



**CCPL**  
CENTRE FOR COMPARATIVE  
AND PUBLIC LAW  
比較法與公法研究中心

**Doing Equality Consciously:  
Understanding Unconscious Bias and its Role and  
Implications in the Achievement of Equality in  
Hong Kong and Asia**

**EXECUTIVE SUMMARY**

**Puja Kapai**

Associate Professor of Law  
Convenor, Women's Studies Research Centre  
Centre for Comparative and Public Law  
University of Hong Kong

September 2019

Published in 2019

Women's Studies Research Centre & Centre for Comparative and Public Law  
Faculty of Law, The University of Hong Kong

All rights reserved. No part of this publication may be reproduced, distributed, or transmitted in any form or by any means, including photocopying, recording, or other electronic or mechanical methods, without the prior written consent of the author or publisher, except for brief quotations accordingly attributed.

© Puja Kapai



## About the author



**Puja Kapai** is an Associate Professor of Law at the University of Hong Kong (HKU) where she serves as the Convenor of the Women's Studies Research Centre (WSRC) and Chairs HKU's Equal Opportunity Committee's Working Group on Gender Identity, Sexual Orientation and Race. She was until recently a Co-opted member of the Hong Kong Equal Opportunity Commission's Policy, Training and Research Committee and currently serves as a Member of the EOC's Advisory Committee on Racial Equality and Integration and its Working Group on Education for Ethnic Minorities. Puja is also a founding member of the Everywoman Everywhere Violence Against Women treaty initiative being led by the Carr Centre for Human Rights at the Kennedy School of Government, Harvard and serves on the group's Drafting Committee. Her research expertise lies in international human rights law, in particular, equality law and minority rights. Puja was the Director of the Centre for Comparative and Public Law (CCPL) between 2013 and 2017.

She has published widely on these issues including on the rights of ethnic minorities, violence against women, children's rights and freedom of religion and hate speech. Puja was awarded the International Women of Courage Hong Kong Award 2015 by the Consul General of the United States of America in Hong Kong, the Faculty of Law's Outstanding Teaching Award 2016 and Knowledge Exchange Award 2017 in recognition of her contribution to teaching and the impact of her work in the community. She has regularly appeared before the Legislative Council to present on issues impacting ethnic minorities, women and children as well as before the United Nations treaty bodies, including the Human Rights Committee, the Children's Rights Committee in 2013 and the Committee on the Elimination of Racial Discrimination in 2018, at their hearings on Hong Kong. She sits on the Boards of various non-governmental organisations and is widely consulted on issues impacting gender, race, sexuality, violence, education and children.

## LIST OF ABBREVIATIONS

**IAT1** = Total score from first IAT

**IAT2** = Total score from second IAT

**IAT2-IAT1** = **magnitude of change** between first and second scores averaged out (IAT2 mean score minus IAT1 mean score)

**IAT2-IAT1 (Bias Score)** = how much closer to zero was IAT2 than IAT1 (subtracted the absolute value of IAT1 from the absolute value of IAT2)

**CG** = control group

**IG** = intervention group

**GS** = Gender-Science

**GC** = Gender-Career

**CSA** = Chinese-South Asian

**HKM** = Hong Kong – Mainland

## BACKGROUND AND INTRODUCTION

*Doing Equality Consciously: Understanding Unconscious Bias and its Role and Implications in the Achievement of Equality in Hong Kong and Asia* is a project funded by the Hong Kong Equal Opportunities Commission (EOC) and housed at the University of Hong Kong's Women's Studies Research Centre (WSRC) and the Faculty of Law's Centre for Comparative and Public Law (CCPL). The study is the first of its kind in examining the manifestation of unconscious bias and the effectiveness of intervention tools in reducing such bias in an Asian context.

In 1948, the United Nations General Assembly resolved to pass the Universal Declaration of Human Rights (UDHR), which established the global commitment to equality and non-discrimination against people on grounds such as sex, race, ethnicity, religion, nationality, disability, immigration or other statuses. In the aftermath of the Second World War, the community of world states vowed to safeguard equal human dignity so that the atrocities perpetrated in the preceding years would never be witnessed again. In the decades since, many international and regional treaties have repeated their commitment to these principles and the vast majority of states have enshrined the broad principle of equality into their constitutions, while many others have enacted specific legislation to safeguard the right to equal treatment and non-discrimination on various enumerated grounds.

The Millennium Declaration highlighted the centrality of equality, non-discrimination and human rights to the development of inclusive and sustainable societies. Governments soon realised however, that despite progress made on realising the Millennium Development Goals (MDGs), social and economic inequalities, income and wealth disparities have continued to rise across most developed economies and remain an ongoing challenge for developing countries. In these societies, measures to ensure minimum standards of living a life of equal dignity through their income and wealth redistribution mechanisms and social services as well as access to minimum wage and opportunities to generate new wealth are political priorities designed to guard against the ills of inequality. In many of these countries, anti-discrimination laws have been enacted to protect certain groups against discrimination on various grounds. Despite this however, the measures have had limited impact. This is because the root causes of inequality need to be contextualised against the broader frameworks for social organisation and governance, which is key to understanding which groups get left behind and more importantly, why.

Despite the availability of extensive research and statistical data demonstrating the widespread prevalence of bias and its detrimental impact in diverse domains, denial that discrimination is real remains rampant. This denial, coupled with the intractable inertia of those in positions of power and authority to meaningfully and systematically address this silent but potent poison in our societies, has meant that the perpetuation of inequality and second-class citizenship has been written into our futures indefinitely.

Within the field of the study of bias, there is a distinction between explicit (or overt) bias, which is more closely aligned with discriminatory conduct, and implicit (or unconscious) bias which is broadly cast as attitudinal rather than actual in terms of impact. However, unconscious bias not only forms the foundational subtext for institutional or systemic discrimination but also serves as the springboard from which discriminatory conduct at the individual level manifests. Unconscious bias affects us all and manifests in a variety of ways. It is a complex process undergirded by the tendency to assess an individual and associated actual or presupposed characteristics based on perceptions and often, misconceptions surrounding these traits. These views form through various processes and mechanisms. The socialisation of attitudes, values and preferences among individuals is often informed by cultural, religious, racial or ethnic, national, economic,

geopolitical and/or other societal forces and our exposure to them. These processes of subtle and explicit exposure build on earlier perceptions of or direct experiences with individuals belonging to particular groups, resulting in the aggregation of this information to form and inform attitudes, prejudices, and stereotypes and eventually, they impact our conduct towards these groups and their members.

The prevalence and impact of unconscious bias has been widely documented in a number of studies across a range of disciplines and fields. Both quantitative and qualitative research confirm that unconscious bias is pervasive and operative in multiple spheres. No sector is bias free. For example, the implicit bias of teachers results in applications of differential standards of punishment and academic expectations to different groups of students. Unconscious bias is also operative in the workplace and manifests itself based on gender, race, age, accent, and physical appearance resulting in inequality of access to employment opportunities, wage gaps, performance assessments, promotion prospects and so on. Implicit bias impacts decisions made by police officers, courts and prosecutors, medical professionals and health care specialists influencing access to quality healthcare and medical treatments for racial and ethnic minorities.

Unconscious bias is a global phenomenon and Hong Kong is no different. Hong Kong has seen its share of racist, sexist and misogynist views and experienced their influence on policy or action. In volatile times where sexism and racism, among many other –isms are condemning marginalised communities to impoverishment, imprisonment and even death, it is insufficient to take a passive approach to addressing these harms. Humanity’s obligations extend beyond passivity imposing a positive obligation on society to actively take measures to wrestle with this entrenched attitudinal bias. One only needs to review existing statistics pertaining to the overrepresentation of women, persons of colour and religious minorities in prisons and take reference from the multiple recent shootings and deaths of people on account of their religious beliefs or skin-colour, to recognise that such deep-rooted biases should never be taken lightly.

The law enables employers to do the bare minimum to steer clear of falling foul under the legislation but does little to assuage the subtler forms of bias which aggregate at different junctures in various social contexts to disadvantage particular groups. Clearly, Hong Kong’s progress towards the realisation of its equality guarantees has been meagre given the continued disparities and discrimination experienced on grounds of gender, family status, disability, and race. Despite protections embedded within our laws, there remains a realm that appears to be untouchable and sits outside the reach of regulatory imperatives: unconscious bias. Yet the impact of such bias is not only very real but systemic, entrenched and invidious. This is largely because it is very difficult to uncover given that its site of operation is the unconscious domain. This is so even where the consequences are tangibly negative for disadvantaging groups subjected to such biases. Numerous studies pertaining to inequality and bias have shown that people often hold stereotypes and prejudices without deliberation or awareness. In contrast to explicit bias, which people may be aware of harbouring, unconscious bias impacts decision-making and daily interactions in an often unintentional and seemingly reflexive manner. The pervasiveness of these biases just beneath the surface make them difficult to trace, assess and address.

In order to address these issues proactively and effectively, however, it is vital to better understand the different types and levels of bias that are prevalent in Hong Kong as well as whether, and how, these can be addressed. These are some of the key questions that this research study is concerned with:

- (1) What are the levels of unconscious bias on grounds of gender and race in Hong Kong?
- (2) Who harbours which types of unconscious biases?
- (3) Do such biases serve as predictors of discriminatory behaviour?
- (4) Is it possible to ameliorate these unconscious biases? if so, how and to what extent?

Hong Kong and regionally-based data can prove to be of particular significance given that international research and training materials have been grounded in contexts outside of Asia for the most part and are based entirely on the experiences of life informed by the political, social and legal cultures in the West and its attendant contexts (this is vastly diverse too as this work spans Europe, the United States of America and Australia). Although Hong Kong is a modern city and its legal system and social pulse represents a hybrid of East and West, it is critical to evaluate whether the research and training modules are relevant and effectively adaptable for transferability in the East Asian context. Therefore, this project aims to consolidate existing knowledge of unconscious bias whilst developing a more locally-grounded perspective to understand unconscious bias and how it might be addressed through intervention in Hong Kong and to identify and articulate the implications of this work for the broader Asian context.

Drawing together what we now understand from social identity theory, implicit theory frameworks, unconscious bias research and intersectionality as theory and praxis, it is essential to reexamine the role of law and policy in effectuating regulatory mechanisms which eradicate discrimination and bias at the institutional, community and individual levels. However, these diverse disciplinary domains have seldom been meaningfully engaged in a cross- or inter- disciplinary dialogue to explore how social identity theory, implicit theory frameworks and intersectionality theory complement each other to enhance our understanding of bias and to address it more rigorously through the implementation of equality-related values and norms. An interdisciplinary and Asia-centered understanding can help develop approaches towards education, law reform and accountability with greater prospects for success in striving closer to the constitutional guarantees of equality and non-discrimination in recognition of everyone's inherent dignity.

The Women's Studies Research Centre and the Centre for Comparative and Public Law at the University of Hong Kong set out to conduct this exploratory study on unconscious bias in various contexts (schools, universities and the corporate sector in Hong Kong) with a view to understanding the implications of existing literature in this context, assess its relevance and the effectiveness of interventions on unconscious bias for Hong Kong. The vision is for this work to serve as the foundation for designing suitable research instruments for use with diverse sample groups in a variety of contexts to examine various forms of unconscious bias and to develop evidence-based interventions targeting such bias and to facilitate the implementation of bespoke training to achieve desired outcomes.

## OBJECTIVES

This study aims to understand the prevalence and propensity of unconscious bias towards marginalised or minority groups in Hong Kong. More specifically, the project seeks to identify and measure the various manifestations of unconscious bias in relation to specific characteristics (gender and race) and domains (science and career). This study also sets out to test whether interventions have any impact on the reduction of unconscious bias.

To this end, the objectives of this research project are:

1. To conduct a literature review of existing research on unconscious bias, tools to assess implicit bias and the effectiveness of interventions in diverse contexts from across jurisdictions, focusing in particular, on Asia;
2. To develop research instruments to test for implicit bias suitable for the context of Hong Kong in the specific settings that are the targets of this study (school, university, corporate sector);
3. To develop intervention material to target unconscious bias in the settings identified in (2);
4. To collect data to determine:
  - a. whether unconscious bias is pervasive in Hong Kong;
  - b. what are the manifestations of unconscious bias in relation to specific grounds;
  - c. the extent of the unconscious bias manifested;
  - d. whether there are any distinguishing features of unconscious bias among respondents based on their gender and social groups;
  - e. whether interventions reduce or eliminate unconscious bias; and if so, which unconscious biases and respondents are susceptible to successful reduction or elimination;
5. To understand the role of unconscious bias in the implementation of equality standards institutionally and more broadly in society and the implications of this; and
6. To draw conclusions from the research findings and formulate recommendations for further action.

This proposed exploratory study will be the first phase of a long-term endeavor to develop a better understanding of unconscious bias in Hong Kong, and in Asia more broadly. It aims to develop evidence-based curricula (EBC) and training (EBT) grounded firmly in research to augment bias reduction, prevention and elimination in a range of settings. In the pilot phase, the aim is to set the groundwork for evidence-based strategies for consciously promoting equality in the future.

## Methodology

This study's research design is divided into two parts: literature review and quantitative study.

The first part of the project involved an extensive literature review of unconscious bias research carried out in various jurisdictions. The literature further included relevant law and policy in the Hong Kong context and research on the practical impact of these measures on addressing unconscious bias. In particular, literature examining the effectiveness of various approaches to addressing bias was also reviewed. Drawing on this extensive review and the insights gleaned from it, the next stage of the project involved selecting and adapting for use appropriate research instruments to test the research hypotheses.

The second part of the project assessed various stakeholders' levels of unconscious bias on school and university campuses and in the workplace as well as the impact of the interceding intervention on groups in terms of implicit bias. The stakeholders included management level personnel, employees, university and high school students. The sample was recruited on the basis of these two broad social groupings, students and corporates. However, the student group was further sub-divided into high school students and university students to present some variation in data in relation to the school- and university-based contexts to elicit any distinctions. Each social group (including the subgroup), was divided further into two groups, one Control and one Intervention.

A total of seven focus groups were conducted between September 2018 and January 2019 with three social groups: high school students (one control group and one intervention group), university students (two control



groups, one intervention group), and corporate employees (one control group, one intervention group). Participants were recruited through different means. The distribution of groups is summarised in the following table:

	<b>Intervention group</b>	<b>Control group</b>	<b>TOTAL</b>
<b>Public secondary school</b>	1	1	2
<b>University</b>	1	2	3
<b>Corporate sector</b>	1	1	2
<b>TOTAL</b>	3	4	7

A total of 112 participants were recruited for this study (high school: 13 Control, 13 Intervention; university: 25 Control, 50 Intervention; corporate: 3 Control, 8 Intervention). Apart from the high-school sample, all tasks were conducted on the campus of The University of Hong Kong.

The control and intervention group within each social subgroup were presented with the same research tasks but in a different order. This differentiation was designed specifically to test the impact, if any, and the effectiveness of the guided intervention in a focus group setting among the intervention group. In other respects, the groups were treated identically and were asked to complete the same tasks.

This project used the Implicit Association Test (IAT) (developed by Greenwald et al in 1998 and adapted to the local context) to measure the extent and nature of participants' unconscious bias that manifest in cross-sector settings, to examine their inter-relationship, if any, and to discern unique data trends pertaining to the Hong Kong cultural and social context. The project also adopted an intersectional lens to frame the research instruments and interpretive tools to unpack the findings. In all, we used four instruments to collect the necessary data and to assist in its interpretation. They were:

### 1. The IAT

An adapted set of 4 IATs comprising 7 blocks of tests each. Two IATs pertained to implicit bias in relation to Gender and the other two pertained to race. They were as follows:

- a. Gender-Science
- b. Gender-Career
- c. Race (Chinese-South Asian)
- d. Race (Hong Kong-Mainland)

The main working hypotheses for the research team are as follows:

- a. Respondents' gender, race, and social grouping will impact their implicit bias scores; and
- b. Respondents' placement in the Control or Intervention group will also impact their bias scores.

### 2. The Intervention

We have adopted a habits-based approach to address unconscious biases, which involves a step-by-step method of: (1) checking our biases by recognising them, (2) developing situational explanations rather than jumping to trait-based conclusions, and (3) creating habits that keep biases in check,

including exposure to outgroup, developing media literacy, and seeking out information to correct stereotypes.

### 3. The Questionnaire

A questionnaire was designed to obtain basic demographic data but also included questions about social groupings to determine in-groups and out-groups, attitudinal questions pertaining to gender, science, career and family as well as experiences in the household context in terms of upbringing, role models and mentors.

### 4. Behavioural Tasks

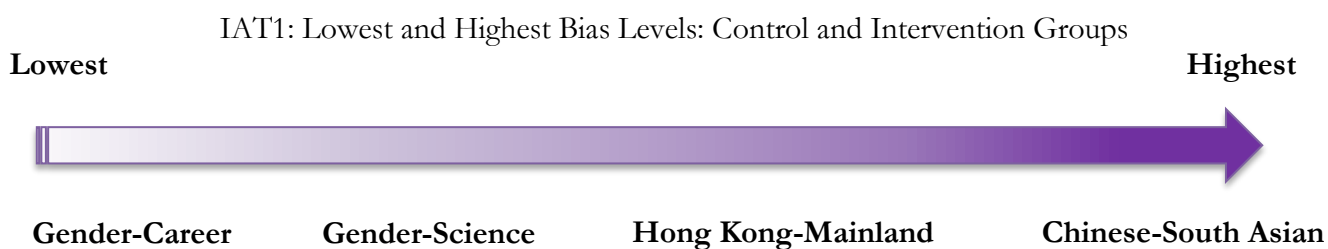
We designed Post-IAT Behavioural Tasks to determine whether and the extent to which IAT scores were of predictive value in terms of actual behaviour in a laboratory setting.

First, all participants were asked to take the first IAT (IAT1) regardless of their allocation to the Intervention Group (IG) or Control Group (CG) with a view to ascertaining the baseline data across the social subgroups (high schools, universities and the corporate sector). Second, the IGs were invited to participate in a focus group discussion session with a facilitator immediately after the first IAT. This was where the Intervention was administered. Third, all the participants were invited to take the second IAT (IAT2) at a one-week interval since the first one.

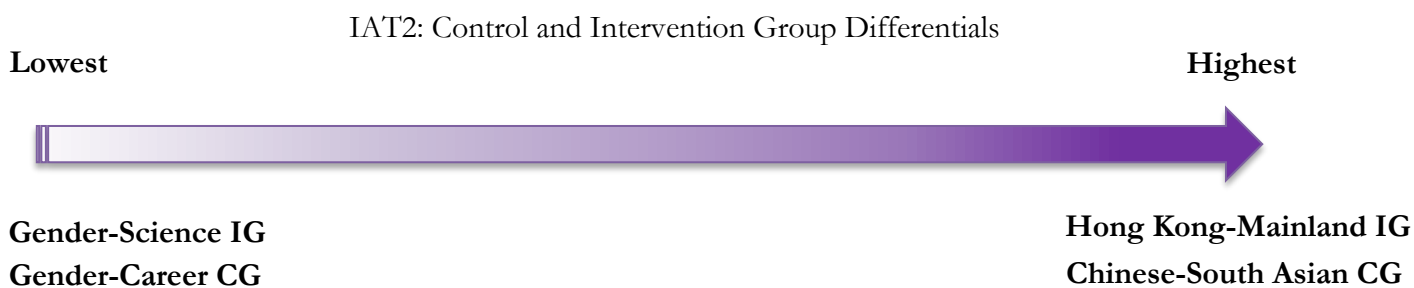
All participants were asked to complete the post-IAT Questionnaire and the Behavioural Task Activity. All participants were debriefed as to the actual objectives of the study and what it was designed to measure. The CGs were invited to participate in the intervention and focus group discussion to further the objective of public education in this important field but also, to ensure that all respondents could benefit from the Intervention (assuming it was effective in addressing implicit bias).

## Key findings

**IAT1 vs. IAT2:** Compared with IAT1 score, the results show that although IAT2 score were lower overall, the finding was not statistically significant. Analysing the differences in the IAT1 scores between the Control and Intervention groups (pre-Intervention) for each of the IAT tests, the results show that there were no significant differences between the two groups (Control and Intervention) for any of the four IAT1s. Bias levels are worse for Racial categories than Gender but there is implicit bias towards both categories in IAT1s overall. All groups are most biased in the Chinese-South Asian category followed by the Hong Kong-Mainland category. The lowest rates of implicit bias are found in the Gender-Career Control group (Figure 1).

**Figure 1:**

**Intervention Group vs. Control Group:** Looking at the question of whether the first and second IAT test scores differed significantly in respect of the Control and Intervention groups to determine the impact and significance of the Intervention on implicit bias scores, the results show that in the Gender-Science IAT Intervention group, there was a marginally significant difference between IAT1 and IAT2 whereas in the Chinese-South Asian IAT Intervention group, a significant difference was found ( $p=0.003$ ). Since the scores of IAT2 tended in the direction of zero, this indicated that respondents who had participated in the Intervention became less biased after the intervention whereas there was no significant difference in the Control group. Scores did not differ significantly for both the Control and Intervention Groups in the Gender-Career IAT between IAT1 and IAT2 (Figure 2).

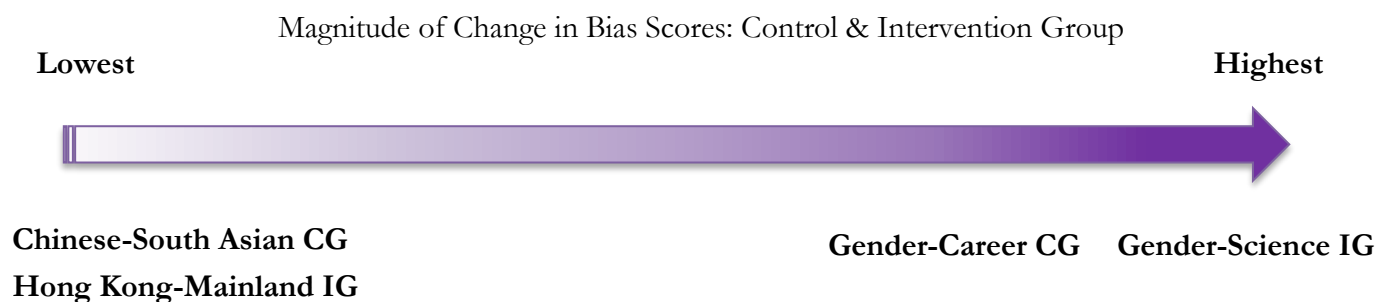
**Figure 2:**

**Comparison Between Four Areas of Bias:** Across all 4 IATs, IAT2 scores were lower than IAT1 scores overall for each Test for each group (Control and Intervention) and trending closer towards 0, reflecting reduced implicit bias. This reflects that taking the IAT twice has the effect of reducing implicit bias scores in and of itself. For the Hong Kong-Mainland test, the scores of the Control group improved between IAT1 and IAT2 reflecting a statistically significant change ( $p=0.022$ ). There was no significant difference between the scores for Hong Kong-Mainland IAT1 and IAT2 in the Intervention group although there was an overall reduction of bias. Despite the overall reduction in bias between the two tests, groups remain most biased in the Hong Kong-Mainland category and least biased in the Gender-Science category in the Intervention group whereas for the Control groups, they are least biased in the Gender-Career and most biased in the Chinese-South Asian categories in IAT2.

**Impact of Intervention on Bias Reduction:** The magnitude of change in scores between IAT1 and IAT2 did not differ significantly between the Control and Intervention groups across all 4 IATs suggesting the Intervention had no impact on degree of change in IAT scores. Intervention significantly decreased bias in the Gender-Science IAT ( $p = 0.033$ ). The Intervention group became much less biased compared to the

Control group for this test whereas the difference in scores was marginally significant in the Gender-Career Intervention group ( $p = 0.09$ ) (Figure 3). This indicates that the Intervention worked very well or has strong potential for bias reduction in different categories. There was no significant difference for either of the other two IATs for the Intervention or Control group, suggesting bias towards Racial categories appears to be more entrenched, despite bias reduction overall.

**Figure 3:**

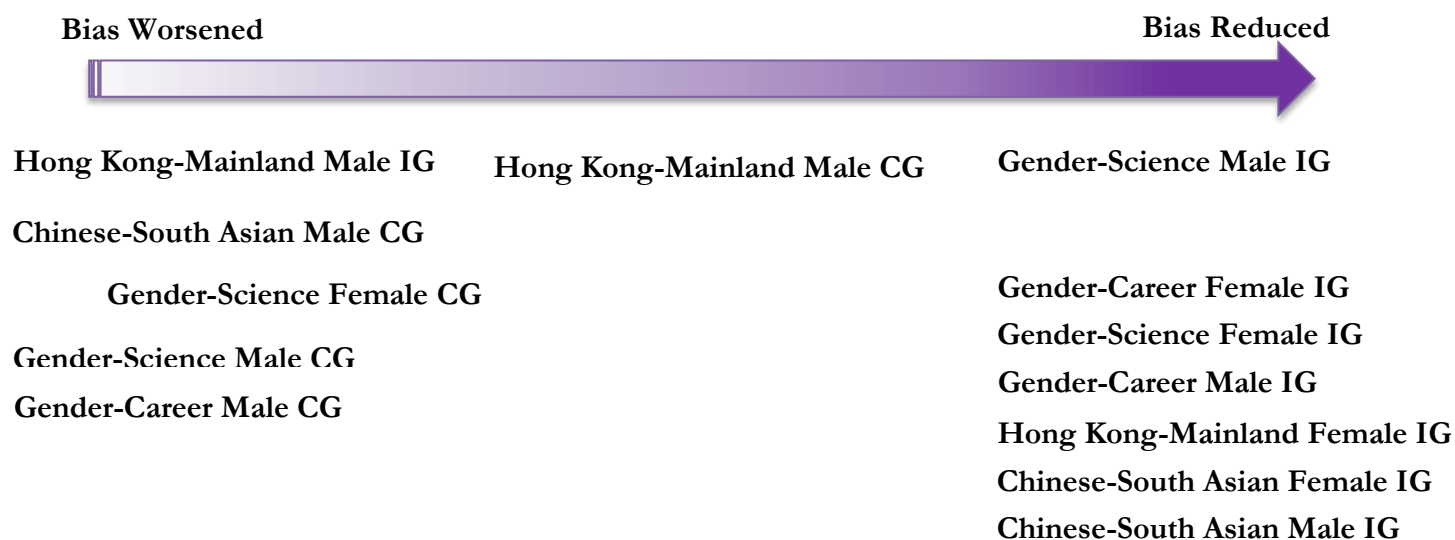


**Gender Difference in IATs:** In general, there was no significant difference in IAT scores on the basis of gender however, these results need to be interpreted cautiously due to the female heavy sample here. In terms of comparable performance between genders in terms of the IAT1 scores, there was no significant difference for any of the IATs. The raw numbers, however, suggest that females were much more biased in terms of IAT1. In terms of the difference in magnitude of bias reduction between males and females, there was no significant difference in any of the IATs except for the Hong Kong-Mainland IAT, where females became significantly less biased while males became more biased in the IAT2 ( $p = 0.010$ ).

**Gender Differences in Bias Reduction after Intervention:** Comparing differentials between IAT1 and IAT2 scores across Control and Intervention Groups based on gender, the Intervention appears to have had a positive impact in terms of bias reduction for all male and female groups except for the Hong Kong-Mainland IAT, where there was a statistically significant improvement among females in the Intervention group and conversely, a deterioration among the males in this group ( $p = 0.011$ ) (Figure 4). Overall, based on raw scores females in Intervention groups across all IATs improved their bias scores. Bias got worse among males across Control Groups for all IATs except the Hong Kong-Mainland IAT, which saw a very slight improvement (though not statistically significant). There was a marginally significant difference in the Control group for the Gender-Science IAT ( $p = 0.094$ ) where the bias levels increased in both males and females, which suggests the IAT's test-retest activity has a negative effect on bias reduction. However, gender-based differentials among Control and Intervention groups need to be read with caution given the skewed gender sample.

Figure 4:

Overall Bias Reduction: Control &amp; Intervention Group by Gender



**Social Group Differences in Bias Reduction after Intervention:** In terms of impact of Social Group (High School Student, University Student and Corporate Employee), there were no significant differences between the first and second test scores in any of these groups. Social Grouping did not significantly impact Bias scores although IAT score differentials were statistically significant for the Hong Kong-Mainland IAT ( $p = 0.035$ ) as well as Education level for this particular IAT ( $p = 0.060$ ). The mean bias scores by Social Group all followed a downward trend between IAT1 and IAT2 showing a reduction in overall bias scores except for the Gender-Science IAT in which the Corporate Employee group's score went up (more biased) and for the Hong Kong-Mainland IAT in which the University students' mean bias score went up (more biased) in IAT2 (Figure 7).

Figure 5:

IAT1: Lowest and Highest Bias Levels: Social Groups

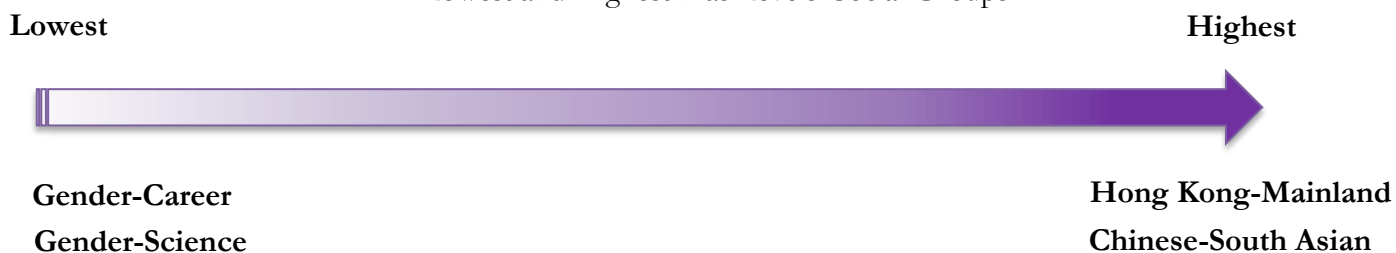


Figure 6:

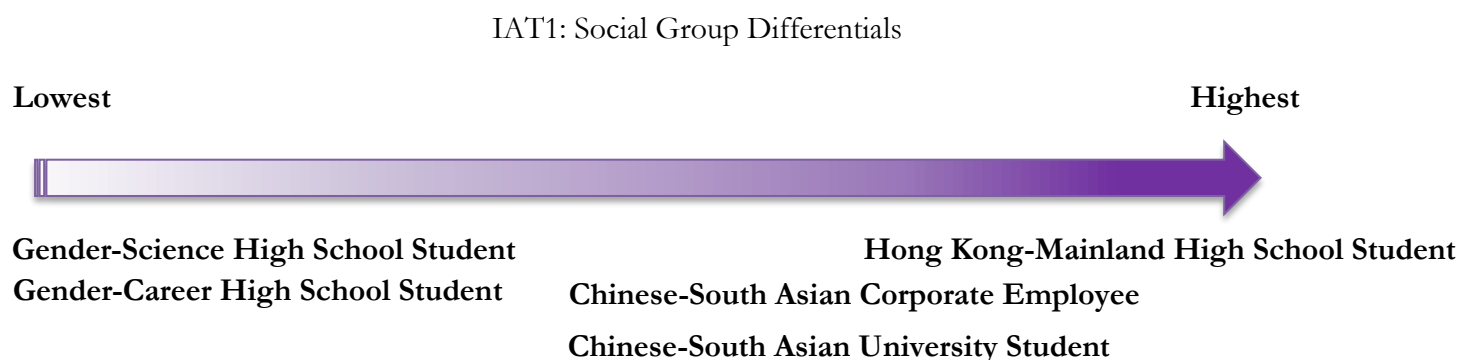
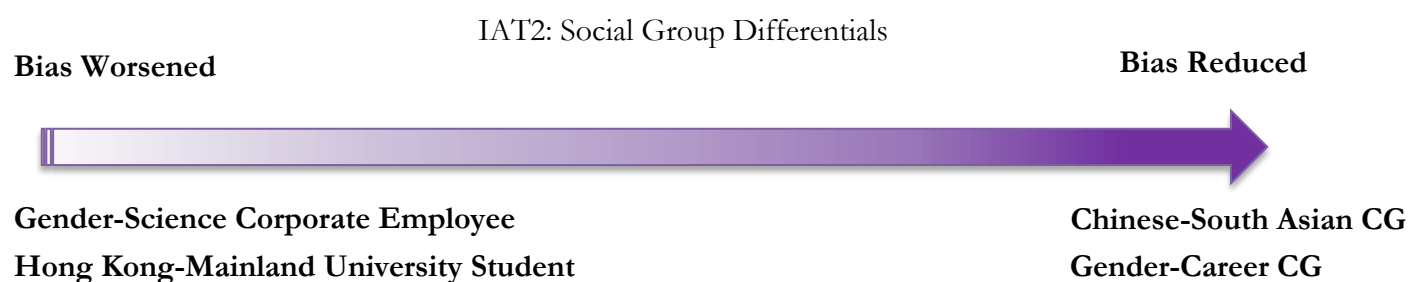


Figure 7:

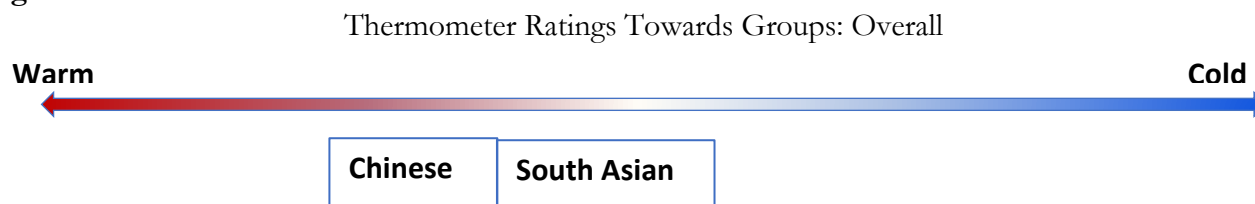


### *Post-IAT Questionnaire: Explicit Bias Measures – Race*

To better understand the influence of other factors on the IAT scores, the responses to various items on the post-IAT Questionnaire were analysed and interpreted. These questions include asking respondents to use a scale of 1 to 10 to report on whether they felt warm or cold towards particular groups, with 1 being extremely cold to 10 signalling extreme warmth, and asking respondents to use a relative scale of 1 to 7 to rate their preference for particular groups, with a lower score signalling a stronger preference for one group and a higher score signalling a stronger preference for the other.

Respondents were asked to rate their feelings towards Chinese and South Asian groups using the thermometer scale and the relative scale. They were found to feel more warmly towards Chinese (6.30) than South Asians (5.95) (Figure 8) and demonstrate a slight preference towards Chinese over South Asians, as shown by the mean score of 3.35 on the relative scale, which is lower than the neutral value of 3.50 (Figure 10).

Figure 8:



On both questions, there was no significant difference between the responses of the Control and Intervention groups but social groupings seemed to have a significant impact on these ratings. The thermometer ratings were significantly warmer ( $p = 0.044$ ) towards Chinese than South Asians when examined through this variable relative to the thermometer scores tested by gender or trial group (Control/ Intervention). Thermometer ratings comparatively were lower towards South Asians but not significantly so although the High School student ratings were least warm towards South Asians. In general, Corporate Employees' thermometer ratings were warmest overall (Figure 9). On the relative scale, High School students rated the strongest preference for Chinese (3.00), followed by Corporate Employees (3.27), with University students reflecting a very slight preference for South Asians (3.52) (Figure 11). However, none of these differences were statistically significant.

Respondents were asked to rate on a relative scale of 1 to 7 whether their positions towards racial groups were motivated by an internal belief or commitment to non-discrimination or social expectations for political correctness or to avoid disapproval from others. The mean scores were lower on the self-motivation/belief items ranging from 2.45 to 3.10 while the scores were much higher on the items indicating external motivations such as political correctness or admonishment (mean score = 3.97). These scores indicate that respondents strongly believe in the principle of equality and that it is wrong to stereotype against South Asians and disagree that their motivations are the result of social disability bias.

**Figure 9:**

Thermometer Ratings Towards South Asians: By Social Group



**Figure 10:**

Relative Scale Depicting Preference of Ingroup and Outgroup: Overall

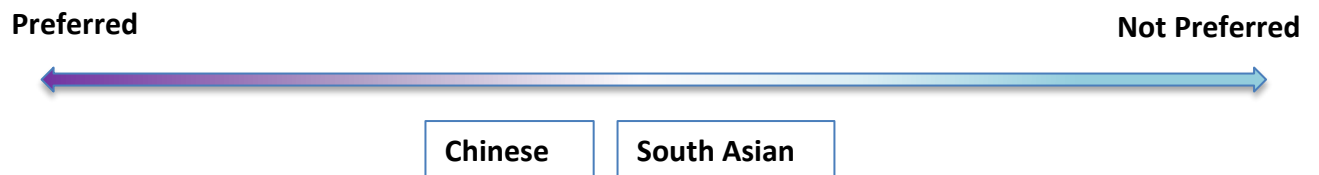
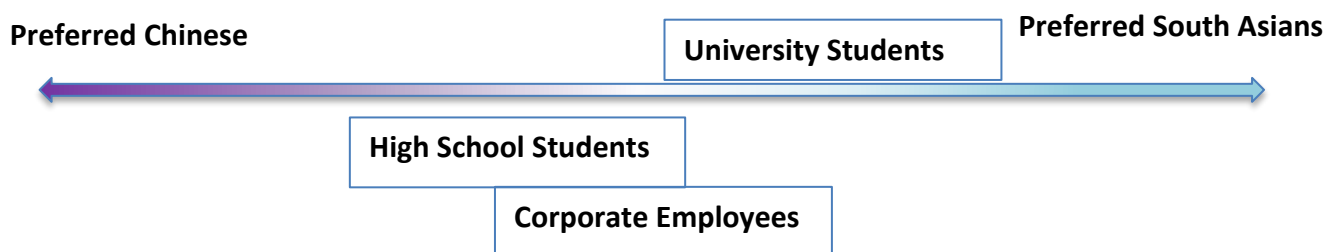


Figure 11:

Relative Scale Depicting Preference of Ingroup and Outgroup: Social Groups



Respondents were asked to rate their feelings and preference in relation to HongKongers and Mainlanders using the same thermometer scale and relative scale. The mean ratings given on the thermometer scale were higher for HongKongers (6.97) than Mainlanders (5.41) (Figure 12). The mean score obtained on the relative scale (2.45) also indicated a fairly strong preference for HongKongers (Figure 13). These scores do not seem to reveal any statistically significant correlation with responses on a question asking participants if they had ever met a Mainlander.

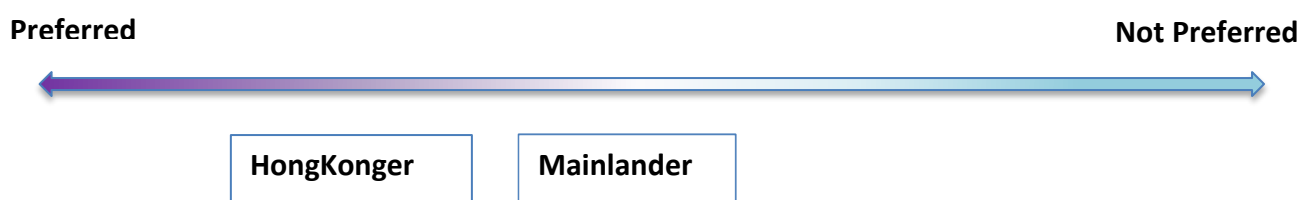
Figure 12:

Thermometer Ratings Towards Mainlanders and HongKongers: Overall



Figure 13:

Relative Scale Depicting Preference of Ingroup and Outgroup: Overall



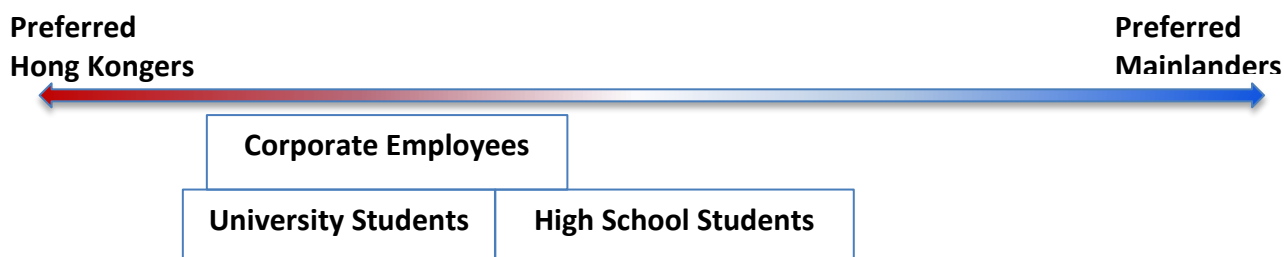
Compared with the Control Group, the Intervention Group showed a warmer overall mean score towards HongKongers and a marginally higher preference for HongKongers than Mainlanders, although these differences were not statistically significant. All social groups were much warmer, and showed a stronger preference, towards HongKongers than Mainlanders. The University and Corporate Employee Groups showed similarly strong preference for HongKongers with the High School group slightly behind them, who also preferred HongKongers but had a lower warmth score relative to the University and Corporate Employee Groups. The University Group scored the lowest on expressing their sentiment towards Mainlanders, followed by the High School group and the Corporate Employee group (Figure 14). However, none of these differences based on social grouping are statistically significant. Significantly, male respondents are shown to have much warmer feelings and a stronger preference towards HongKongers compared to female



respondents ( $p = 0.083$ ). This reveals a gender dimension to bias against Mainlanders which was underscored in the Hong Kong-Mainland task.

**Figure 14:**

Thermometer Ratings Towards Ingroup and Outgroup: By Social Group



### *Post-IAT Questionnaire: Explicit Bias Measures – Gender*

Respondents were asked to rate their like or dislike towards Liberal Arts and Sciences on a 5-point scale with 1 representing strong like and 5 representing strong dislike. For both Control and Intervention groups, males reflected a similar mean score (2.3) in terms of liking towards both Liberal Arts and Sciences whereas females showed a slightly stronger liking towards Liberal Arts (2.2) and a slightly stronger dislike towards Sciences (2.4) than males.

Respondents were also asked to rate Liberal Arts and Sciences on a 7-point scale from strongly male (1) to strongly female (7). The mean scores were lower for Sciences (3.13) than for Liberal Arts (4.47), reflecting a stronger association of Sciences with males than females and Liberal Arts with females than males.

Respondents were asked to rate the level of importance of various factors that are often used to explain the difference between the proportion of women in science and engineering faculty positions in top research universities relative to men. The lowest mean rating was given to the explanation that ‘In general, men and women differ in their willingness to devote the time required by such “high-powered” positions’ (2.18) and the highest mean rating was given to the explanation that ‘Directly or indirectly, boys and girls tend to receive different levels of encouragement towards developing interest in the sciences’ (3.16).

When asked to rate the importance of being knowledgeable about the Sciences and Liberal Arts to their personal goals on a 5-point scale from extremely important (1) to not at all important (5), the males rated both as not so important (Sciences: 2.75; Liberal Arts: 2.60) whereas females rated Sciences (2.36) as more important than Liberal Arts (2.72). Although these differentials based on gender were not statistically significant, they do reveal that females valued Sciences more than Liberal Arts when compared with men.

Similarly, in relation to Family and Career, respondents were asked to rate the level of importance they accord to each on a 5-point scale from extremely important (1) to not at all important (5). Both males and females attached a stronger level of importance to Career (females: 2.10; males: 1.95) when compared with Family (females: 2.20; males: 2.15), with no statistically significant differences. Respondents were then asked to indicate their agreement or disagreement with a series of propositions concerning marriage and childbirth and the advancement of career or education, framed to ascertain the degree of acceptability for males and females

to put off marriage or childbirth to advance their education or careers. The responses reflected the understanding that childbirth and marriage are not impediments to men's advancement in their education or career whereas for women, these life events can and do impact their prospects. All social groups seem to consider it slightly disagreeable for women to put off marriage and childbirth but even more so for men. University Students seemed to be less differentiating in terms of whether gender makes any difference to the acceptability of such decisions whereas Corporate Employees were the most biased in this regard, expressing disagreement with women putting off marriage and childbirth but even more strongly for men. These differentials based on social grouping were statistically significant ( $p = 0.025$ ). There were no statistically significant differences in terms of the responses of males and females in the sample.

### *Correlating data with other background factors*

Some demographic factors were found to be statistically significant in terms of their impact on bias scores:

1. Respondents raised by Working Mothers were found to have become more biased whereas those raised by Stay-at-Home Mothers were found to have become significantly less biased after taking the IAT (both Control and Intervention groups) ( $p = 0.04$ ).
2. Intervention group participants raised by Working Mothers have a significantly higher magnitude of change in bias scores in the Gender-Science task ( $p = 0.04$ ) and the Hong Kong-Mainland task ( $p = 0.023$ ) than those who were not.
3. Responses to a question about strength of social network with groups of particular backgrounds or gender indicate a statistically significant impact on magnitude of change, bias scores, and direction of bias:
  - a. x-axis: Reduction in bias score (negative value connotes increase in bias)
  - b. y-axis: strength of social network (8 = strong, 2 = weak)
  - c. Social network with
    - i. **C**: Caucasians
    - ii. **MC**: Mainland Chinese
    - iii. **SA**: South Asians
    - iv. **WM**: Working Mothers
    - v. **GW**: Girls/Women
    - vi. **BMS**: Boys/Men in Science
  - d. Relevant IAT test:
    - i. **Gender-Science**
    - ii. **Gender-Career**
    - iii. **Chinese-South Asian**
    - iv. **Hong Kong-Mainland**

Figure 15:

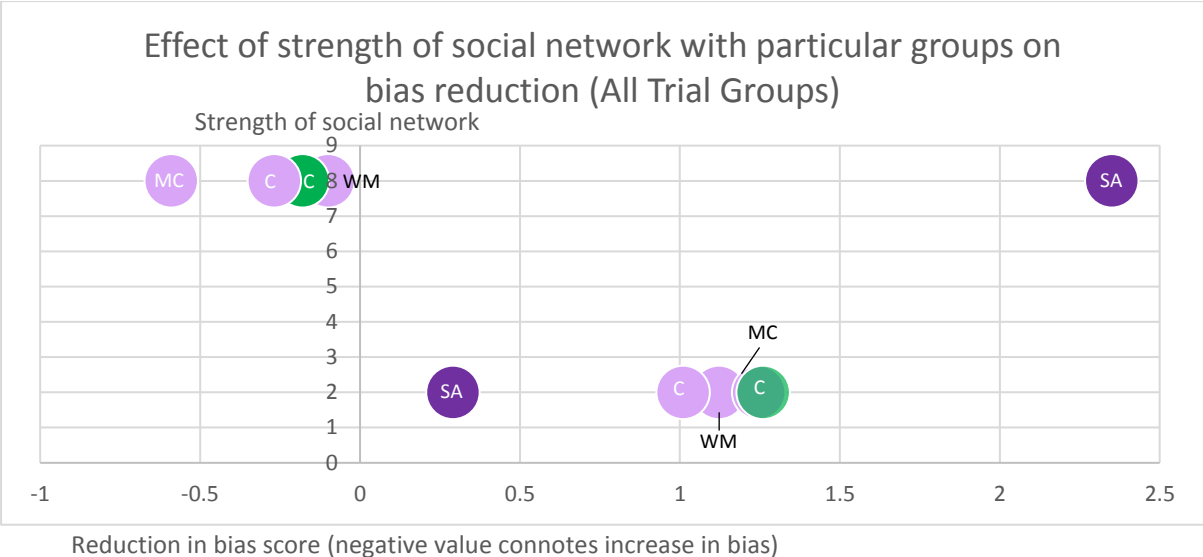


Figure 16:

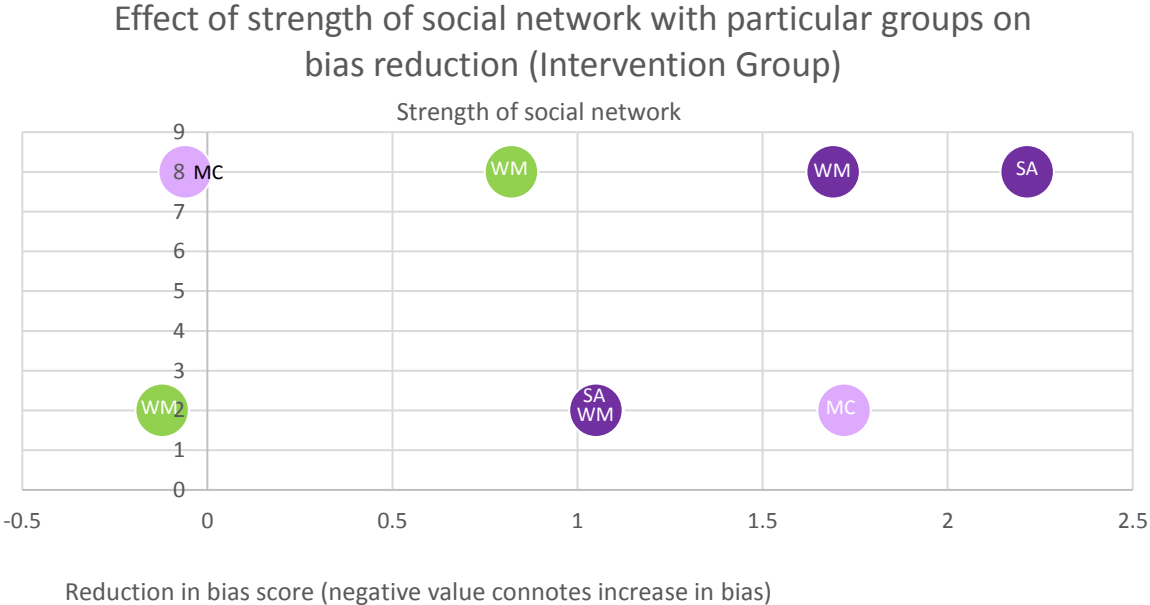
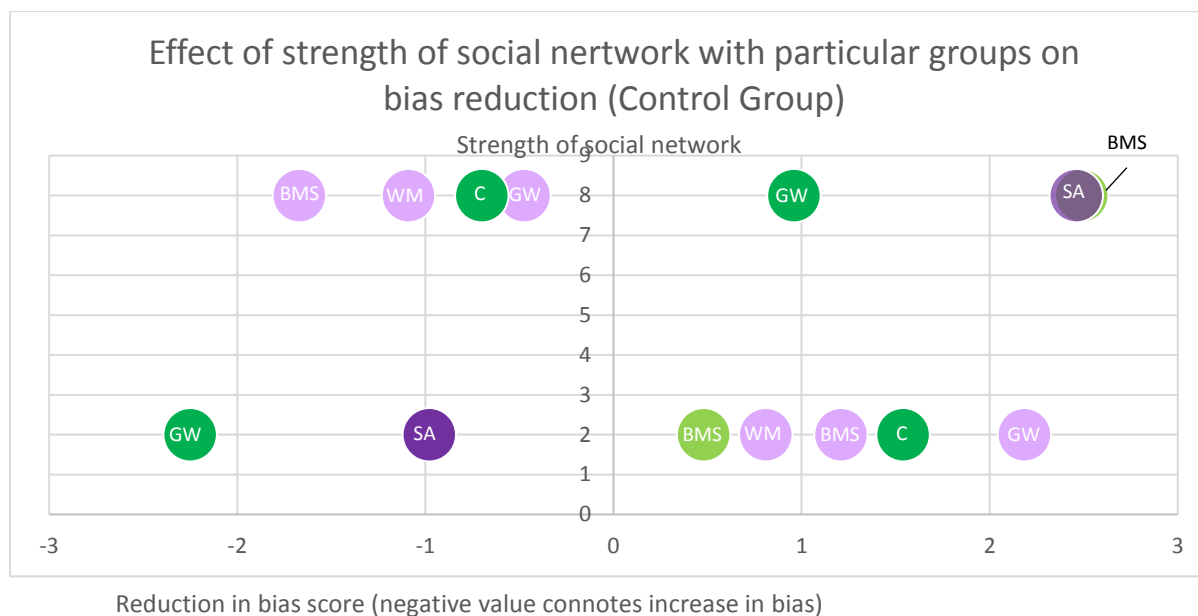


Figure 17:



### *Correlating data with Post-IAT Behavioural Tasks*

Respondents were first presented with people of different ethnic backgrounds and genders as awardees for prominent competitions or prizes. The majority of participants selected the person with a Caucasian-sounding name for the Men's 10m Air Rifle Olympic Competition, the person with a mainland Chinese name for the World Class Chess Championship, a man for the Nobel Prize for Physics, and a woman for the Nobel Prize for Literature.

Respondents were then asked to select candidates for a job vacancy and for a Student Union election. A majority of respondents selected the female for the job while both candidates were selected an equal number of times for the Student Union election. The Intervention Group were overwhelmingly more likely to hire the pregnant mother of two than the third-time father-to-be compared with the Control Group, which predominantly selected the man for the position for reasons that seemed unrelated to the job qualifications, such as the fact that the woman is pregnant. A fair amount of pregnancy- and family-status-based discrimination is also evident from the commentary of the Control Group. Another observation is that the in-group (female respondents) mostly focused on job qualifications.

## Conclusion

The results of this research study provide groundbreaking insights into the prevalence, nature and extent of unconscious bias among different social groups as well as the variables which influence such biases negatively or positively in the context of Hong Kong. Furthermore, the study demonstrates the effectiveness of specifically designed interventions in terms of reducing particular biases, while outlining the more challenging categories of unconscious bias which require more complex intervention models to address concretely. The key research findings are:

- (1) Unconscious gender and racial biases are widespread in Hong Kong across diverse social groups;
- (2) Unconscious bias tends to be stronger in the case of racial biases compared with gender biases.
- (3) The level of racial bias also varies depending on target group with South Asians being more susceptible to higher levels of bias relative to Mainland Chinese for the most part.
- (4) The level of gender bias in relation to sciences is significantly higher when compared to gender-role stereotypes pertaining to career.
- (5) The IAT itself has the effect of mitigating against certain types of unconscious bias but may have the opposite effect in respect of deeply entrenched biases;
- (6) Interventions can and do work. However, the effectiveness of interventions varies depending on the type of bias, targets of discrimination, social groups targeted by the intervention, their social networks and exposure to outgroups;
- (7) Some biases (racial biases) are more entrenched than others (gender-based biases) in the Hong Kong context and interventions have limited or little impact in reducing them; and
- (8) One-size-fits-all solutions do not work. There is a clear and potent need for intervention tools to be well-tailored to different groups and contexts and fine-tuned for different types and manifestations of biases.

Importantly, this study is the first of its kind to examine the manifestation of unconscious bias as embedded in an Asian context. These findings bear important implications for future research pertaining to unconscious bias and the implementation of interventions in Hong Kong in across different sectors, most notably, corporate, high school and higher education sectors. This study breaks new ground in Hong Kong by showing that systemic and indirect discrimination is prevalent here at a subtle level and is capable of being more invidious than direct discrimination and other more widely recognised forms of indirect discrimination

Legal standards, in terms of their coverage and reach, need to be examined more critically to determine whether these claims are actionable given the evidentiary burdens of establishing such bias. Moreover, the effectiveness of these legal provisions must be considered in light of environmental and structural constraints. Unconscious bias research data is a significant step towards plugging this evidentiary gap and to draw a stronger nexus between acts or omissions and their discriminatory impact on victims of discrimination.

This research integrates theory with empirical evidence to show that the brain can be rewired to influence its circuitry to achieve substantive changes in our information processing, which in turn helps alleviate prejudice. These research findings and the recommendations set out below can lay the groundwork for future research and the development of industry-specific responses to identify, understand, and root out patterns of unconscious bias. Unconscious bias must be taken just as seriously if not more seriously than direct discrimination.

## Recommendations

This study has demonstrated that unconscious bias clearly exists and is prevalent in our society and presents in specific ways pertaining to racial categories and gender stereotypes in relation to career and sciences in the Hong Kong context. We suggest that a systemic, cultural change in terms of the implementation of training standards and early childhood education complemented by changes in law and policy are required to achieve the objectives of antidiscrimination law more broadly, which should encompass not only direct discrimination, but also systemic and indirect discrimination.

## 1. Training and Interventions: Design, Review & Evaluation at the Institutional Level (for Governmental, educational, corporate, health, civil society and entities engaged in legal and social services)

- (a) *Using interventions to reduce unconscious bias:* The research findings demonstrate the effectiveness of suitably designed and targeted interventions in school, university and corporate settings in reducing unconscious bias. This requires establishing a baseline data within the specific institutional context by administering an unconscious bias assessment, analysing the findings and charting specific goals and strategies for intervention based on the data.
- (b) *Taking context into account:* Our research results have further shown that training must be done carefully and mindfully, in terms of both *who* is delivering the training, *how* the training is conducted and *what* is being delivered in the name of training; otherwise intervention may be ineffective or even counter-productive. Institutions must identify relevant contexts within their environment and take into account multiple factors in designing interventions. Using targeted approaches to raise awareness and specifically address unconscious biases, as well as designing systems to facilitate reflective processes to eliminate the impact of unconscious bias on people and communities around them, such tailored interventions are more likely to prove effective.
- (c) *Institutionalising interventions and adoption of anti-bias measures at all levels:* It must be kept in mind that unconscious bias training cannot be treated a mere box-ticking exercise. Instead, the commitment to equal treatment and non-discrimination needs to become part of the social fabric of educational, corporate, judicial, law enforcement, and public institutions to turn the tide against long-engrained, entrenched biases. It means being actively “anti-racist” and “anti-sexist” by taking necessary steps to disrupt such biases from pervading spaces around you through dedicated and deliberate approaches to course-correcting, for example, bystander intervention, legal, policy and educational measures and media strategies.
- (d) *Regular stocktaking, monitoring, evaluating and improving interventions and their impact:* As it is impossible to the effectiveness of a particular intervention tool without testing it, these tools should be regularly reviewed through administering implicit bias assessments which collect, collate, and review attitudes so that problem areas may be addressed effectively through revised interventions and other strategies in a timely manner.

## 2. Education: From Early Childhood through Higher Education

- (a) *Early childhood intervention to prevent entrenchment of bias:* Developing strategies for early childhood intervention to prevent the acquisition and entrenchment of harmful stereotypes is vital. This is done by enhancing individuals’ understandings about sources of stereotypes and prejudice and equipping them with critical thinking skills to reassess their existing sources of knowledge and information.
- (b) *Breaking the cycle – Saving oneself from becoming a casualty of the self-fulfilling prophecy:* Education is also important not only in terms of preventing children from acquiring and entrenching harmful stereotypes about others from a young age but also from developing such stereotypes about *themselves* if they belong to a marginalised out-group. Leaving unconscious biases unaddressed is costly for

society as a whole and those who are targets of such harmful biases by stripping them of opportunities and their confidence to pursue their dreams and aspirations.

### **3. Law, Policy & Research**

As current anti-discrimination laws stand, it is extremely challenging for claimants to mount challenges against discriminatory conduct based on unconscious biases due to evidentiary hurdles, given the inherently implicit nature of such biases. Traditionally, the law has focused on and been primarily used to target instances of direct discrimination which are tangible and explicit. However, some have suggested a ‘proactive model’ which obliges public bodies to actively take action to eliminate systemic discriminatory practices, by utilising implicit bias research to formulate and implement appropriate ‘debiasing strategies’ that will enable regulated actors to take steps to reduce implicit bias.

In some jurisdictions, implicit bias has been brought to the attention of courts and utilised by judges, although it remains far from being formally recognised by the law. Nevertheless, these examples serve as a strong signal of the prospects and relevance of utilising such research by law- and policy-makers and judges as appropriate in the Hong Kong context.

### **4. The Role of the Equal Opportunities Commission**

Given the EOC’s role as a quasi-human rights body with the mandate for oversight in relation to antidiscrimination legislation in Hong Kong, it should urgently issue industry-specific codes of practice to incorporate best practices in relation to addressing unconscious bias in diverse domains, with data collection and monitoring obligations. These codes of practice should be introduced to cover educational, healthcare, social work and welfare organisations and law-enforcement bodies.

### **5. Mandating Data Collection and Disaggregation**

Governmental bodies and entities engaged with education, legal assistance, social welfare, and healthcare should be legally mandated to maintain data disaggregated based on various characteristics such as gender, race, religion, disability, and sexuality and make such data transparent and publicly available. This obligation should also be made part of best practices for corporate actors to follow.