的四個海岸公園、保育泥灘及沙坪生境、加強保護郊野公園「不包括的土地」、保育貝澳濕地和研究提供資源作保育用途。在文物資源保育方面，可持續大嶼辦事處建議落實推廣大澳文化及歷史、推廣獨特傳統、保存已評級歷史建築和展示大澳鹽田。另外，政府亦研究在大嶼山提供可持續休閒康樂用途設施，包括於大嶼山生態敏感度較低的地區開發單車徑、行山徑、越野單車徑及訓練場和露營營地等設施，同時亦會推廣各類休閒康樂活動，包括賞花、賞樹、水上活動、生態旅遊、歷奇/探險樂園和沙灘排球場。



圖二：明日大嶼發展計劃（圖源：香港政府）



圖二：保育大嶼山計劃（圖源：香港政府）

2.2 主要爭議

2.2.1 爭議一：香港是否還需要龐大土地供應？

政府表示，中部水域人工島的填海工程可滿足香港中長期的土地供應需求。大面積已平整待土地，比起零碎的棕地和改劃地等選項，可較容易作整全規劃。人工島可作為繼中區及九龍東之後，香港第三個核心商業區，提供約 400 萬平方米商業/寫字樓的樓面總面積。

支持計劃依據	反對計劃依據
<ul style="list-style-type: none">政府指出，新增的土地儲備可讓現時市區的稠密人口分散，重置舊區人口，以加快落實舊區重建。現時香港正面臨較嚴重的私人樓宇老化問題。據統計，至 2046 年，樓齡為 70 年或以上的私人住宅單位將達 326000 個，潛在影響 100 萬人。新發展區如獲妥善規劃，可一併解決舊區樓宇老化、人口密度過高、公共休憩空間 / 社區設施不足的問題，改善居住環境，提升城市的宜居度，亦提供更多土地應付人口老化需要增加的社區設施。	<ul style="list-style-type: none">民間土地資源專家組任憲邦指出，按照香港 2030+ 的推算，2041 年香港商業核心區甲級寫字樓只短缺 106 萬平方米，但東大嶼人工島規劃的商業樓面面積卻達 400 萬平方米，亦未計算東涌新市鎮拓展及機場北商業區項目等所新增的商業樓面面積，此需求需要大幅增加香港和廣東省 GDP 才可達成。

2.2.2 爭議二：為何選擇填海而不是回收棕地？

支持計劃依據	反對計劃依據
<ul style="list-style-type: none">香港專業及行政人員協會前會長李鏡波撰文指出，明日大嶼」是香港未來 20 至 30 年的長遠發展計劃，關乎香港整體規劃及多項大型基建的推行。	<ul style="list-style-type: none">本土研究社成員陳劍青認為，香港「一定唔係唔夠地」，認為現存土地可容到 2047 年，土地是「分配問題，唔係供應問題」。他強調，自己原則上不反對填海，但認為應先發展

<ul style="list-style-type: none"> 香港大學房地產及建設系系主任兼講座教授鄒廣榮認為，假設港府落實「明日大嶼」計劃，即擁有相對龐大的土地儲備作為籌碼，才有足夠的談判條件，與業主討價還價，那麼收回私人土地也比較容易。 	<p>現有的新界棕地，並建議可運用《收回土地條例》以作建屋。</p> <ul style="list-style-type: none"> 綠色和平資深項目主任朱江表示，對於政府強調棕地業權複雜、土地零散，增加收地及發展的難度，朱江指出香港有不少棕地的面積大，例如元朗橫台山佔地約 70 公頃。而鄉村式公屋與一般的新發展區不同，所涉的伙數少，毋須移村建大型基建，故興建時間一定比填海快。
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2.2.3 爭議三：計劃成本是否過高？

2019 年 3 月 19 日，政府表示按 2018 年 9 月價格，「明日大嶼」首階段工程總造價初步粗略估算約為 6240 億港元，其中交椅洲人工島填海和基建工程造價約為 2560 億元。除交椅洲人工島填海工程外，工程總造價還包括其它近岸填海工程、屯門內河碼頭發展以及若干道路和鐵路工程，而上述工程總造價未包括餘下的 700 公頃填海。6240 億元成本會分 10 至 15 年攤分，即每年約 400 至 500 億元。至於全新運輸走廊的總工程造價，則約為港幣 2730 億元。

支持計劃依據	反對計劃依據
<ul style="list-style-type: none"> 合和實業主席胡應湘表示，施政報告提出填海 1700 公頃設立東大嶼都會，以 35%土地用作住宅、地積比四倍、公私營樓宇七三比推算，單以地價，政府已可賺取 7735 億元收入，成本只需 2200 億。 香港浸會大學財務及決策系副教授麥萃才則認為明日大嶼計劃不會掏空庫房，因為項目成本並非一次性支出，而是分攤多年支付，因此每年的支出 	<ul style="list-style-type: none"> 前立法會議員姚松炎先後指出，根據差餉物業估價署的統計，甲級寫字樓的空置率自 2012 年起一直上升，由 6%上升至 2017 年的 9.6%，空置面積達到差不多 73 萬平方米，這與規劃署預測甲級寫字樓將會出現過剩情況吻合，若再大量增加甲級寫字樓的土地供應，可能會出現有地都賣不出的現象，無法透過賣地賺回填海成本。而事實上，2021 年財政預算案把五幅位於啟德的商業用地全部改

<p>並非如此巨額。再者，若投資回報勝支出，反而是資本的累積。</p> <ul style="list-style-type: none"> • 面對財政狀況逆轉，財政司司長陳茂波仍然指出，在經濟衰退時，政府若能採取逆周期措施，對支撐經濟非常重要。因此即使面對嚴峻財政狀況，基於社會長遠好處，重要基建仍會按計劃進行。 • 投資銀行摩根士丹利董事總經理譚楚翹認為，2017年香港的本地生產總值為26600億元，與新加坡差不多。假設項目成本為5000億元，其佔香港本地生產總值少於20%。由於投資攤分15年，因此在此期間每年不到本地生產總值的1.5%。 	<p>作住宅用途，已反映2019冠狀病毒病疫情下商業樓面面積供過於求的情況。</p> <ul style="list-style-type: none"> • 2020年9月，綠色和平聯同冠域商業及經濟研究中心發佈《明日大嶼對香港財政的影響分析》報告，報告推算了四十個香港在2019-2020至2041-2042年度的公共財政狀況。所有推算結果均顯示，結構性財赤問題已逼在眉睫，香港庫房有可能於2031-32財政年度便會耗盡，而香港政府的債務水平於2041-42財政年度更有機會高達14萬億元，顯示政府推行明日大嶼工程，將對香港財政狀況帶來不可逆轉的負面影響。 • 公共專業聯盟召集人黎廣德曾以過去高鐵、港珠澳大橋等工程的超支比例推算，「明日大嶼」計劃最終工程費用或高達1.2萬億，會掏空香港人的庫房。
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2.2.3 爭議四：計劃是否會破壞生態環境？

支持計劃依據	反對計劃依據
<ul style="list-style-type: none"> • 政府表示，選擇在中部水域填海，是因為考慮了對生態環境的影響，因中部水域的海洋自然生態敏感度相對較低。而“明日大嶼”工程開展前，亦將進行詳盡的環境影響評估，估計需時18個月，連同工程研究的其他工 	<ul style="list-style-type: none"> • 守護大嶼聯盟召集人謝世杰稱，交椅洲一帶水域擁有極具生態價值的完整珊瑚區，是部分魚類的常用通道。除影響生態，將對梅窩及大嶼南的環境構成壓力，面臨市鎮化。

<p>作，据政府现时预算，约需时 4 年完成，环境影响评估将宏观地评该填海工程对生态、水流、水质、噪音及空气质量等的影响，还会检视相关运输网络和土地用途对周边环境的影响，例如交通噪音、废气排放和废物管理等。如确认相关工程对环境有不利影响，则继续研究是否有合理的缓解或补偿措施。</p> <ul style="list-style-type: none"> 香港工程师学会前会长、香港专业及资深行政人员协会副会长梁广灏指出，政府每做一项大型工程，必定会进行详尽的环评。环评报告不仅会评核填海工程对生态、噪音、水质、空气质量等的影响，还会检视土地用途、交通基建对周围环境的影响，每一个环节都会由相应的专业技术人士评估。以东涌新市镇扩展计划为例，在工程规划阶段已考虑到对环境的影响，采用非浚挖式填海方法造地，毋须挖走海泥进行填海，减少对附近水质的污染。 	<ul style="list-style-type: none"> 绿色和平联同六个环保及关注团体，于 2019 年 3 月 26 日公布“生态调查初步观察”，批评政府严重低估东大屿水域的生态价值。填海影响<u>白腹海雕</u>繁殖及觅食，直接影响雀鸟在香港的数量；香港独有物种如：<u>鲍氏双足蜥</u>，会因人为干扰面临绝种；至于中部水域特有的稀有珊瑚和底栖生物，亦会直面威胁。 香港观鸟会于 2021 年初指出，《国家重点保护野生动物名录》已把白腹海雕升格为国家一级保护野生动物，而周公岛乃新近发现的繁殖地。人工岛工程将严重干扰雀鸟繁殖及觅食，最终影响它们的繁殖成功率。 香港海豚保育学会则指出，渔农自然护理署待数据显示自 2012 年港珠澳大桥工程开始后，在北大屿山周边水域录得的中华白海豚出没数量下跌 4 成。学会认为，设立海岸公园未必能补偿填海为环境带来的破坏。
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第三章 其他國家或地區相關法律及方案

本章介绍澳門、澳門和新加坡的填海情况，以及日本和中國內地近年收紧填海的政策。

3.1 澳門

澳門天然土地狹小，因此早在 1863 年便開始填海工程。直至 2013 年，澳門填海所得的土地面積已大大超過原有的天然土地，填海所得土地佔全澳門土地面積近三分之二，而隨着澳氹新填海區的落成，此一比數會進一步擴大。長期的填海使得澳門原本的天然海岸線幾近消失，只剩路環的東部與南部有天然的海岸線。

3.2 台灣

日治時期，在今高雄市鼓山區哈瑪星一帶填海造地，設立「打狗停車場」（今高雄港車站）作為縱貫鐵道終點，後來發展成為高雄政經中心。而近年臺灣的填海造地，台灣最早的海埔新生地位於新竹市的新竹海埔新生地，1957 年 5 月着手開發，1960 年 3 月完成，實驗區共 88 公頃。最具代表性的是位於雲林縣麥寮鄉，台塑集團的第六套輕油裂解廠，開發造地的面積約 2,255 公頃；1979 年開發彰濱工業區總面積 3,643 公頃，為台灣目前最大之工業區與填海工程。

3.3 新加坡

新加坡國家發展部長、財政部第二部長黃循財提到，新加坡分別從「向海（sea-ward）」、「向上（upward）」及「向下（downward）」三方面發展。當中「向海」以填海為開

拓土地的方式，而當地有約 25%土地從填海得來；近年他們更於沿海一帶進行填海，並用作重置軍事訓練用途，以釋出更多空地作興建房屋等。

他又指出，當地需要維持發展的可持續性；全球正面對氣候變化問題，而當地透過填海紓緩及應對相關影響，包括現時運用「汙田（polder）」的填海技術，透過興建高於海平線的海堤，不但能應對極端天氣導致的海平面上升，更能減少約四成的海砂使用量。展望未來，當地正計劃約 2,000 公頃的填海方案，面積相當於現時濱海灣（Marina Bay）的六倍大小。

3.4 日本

從 1945 至 1975 年，日本政府在臨海填海造地 11.8 萬公頃（相當於兩個新加坡的面積），東京灣填海造地工程、神戶人工島和關西國際機場填海造地工程都世界知名。經過這一時期的發展後，占日本全國總面積 31%的臨海地帶，匯集了全國 52%的人口和全國 58%的工業產值，顯示出臨海工業區在日本國民經濟發展中的重要作用。

至 2005 年，日本圍填海總面積已經不足 1975 年的 1/4，每年的填海造地面積只有 500 公頃左右，填海主要用於港口碼頭建設，形式主要是人工島。

在獲得巨大收益的同時，大肆填海造地發展工業經濟也給日本帶來了巨大的後遺症。從 1945 年到 1978 年，日本全國各地的沿海灘塗減少了約 3.9 萬公頃，後來每年仍然以約 2000 公頃的速度消失，海洋污染、生態退化、航道淤塞等問題層出不窮。日本每年又不得不投入巨資希望能夠找到一些恢復生態環境的方法。

在東京、大阪等港口地區，由於海岸線都被垂直建築取代，使可以平衡海洋生態的海洋生物無法棲息在海岸邊，這樣的情況在日本全國都不同程度地存在著。

日本的各種海洋環保研究機構已經不斷在進行各種實驗，希望能夠找到一些恢復生態環境的好方法，這些實驗包括人造海灘、人造海岸，人造海洋植物生存帶等等。經過把多種技術組合起來進行實驗，看起來很有效，各種小魚小蝦貝類和海洋微生物已經出現在人造海灘、海岸周圍，顯示著環境的改善。

按照日本現有的法律規定，如果要進行填海造地工程，地方政府首先要組織各方人員進行廣泛調查，其中最主要的内容就是瞭解填海將對周圍環境造成怎樣的影響，隨後把報告提交給環境省審批，如果環境省同意就可以進行。現今，日本環境省不會輕易同意填海，原因是日本的經濟增長已經明顯放緩，人口甚至出現了負增長，對土地的需求已經不如以前急迫，最重要的原因是政府已經意識到填海造地對於日本的海洋生態環境影響太大，而且很可能得不償失。

據日本國內媒體報道，為了保護海洋資源多樣性，維護生態環境平衡，日本許多環保組織和漁業人士紛紛採取各種形式，反對填海造地。日本政府有關方面已制定的在東京灣上的“三番瀨”、伊勢灣上的“藤前”等灘塗造地的計劃，都遭到了包括當地政府在內的各界人士的強烈反對，後者強烈要求有關方面停止填海計劃，已經使一些項目被迫縮小規模或停止。

日本國內新的填海工作基本上是被禁止的，但例外是城市垃圾的填埋。填埋垃圾前都需要由專家們進行環境調查和評估，包括應該採取什麼樣的填埋方式。隨著日本進入大生產、大消費的時代，由此大量產生生活垃圾，由於垃圾處理的成本很高，所以東京將垃圾和泥沙作為填海造地的主要材料。東京灣的二期垃圾填海工程還在進行。

3.5 中國內地

2018年以來，中國國家海洋局宣布將採取“史上最嚴圍填海管控措施”，確立保護優先、集約利用的用海理念，使海域開發利用得到可持續發展。中國原則上不再審批一般性填海項目，不再分省下達圍填海計劃指標，圍填海重點保障國家重大建設項目、公共基礎設施、公益事業和國防建設等四類用海項目。

另有五大圍填海管控措施陸續推出：

一，密集出台政策，加強圍填海管控。出台《圍填海管控辦法》《海岸線保護與利用管理辦法》，《關於海域、無居民海島有償使用的意見》，制定配套細化的實施方案、技術標準規程，不斷完善圍填海管控的制度體系。

二，率先在海洋領域推行生態保護紅線制度。截至 2018 年，將全國近岸管理海域的 30%和大陸岸線的 37%納入生態保護紅線範圍。

三，堅持“生態優先，節約優先”，嚴格填海項目論證、環評審查。嚴格填海項目環評審查，對存在嚴重缺陷的環評報告堅決不予批準。

四，約談地方政府負責人，強化壓力傳導。

五，建立實施海洋督察制度。2017 年完成了沿海 11 個省區市圍填海專項督察全覆蓋。第一批 6 省（區）的督察意見已全部反饋完畢。海洋督察對 6 省（區）的工作進入整改追責階段。督察組明確要求，對督察發現的問題，6 省（區）要切實整改、深入調查，釐清責任，嚴肅問責查處。

國家海洋局實施十個一律政策。一，違法且嚴重破壞海洋生態環境的圍海，分期分批，一律拆除；二，非法設置且嚴重破壞海洋生態環境的排污口，分期分批，一律關閉；三，圍填海形成的、長期閑置的土地，一律依法收歸國有；四，審批監管不作為、亂作為，一律問責；五，對批而未填且不符合現行用海政策的圍填海項目，一律停止；六，通過圍填海進行商業地產開發的，一律禁止；七，非涉及國計民生的建設項目填海，一律不批；八，渤海海域的圍填海，一律禁止；九，圍填海審批權，一律不得下放；十，年度圍填海計劃指標，一律不再分省區市下達。

商議項目平衡簡介資料

都市固體廢物收費（垃圾收費）條例草案

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第一章 背景

1990年代起政府一直依賴堆填的方式處理都市固體廢物，然而堆填區比政府預期更早達至飽和。2016年，香港的人均都市固體廢物棄置量每日達1.41公斤。政府於2018年向立法會提交《2018年廢物處置（都市固體廢物收費）（修訂）條例草案》（條例草案），建議按「污染者自付」的原則和現時廢物收集的方式，實行兩種收費模式，分別為「按袋」收費及「按重」收費，落實推行都市固體廢物收費。

草案曾在19/20立法年度內被相關小組委員會通過終止審議。由於立法會延任不少於1年，立法會重新審議有關議案。2021年8月26日，草案在立法會恢復二讀。立法會以37票贊成、1票反對，三讀通過都市固體廢物收費修訂條例草案，落實垃圾徵費。政府會設立以18個月為基礎的準備期，亦會免費向市民派發指定垃圾袋。法例生效之後首半年，執法人員會以警告為主，針對嚴重及屢勸不改的個案才會檢控，當局會審視情況，再決定法例生效日期。

第二章 都市固體廢物收費及其關注要點

2.1 都市固體廢物收費草案建議收費模式及罰則

「按袋」收費適用於大部份住宅樓宇及工商業樓宇、村屋、地舖及機構處所，方式是由食物環境衛生署透過其垃圾收集車、垃圾收集站及垃圾桶站收集，以及由私營廢物收集商利用配備壓縮系統的垃圾車收集，市民將以預繳形式付費。

預繳方式是購買「指定垃圾袋」及「指定標籤」，實施首三年指定垃圾袋收費定為每公升 HK\$0.11，共有 9 種大小，容量介乎 3 公升至 100 公升，至於未能放進「指定垃圾袋」的大型廢物，每件大型廢物需要貼上「指定標籤」，每個標籤劃一收費 HK\$11。

「指定垃圾袋」及「指定標籤」皆會備有防偽特徵，可以在全港約 4,000 個獲授權的銷售點購買，包括超級市場、便利店、郵局和自動售賣機等。另外，「指定垃圾袋」及「指定標籤」亦可透過獲授權的網上平台購買。

「按重量」收入開費主要適用於工商業處所棄置的大型或形狀不規則的廢物，由私營廢物收集商使用非壓縮型垃圾車收集的廢物，將會按棄置於堆填區或廢物轉運站計按廢物重量來收費，堆填區及廢物轉運站的「入開費」為每公噸 HK\$365，市區及新界西北廢物轉運站的收費則為每公噸 HK\$395。

政府提出將逐步實施為全港提供免費廢塑膠及廚餘收集服務。

在「適應期」後，政府會以風險為本模式採取嚴厲執法行動。罰則如下：定額罰款通知書 — 每張\$1,500。如以傳票檢控：首次定罪 — 最高罰款\$25,000 及監禁 6 個月；再次定罪 — 最高罰款\$50,000 及監禁 6 個月。

草案詳情請參考附件一。

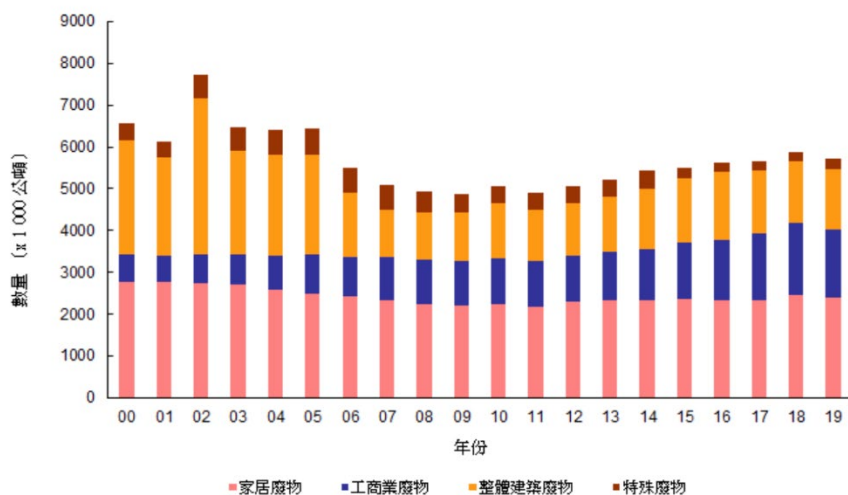
2.2 主要爭議

2.2.1 爭議一：減少垃圾的責任是否應由市民承擔？

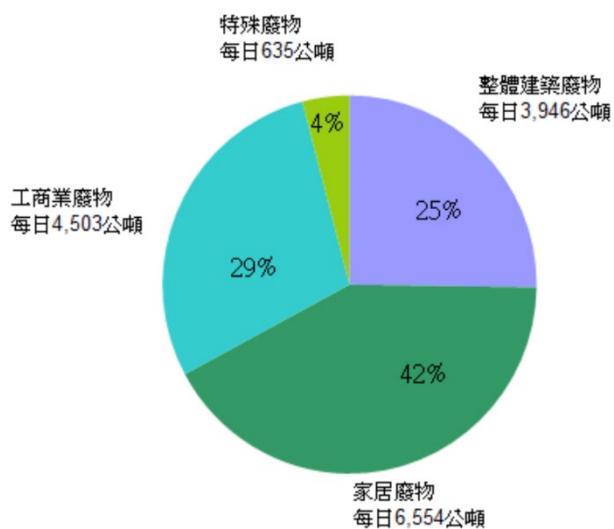
支持草案依據	反對草案依據
<ul style="list-style-type: none">按「污染者自付」原則對產生的廢物按量收費，可改變大家以為丟棄垃圾不用成本的觀念，減少垃圾棄置，增加回收意欲。環境保護署由 2019/20 財政年度起，已增撥額外恆常資源用於推動不同的減廢及回收措施。例子包括：在環保署設立綠展隊，為市民提供在地協助；為回收便利點提供常規化撥款及擴展社區回收網絡至全港 18 區；推行多項回收物收集服務先導計劃，例如非工商業廢塑膠及各界別廚餘等。	<ul style="list-style-type: none">政府多年來對於環保政策的施政理念只有透過經濟行為，改變市民的習慣。以膠袋徵費經驗，膠袋是用少了，但社會生產過多的環保袋作為替代品，而環保袋亦含有塑膠。加稅只能收一時之效，政府應做好其他配套，加大力度做好減廢及回收工作，包括增加回收點及回收物類別，否則大部份的垃圾最後只會回到堆填區。目前社區回收配套嚴重不足，三色桶使用效果差，廚餘的回收處理進度緩慢。在眾多問題未解決下推出垃圾徵費對市民不公道。

擴展資料一：2000年至2019年於堆填區情況¹

2000年至2019年於堆填區棄置的固體廢物數量



2019年於堆填區棄置的固體廢物種類

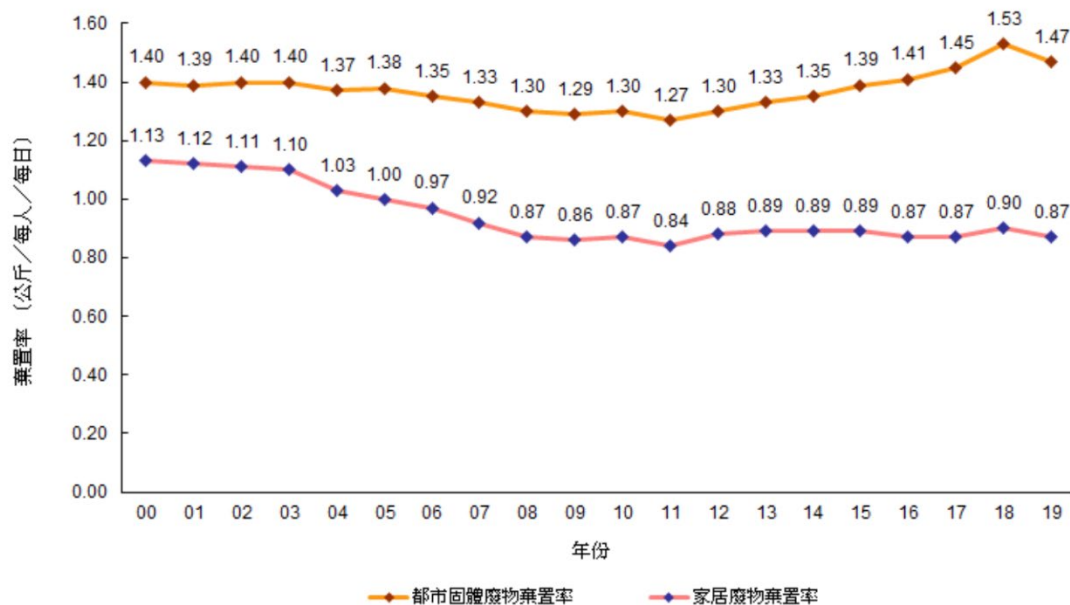


總數：每日15,637公噸

備註：數字以四捨五入方式顯示，相加起來未必與總數相符。

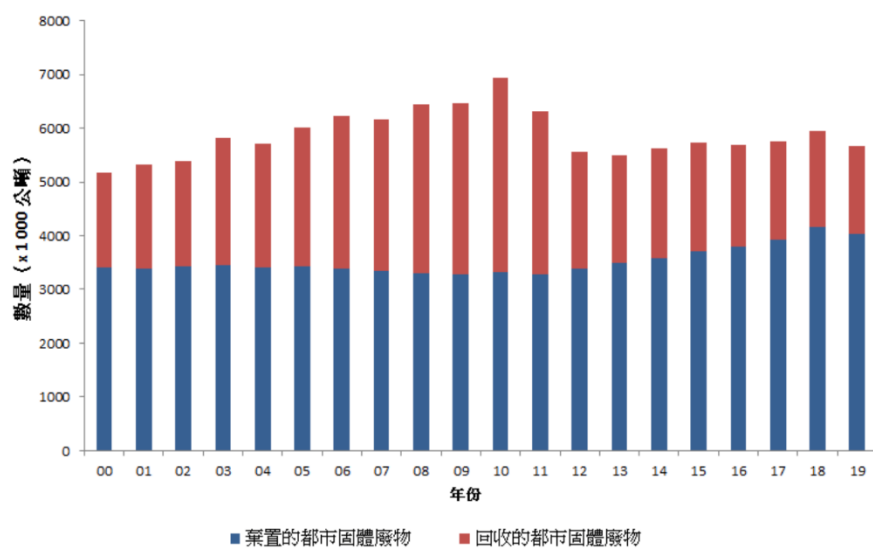
¹ 數據來自環保署 https://www.wastereduction.gov.hk/tc/assistancewizard/waste_red_sat.htm

2000年至2019年都市固體廢物及家居廢物的人均棄置率



備註：人均棄置率是根據政府統計處於二〇二〇年二月公布的年中人口數字計算。

2000年至2019年棄置及回收的都市固體廢物數量



2.2.2 爭議二：目前的都市固體廢物收費方案是否會增加底層市民負擔？

支持草案依據	反對草案依據
<ul style="list-style-type: none"> 大部分香港市民可承擔費用。 	<ul style="list-style-type: none"> 指定垃圾袋收費定為每公升 0.11 元，若一家三口每天使用一個 10 公

<ul style="list-style-type: none"> • 所有綜合社會保障援助計劃及高額長者生活津貼的受助人每人可獲政府提供每月\$10的津貼，以支援他們有關都市固體廢物收費的額外開支。 • 減少垃圾棄置總是要由收費做起。根據其他大城市的經驗，「都市固體廢物收費」可以有效推動減廢。 	<p>升或15公升的指定垃圾袋，估計三人家庭每月將繳付三十三元至五十一元，基層家庭難以負擔每月須付的徵費。</p> <ul style="list-style-type: none"> • 徵費等於向小市民開刀，市民於購買物品時，無法選擇該物品有無包裝，生產者也有環保責任。 • 實施收費後，餐廳、店鋪成本增加，提高產品價錢，市民變相要承擔更多費用
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2.2.3 爭議三：目前的都市固體廢物收費方案是否會給市民帶來不便？

支持草案依據	反對草案依據
<ul style="list-style-type: none"> • 香港的人均廢物棄置量遠高於其他大城市，並且不斷增加。為了應對氣候變化和推動社會的可持續發展，市民必須增加保護環境意識，惜物減廢，以減少碳排放。 • 現時設置了適應期，讓不同持份者和市民有充足時間了解和適應垃圾徵費的生活方式。 	<ul style="list-style-type: none"> • 推行按住戶的垃圾體積徵費容易引致垃圾非法傾倒，因為市民可能為逃避垃圾徵費而將家居廢物棄置於公共垃圾箱或垃圾站。由於香港大部分的住宅多為多層式大廈，因此將難以為非法棄置垃圾的個案追溯廢物的源頭。三無大廈（即沒有業主立案法團、沒有任何居民組織及沒有管理公司的大廈）以及鄉郊更加難以管理。垃圾非法傾倒不但會阻塞通道，還會令衛生環境惡劣。 • 為了加強執法，政府或需要大量安設閉路電視監察市民有否偷掉垃圾，亦會妨礙市民的自由。

第三章 其他國家或地區相關法律及方案

本章就其他國家或地區的固體廢物徵費或處理法例及方案進行比較。

3.1 南韓

韓國自 1995 年起實行垃圾徵費，整體廢物棄置量減少四成，回收率達 60% 以上。比起「一刀切」，韓國政府以循序漸進的方式實行減廢計劃。由隨袋收費形式開展垃圾徵費，再慢慢擴展至限用即棄產品、回收廚餘等，以多管齊下的方式處理廢物。

3.1.1 主要措施

在 1995 年以前，南韓的廢物處理收費模式是一律以固定金額透過物業稅或月費徵收費用，不論棄置的廢物量。當局在 1995 年本着“產生者自付”的原則，引入廢物按量徵費制度，使用者或廢物生產者須按產生的廢物量支付棄置廢物的成本。“產生者自付”原則旨在改變生產者和消費者的消費及棄置行為，從而在廢物產生階段減少廢物。這個徵費制度在南韓能成功減低廢物產生量。根據環境局資料，南韓每人每日產生的家居廢物量由 1994 年推行前的 1.33 公斤減少 23% 至 2009 年的 1.03 公斤。

在廢物按量徵費制度下，住宅及小型商業機構²產生的廢物按以下 3 種方法棄置：（a）從地方政府購入有 2 至 100 公升容量不同的專用垃圾膠袋棄置家居廢物，以待收集。家居垃圾可分為一般、食物及可回收垃圾。專用垃圾膠袋的價格已包括收集、運輸及處置廢物的成本，其價格是由地方政府按處置廢物的成本釐定。收費約為每公升 16.5 韓圓，即 0.11 港元左右。若產生越多垃圾，便需購買更多或更大的垃圾袋去處理，從而幫助源頭減費；（b）可循環再造的廢物從家居廢物中分類，另置於其他容器內。地方政府或私營運輸公司於指定時間和地點免費收集可循環再造的廢物；及（c）家庭電子產品和傢俬等大件物品是分開棄置的。住戶須向地方政府或私營運輸公司購買合適的標貼，並在棄置這些廢物時貼上。

² 小型商業機構包括小型商戶及辦公室樓宇。強制使用專用垃圾膠袋的規定不適用於每日產生多於 300 公斤廢物的大型商業機構。他們需自行安排收集廢物。然而，若這些機構產生的廢物類似家居廢物，亦建議這些機構參與此廢物收費系統並使用專用垃圾膠袋。

另外，南韓在 90 年代開始實行廚餘回收計劃。家居廚餘與其他家居廢物分開棄置，再由地方政府收集。地方區域的住宅區以往一般免費提供廚餘收集服務，或按某個金額收費；至 2010 年，南韓政府宣布引入先導性的廚餘按量徵費制度，讓居民為其產生的廚餘負責。在廚餘按量徵費制度下，住戶須按其產生的廚餘量付費。回收工具（廚餘機、垃圾袋與條碼等）的製作也是由各地方政府設計，中央政府並沒有統一的規定。基本上，地方政府可從以下 3 個方式選取其一，以運作徵費制度：(a) 使用專用垃圾膠袋 — 住戶須把廚餘丟棄於特別設計並於雜貨店有售的膠袋。這種膠袋有特定顏色，並按其大小售價不同。(b) 把廚餘放入廚餘桶中，在指定地方秤重後付費。市民再定時把廚餘拿到指定收集區；或 (c) 新式的高廈則會地下空地放置秤重廚餘機，市民在超市等零售點購買計費咭，拍咭後把廚餘放入機器中，就會自動秤重扣錢，收集沒有限時。

3.1.2 罰則

當局在市面安裝適量監察儀器及訂立 10 萬至 100 萬韓元罰款（港元約\$700 至\$7000），舉報者則可獲當中八成，即逾 5,000 港元作為獎金。在難以監察的鄉郊地區，非法的廢物棄置費則由所有住戶攤分。地區政府設定垃圾分類指引後（如標示出區內住所棄置垃圾的位置），受檢控人數在 20 年間大跌 8 成。

3.2 台灣

1994 年開始，台灣所有縣市按耗水量徵收廢物費，屬接近似量收費。不同縣市按廢物管理成本，計算出本身的收費率。自 2000 年起，部分縣市（包括台北市）轉為實行「垃圾費隨袋徵收計劃」，到了 2010 年底，這項更擴展至新北市。目前，接近似量收費仍在台灣大部分地區實施（包括高雄）。按「垃圾費隨袋徵收計劃」涵蓋全台灣約 28.2% 人口。

3.2.1 主要措施

本平衡簡介資料主要介紹台北市垃圾徵費措施。在台北市，家居垃圾主要分為不可回收、可回收、廚餘、大型家具（含電子廢物）四類。不可回收類的垃圾需要購買專用藍色垃圾袋放置；至於可回收的垃圾，需要分類放置（類別包括鋁罐、膠樽膠盒、紙盒廢紙等），不可投入藍色垃圾袋。廚餘即是食物殘渣，需要在家中先預留廚餘桶放置。棄置大型家具（含電子廢物），要預先致電住宅附近的政府清潔隊，預約時間清運。小型電子廢物如電池，則要送往指定的收集點如便利店等。

台北市住戶主要分兩類，一類有管理公司或業主立案法團，第二類兩者皆無。第一類住戶，可以將分類好的垃圾和藍色膠袋放在大樓特定位置，由管理公司或法團聘請的清潔工負責倒垃圾。第二類住戶，則需自己（或家傭）帶同不同類別的垃圾、廚餘桶，自行清運垃圾，台北市多數住戶屬於此類。收集垃圾的時間，是在每週一、二、四、五、六的特定時刻，按地區而定。政府環保局的垃圾清運車，會在每區不同地點輪流出現。目前台北市的專用垃圾袋每公升 0.36 元，即 0.10 港元左右。

3.2.2 罰則

未依規定任意棄置垃圾包者，可被罰款 1200 元至 6000 元台幣，檢舉者則可實收罰款的 75%。

3.3 中國北京

中國內地生活垃圾中，廚余垃圾占比近 60%，年均增速預計達 10% 以上。廚余垃圾對環境危害大，處理成本高昂。北京市城管委公布的數據顯示，2021 年 2 月，北京家庭廚余垃圾日均分出量為 3541 噸，如果按每年每噸 901 元處理費計算，每年政府需承擔的成本約為 11.6 億元。

3.3.1 非居民廚余垃圾計量收費

2014 年開始，北京要求產生生活垃圾、餐廚垃圾、建築垃圾的非居民單位繳納非居民垃圾處理費，非居民餐廚垃圾收費標準為 100 元/噸或 11 元/桶。

國家發改委、住建部在 2021 年 7 月聯合印發《關於推進非居民廚余垃圾處理計量收費的指導意見》（以下簡稱《指導意見》），對非居民廚余垃圾，建議按照「產生者付費」原則，建立健全計量收費機制。非居民廚余垃圾是指黨政機關、事業單位等公共機構和賓館、飯店等相關企業在食品加工、飲食服務、單位供餐等活動中產生的廚余垃圾，不包括居民垃圾。市發展改革委相關負責人表示，此次收費管理政策調整旨在引導非居民單位改變行為習慣，比如更好地進行垃圾分類、加裝控水控雜設備、倡導節約食物、合理配餐等。政策調整後，非居民單位產廢量不同實際影響也會不同，產廢量大的增支相對較大，產廢量小的增支也相對較小。

響應國家建議，2021 年 9 月，京市印發實施《關於加強本市非居民廚余垃圾計量收費管理工作的通知》（下稱《通知》）。《通知》宣布自 2021 年 9 月 30 日起，北京市非居民廚余垃圾統一實行計量收費，收費標準調整到 300 元/噸。

根據成本調查，2019年北京非居民廚余垃圾運輸處理平均成本為563元/噸，考慮稅費及合理收益後，價格約594元/噸。統籌考慮餐飲服務單位承受能力，按照逐步到位的原則，本次價格調整方案合理控制了調價水平，非居民廚余垃圾處理費收費標準調整到300元/噸，覆蓋約50%的成本。

3.3.2 未來逐步建立非居民廚余垃圾差別化收費機制

《通知》宣布北京還將逐步建立非居民廚余垃圾差別化收費機制，並為運輸車輛加裝計量稱重和衛星定位等配套設備。自2022年9月30日起，政府機關、部隊、學校、企業事業等單位集體食堂實行差別化收費。具體標準為：實際廚余垃圾運輸量低於定額標準50%的（含50%），按200元/噸計收。實際垃圾運輸量在定額標準50%-100%之間的（含100%），按300元/噸計收。實際垃圾運輸量超過定額標準的，定額內按300元/噸計收，超過部分按600元/噸計收。其他非居民廚余垃圾產生單位待條件成熟後適時實施。非居民廚余垃圾定額標準、差別化收費實施範圍將由城市管理部門確定公布。

Appendix 2. Deliberation Rules

Deliberation 商議組規則：

1. 所有參加者都應該平等、公平地參與討論。
2. 在討論中，參加者對議題的意見並沒有對錯之分，在討論小組中或社會上亦沒有人知道議題的最終答案。此外，我們鼓勵每個人大膽表達自己的意見，但當不同意見的參與者的論點是有理據的時候，每個人都應該做好改變自己原本想法的準備。
3. 參加者不應壟斷發言，別人發言時亦應專心聆聽，而不是自顧自地準備自己的論點。如果擔心忘記你的論點和意見，可以先用筆寫在紙上，待別人完成發言後再作回應或補充。
4. 參加者就著議題的某些論點爭持不下時，不應針對個人，應以事論事並尋求雙方的共同點，例如共同的顧慮。
5. 參加者在討論過程中必須以理據支撐自己的觀點。
6. 參加者在討論過程中應展示出對其他人的尊重。每個人都應該聆聽別人的意見，並接受一個事實：社會上對該議題有不同聲音。
7. 參加者應盡量從他人的角度出發，理解他們的觀點。
8. 參加者應嘗試回應其他人的意見和觀點，例如「就如_____所講，我認為我們應該討論...」。回應別人的意見時，亦盡量避免否定別人的觀點。你可以提出自己的憂慮，如「我明白你的觀點_____，但你有沒有考慮到_____」。
9. 在討論中，可以坦誠承認自己有所不知，或自己改變了態度。

Deliberation 商議組主持人指引：

1. 積極聆聽。
2. 讓每個人公平地參加到討論中。
3. 不要評論每個人的發言，不要回答所有問題。
4. 鼓勵參加者互相對話，而不是與主持人對話。
5. 幫助參加者從不同的角度討論議題。
6. 如果有人的觀點沒有被耐心聆聽，試下讓其他人有理據可以支持該觀點。
7. 幫助參加者認識到他們的共同點，但不要強求這一點，不要影響到參加者發言的意願。

Discussion 討論組規則

參與者應該在討論中暢所欲言，表達自己的意見。

Discussion 討論組主持人指引

不要過多干涉，除非出現特殊情況，如暴力。

Appendix 3. Discussion Questions

問題和時間分配

問題	時間分配
1. 大家對明日大嶼願景有甚麼看法？支持還是反對？	6 分鐘
2. 大家對於自己的立場，有甚麼支持的理據？	15 分鐘
3. 大家請回應對方立場的看法和觀點	18 分鐘
4. 你覺得明日大嶼願景能否被很好的執行？	18 分鐘
5. 明日大嶼願景對香港的發展前景有甚麼影響？	18 分鐘
6. 大家對方才其他人的觀點有無回應？或者對明日大嶼願景還有無補充的觀點？可以簡短總結一下。	9 分鐘

*以上時間分配合共為 84 分鐘，主持人可按當時需要分配其餘的 6 分鐘。對於 deliberation group，主持人需保證每一輪每個參加者發言時間平均。

問題	時間分配
7. 大家對垃圾徵費草案有甚麼看法？支持還是反對？	6 分鐘
8. 大家對於自己的立場，有甚麼支持的理據？	15 分鐘
9. 大家請回應對方立場的看法和觀點	18 分鐘
10. 你覺得垃圾徵費草案是否被很好的執行？	18 分鐘
11. 垃圾徵費草案對香港的發展前景有甚麼影響？	18 分鐘
12. 大家對方才其他人的觀點有無回應？或者對垃圾徵費草案還有無補充的觀點？可以簡短總結一下。	9 分鐘

*以上時間分配合共為 84 分鐘，主持人可按當時需要分配其餘的 6 分鐘。對於 deliberation group 商議組，主持人需保證每一輪每個參加者發言時間平均。

Appendix 4. Questionnaire Items

Demographics	1. 你的性別是？ 2. 你的年齡是？ 3. 請選擇你的家庭月收入的範圍 4. 你的最高學歷是
Attitude	我對明日大嶼願景/垃圾徵費草案的取態是... (0=絕不支持-10=絕對支持)
Attitude toward people holding opposing views	對於明日大嶼願景/垃圾徵費草案與我觀點不同的人，我覺得他們： 0= 是香港人-10=不是香港人 0= 謙虛的-10=自負的 0= 大方的-10=小氣的 0= 友善的-10=不友善的 0= 誠實的-10=不誠實的 0= 正直的-10=虛偽的 0= 溫和的-10=挑釁的 0= 思想開放的-10=思想保守的 0= 聰明的-10=愚昧的 0= 無私的-10= 貪婪的
Issue knowledge	以下題目是關於明日大嶼願景的知識題，如不確定答案，請選擇你認為最接近的選項。 1. 明日大嶼願景是哪一任行政長官提出的計劃 2. 明日大嶼願景於哪一年在立法會通過？ 3. 明日大嶼願景計劃於交椅洲一帶填海多少公頃？ 4. 以下內容是否正確：明日大嶼願景計劃將填海土地全部用於興建公屋 5. 以下內容是否正確：保育大嶼山計劃只包括保護自然環境，沒有包括文物資源 以下題目是關於垃圾徵費草案的知識題，如不確定答案，請選擇你認為最接近的選項。 1. 「按袋」收費不適用於.哪些地方？ 2. 根據垃圾徵費草案規定，未能放進「指定垃圾袋」的大型廢物，每件大型廢物需要貼上「指定標籤」，每個標籤劃一收費幾錢？ 3. 以下內容是否正確：垃圾徵費草案實施後，「指定垃圾袋」及「指定標籤」只能在政府設立的自動售賣機出售 4. 以下內容是否正確：香港政府將逐步實施為全港提供免費廢塑膠及廚餘收集服務 5. 以下內容是否正確：垃圾徵費草案適應期間，違規者會被政府罰款\$1,500
Local identity	請你用 0-10 分表示你對香港人身份的認同感。10 分代表絕對認同，0 分代表絕不認同，5 分代表一半半。你給自己多少分？(0=絕不認同-10=絕對認同)

National identity. 請你用 0-10 分表示你對中國人身份的認同感。10 分代表絕對認同，0 分代表絕不認同，5 分代表一半半。你給自己多少分？(0=絕不認同-10=絕對認同)

Social Trust 你在幾大程度上同意以下描述：(0=絕不同意-10=絕對同意)
普遍來說，大部分人都是可以相信的。

Evaluation of group discussion 你在多大程度上認為討論是 ... ? (0=絕不同意-10=絕對同意)

- 公平的
- 積極的
- 有效的
- 友善的
- 資訊性的
- 有用的
- 文明的
- 互相尊重的

Appendix 5. Demographics Characteristics of the Participants

Study 1 ($N = 48$)

	Frequency	Percentage (%)
Age (years)		
21-30	12	25
31-40	12	25
41-50	12	25
51-60	12	25
Sex		
Male	24	50
Female	24	50
Education		
High school or below	9	18.7
College or above	39	81.3
Income		
Low	2	4.2
Medium	24	50
High	22	45.8

Study 2 ($N = 48$)

	Frequency	Percentage (%)
Age (years)		
21-40	25	52.1
41-60	23	47.9
Sex		
Male	25	52.1
Female	23	47.9
Education		
High school or below	7	14.6
College or above	41	85.4
Income		
Low	4	8.3
Medium	17	35.4
High	27	56.3

Study 3 ($N = 54$)

	Frequency	Percentage (%)
Age (years)		
21-30	19	35.2
31-40	17	31.5
41-50	10	18.5
51-60	8	14.8
Sex		
Male	27	50
Female	27	50

Education		
High school or below	16	29.6
College or above	38	70.4
Income		
Low	18	33.3
Medium	18	33.3
High	18	33.3