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Ying-Yi HONG

*Hong Kong University of Science and Technology*

Chi-Yue CHIU

*University of Hong Kong*

Grace YEUNG

*Hong Kong University of Science and Technology*

Jennifer Y. Y. TONG

*Singapore Management University, jennifertong@smu.edu.sg*

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**SOCIAL COMPARISON DURING POLITICAL  
TRANSITION: INTERACTION OF ENTITY VERSUS  
INCREMENTAL BELIEFS AND SOCIAL IDENTITIES**

*YING-YI HONG*

*The Hong Kong University of Science and Technology*

*CHI-YUE CHIU*

*The University of Hong Kong*

*GRACE YEUNG*

*The Hong Kong University of Science and Technology*

*YUK-YUE TONG*

*The University of Hong Kong*

**ABSTRACT.** *The relation between intergroup perceptions and people's implicit theories of the malleability of human attributes or character was examined. We predicted that people who believe that human attributes are fixed (entity theorists) may also view a group as an entity and thus would rely on trait-based dimensions in social comparison to achieve group distinctiveness. By contrast, people who believe that human attributes are malleable (incremental theorists) may focus on the dynamic aspects of social groups (e.g., group goals) and thus would be less likely to rely on trait-based dimensions in social comparison. Moreover, such differential tendency was expected to become more salient as the day of the handover approached. These predictions were tested in a longitudinal study conducted in Hong Kong during the 1997 political transition. Implicit theories, social identities and group categorization strategies of 242 university students were assessed first in March, 1996, and then in September, 1996 and March, 1997. The findings supported our predictions and were discussed in terms of their implications for intergroup relations. © 1999 Elsevier Science Ltd. All rights reserved.*

**KEY WORDS.** *Social identification, social comparison, implicit theories, political transition*

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Please address correspondence to: Dr Y. Hong, The Hong Kong University of Science and Technology, Division of Social Science, Clear Water Bay, Kowloon, Hong Kong. Tel: +852-2358-7827; Fax: +852-2335-0014; E-mail: sohong@ust.hk

On July 1, 1997, after 156 years of British colonial rule, the sovereignty of Hong Kong was returned to China. On the same day, some 6.2 million ethnic Chinese in Hong Kong became Chinese nationals. Because the handover of sovereignty has been determined at the signing of the Joint Declaration between the Chinese and British government in 1984, Hong Kong people had been expecting the handover over some years before 1997. This situation has provided social scientists an unique opportunity to study how people respond to a political transition. The present article deals with Hong Kong people's intergroup perception in the period immediately preceding the handover. In particular, how did Hong Kong people view themselves and the Chinese Mainlander group? How did the perceptions change before the handover? With the advent of the handover, contact between the two groups became more frequent and their mutual influence became more pervasive. Would this situation intensify social comparisons between the groups? How are Hong Kong people's reactions to the handover related to their personal beliefs? The present research sought to address these questions. Specifically, we contended that dimensions Hong Kong people used in social comparison are a function of their social identity and their belief about the malleability of people's character.

#### THE FRAME OF REFERENCE FOR SOCIAL COMPARISON AND SOCIAL IDENTIFICATION

As Turner and his associates contended, "self-categorizing is inherently variable, fluid, and context dependent, as self-categories are social comparative and are always relative to a frame of reference" (Turner, Oakes, Haslam & McGarty, 1994, p. 454). Accordingly, a change in the social context should effect changes in social comparison by making a particular frame of reference more salient. Consistently, research has shown that Hong Kong people would compare themselves with non-Chinese when a rivalry between Chinese and non-Chinese was made salient, but they were more ready to compare themselves with Chinese Mainlanders when a conflict between Hong Kong and the Beijing government was made salient (Fu, Chiu, Lee & Hong, this issue).

These social comparison frames may also align with people's social identification (Brewer, 1991; Lam, Lau, Chiu, Hong & Peng, this issue). Over 98% of Hong Kong people are ethnic Chinese. However, for over 155 years before the handover of sovereignty, Hong Kong had been under the British colonial rule. Because of the long political separation from Mainland China, some Hong Kong people had acquired a strong regional identity, i.e., Hongkonger. As revealed in the surveys conducted by the

Hong Kong Transition Project since 1993,<sup>1</sup> Hong Kong people were quite divided in whether they chose a Chinese or a Hongkonger identity. For example, data from a recent telephone survey conducted in February, 1997 revealed that among the 546 Hong Kong adults randomly selected for interview, 31% identified themselves as Chinese and 35% identified themselves as Hongkongers. Most of the remaining respondents (29%) chose a combined identity, i.e. Hong Kong Chinese. In general, older people who were born in China and migrated to Hong Kong (in the late 1940s or 70s) felt more strongly that they were Chinese, compared to the younger generations, most of whom were born and grew up in Hong Kong. By contrast, the Hongkonger identity was more important for the younger generations than for the older generations.

As Brewer (this issue; see also Hong, Chiu, Fu & Tong, 1996a) has noted, the "Chinese" and "Hongkonger" identities may have a hierarchical structure: the Chinese identity is a more superordinate, inclusive identity than the Hongkonger identity because Chinese as a group includes both Chinese Mainlanders and Chinese in Hong Kong, whereas the Hong Kong people as a group excludes Chinese Mainlanders. Moreover, Brewer (1991) has posited that people identify with groups in order to meet two basic psychological needs: the need for inclusion and assimilation (i.e., the need to find similarities with others and to connect to others in the social world) and the need for differentiation (i.e., the need to maintain personal distinctiveness) (cf. Turner, Hogg, Oakes, Reicher & Wetherell's, 1987, principle of meta-contrast for group formation, which focuses on relatively bottom-up analyses of feature similarities in category formation, i.e., computation of the contrast between intra-class differences and inter-class differences as a determinant of group formation). To maintain an inclusive social identity, people who identify with a Chinese identity may focus on how they might be similar to other Chinese (including Chinese Mainlanders) and distinct from non-Chinese (e.g., Westerners) in social comparison. In contrast, to maintain a more distinctive regional identity, people who claim a Hongkonger identity may focus on how they are similar to other Hongkongers but distinct from other Chinese (mainly Chinese Mainlanders).

Consistent with this, Lam and her associates have found that adolescents who identified themselves as primarily "Hongkongers" and those who identified themselves as primarily "Chinese" emphasized different dimensions in social comparison to make their respective social group positively

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<sup>1</sup> The Hong Kong Transition Project conducted telephone surveys of Hong Kong residents every six-months in the period between 1993 and 1997. The sample was randomly selected and there were about six hundred respondents in each survey. The project director is Michael DeGolyer and the first author is a member of the project. Other members include Janet Scott, Sonny Lo, Alfred Hu, Yu-hung Hong, and Mary Lo.

distinctive (Lam et al., this issue). For example, Hong Kong adolescents who identify themselves as Hongkongers tend to compare Hong Kong people with other groups (e.g., Chinese Mainlanders, Indians) on the dimension of modernity. Such social comparison strategy allows these adolescents to perceive Hong Kong people as more modern and progressive than people in the less developed countries (including Mainland China). By contrast, Hong Kong adolescents who identify themselves as Chinese tend to make social comparisons on the dimension of Confucian values, so as to make clear the perceived distinction between Chinese (including Chinese in China, Hong Kong, Taiwan, Singapore) and non-Chinese.

To summarize, social identification may be systematically linked to the preferred dimension of social comparison during the political transition. Specifically, people who identify themselves as Hongkongers, may emphasize dimensions that could differentiate Hong Kong people from Chinese Mainlanders. By contrast, those who identify themselves as Chinese may place greater weight on dimensions on which Chinese and non-Chinese are perceived to be different.

#### SOCIAL COMPARISON AND ENTITATIVITY BELIEF

This research examined how social comparison could be moderated by people's beliefs. Specifically, we make a distinction between two fundamentally different approaches to social comparison. The first approach grows out of the group entitativity belief. As Campbell (1958) noted, some social groups can be perceived as entities, i.e., they can be represented as coherent, homogenous entities, each characterized by distinctive attributes. An entity representation of social groups implies that social categories are not simply cognitive structures individuals construct to understand similarities and differences among people. Instead, each social category refers to a collectivity of people who possess similar characteristics that are unique to the group (Brewer & Harasty, 1996). Thus, people who subscribe to the group entitativity assumption might tend to select global trait dimensions for social comparison. For example, in Lam et al.'s (this issue) research, the Hong Kong adolescents who identify themselves as Hongkongers may view Chinese Mainlanders as a social entity consisting of pre-modern, relatively backward individuals. Similarly, those Hong Kong adolescents who identify themselves as Chinese may view Chinese as a relatively homogeneous group of people who endorse Confucian or collectivist values.

Alternatively, social groups can be represented in terms of a set of more dynamic, psychological constructs. For example, a social group can be represented in terms of its evolving goals or missions, and how strategies to attain such goals change with the changing environment, group dynam-

ics and membership compositions. We refer to this assumption as the group dynamics assumption. Individuals who subscribe to this assumption may find it difficult to characterize a social group with fixed global traits, particularly in a rapidly changing sociopolitical environment and intergroup context, such as the sociopolitical environment of Hong Kong during the political transition. As such, individuals who subscribe to the group dynamics assumption are less likely to rely systematically on global trait dimensions for social comparison.

We take the argument further and contend that the perception of entitativity of social groups might be linked systematically to the implicit theories people hold about the malleability of human attributes and character. In other words, beliefs about the nature of social groups may be related to beliefs about the nature of an individual's attributes. To flesh out this argument, we will first describe our previous works on beliefs about individual attributes.

Our past research has identified two implicit theories that predict social inferences: an entity theory, which is an implicit belief that personal attributes and character are fixed entities that cannot be changed, and an incremental theory, which is an implicit belief that personal attributes and character are malleable and can be changed. Individuals who subscribe to an entity theory ("entity theorists") are more likely than those who subscribe to an incremental theory ("incremental theorists") to believe that behaviors across different situations are organized around relatively fixed personality traits. Thus, they are more likely to believe that trait-related behaviors are consistent over time, and that behavior observed in a particular situation is a good indication of personality traits (Chiu, Hong & Dweck, 1997a; Hong, Chiu & Dweck, 1997). By contrast, incremental theorists, who believe in a more dynamic nature of human qualities, tend not to focus on enduring traits as organizers of behaviors (Hong et al., 1997).

To extend these findings, we propose that the customary inferential practices associated with an entity versus incremental theory may also be revealed in individuals' perceptions of social groups. Specifically, members of a social group may display similar behavior, probably because of their shared social cultural environment, shared goals, normative expectations, or consensual agreement regarding public display of behaviors. Entity theorists may infer that members of the group who display similar behaviors as possessing similar traits, which characterize the group. Incremental theorists, in understanding group actions, may instead focus more on such mediating psychological processes as the group's shared representations of the intergroup context, collective goal, consensual beliefs and group norms. As such, they are less likely to rely on fixed traits to characterize a social group. Consistent with this idea, several recent studies have shown that entity theorists were more likely than incremental

theorists to display trait-based stereotyping tendency (Hong & Yeung, 1997; Levy, Stroessner & Dweck, 1998), suggesting that entity theorists are more likely than incremental theorists to rely on trait dimensions to characterize a social group.

Accordingly, we hypothesized that entity theorists would engage in relatively extensive trait-based inter-group social comparison to achieve identity inclusiveness or distinctiveness, whereas incremental theorists would be less likely to do so. Specifically, when making social comparison, entity theorists would tend to use trait dimensions to affirm the inclusiveness and distinctiveness of their social identity. That is, entity theorists who identify themselves as Hongkongers would focus more on trait dimensions that differentiate Hong Kong people from Chinese Mainlanders, whereas entity theorists who identify themselves as Chinese would focus more on trait dimensions that differentiate Chinese from non-Chinese (e.g., Westerners). As the day of the handover approached, various intergroup issues were brought out to the front, and intergroup comparisons were more frequently made. We predicted that entity theorists would more clearly display differential focus on trait dimensions as a function of their social identity with the approach of the handover on July 1, 1997.

By contrast, incremental theorists, whom we expected to rely less on trait dimensions, would not be likely to display such differential focus on trait dimensions to achieve identity inclusiveness and distinctiveness, even in the advent of the handover.

## OVERVIEW OF THE PRESENT STUDY

To test these predictions, we performed a longitudinal study on a group of Hong Kong college students, who were recruited in March, 1996 when they were freshmen. Their implicit theories, social identities, and group perceptions were assessed at the beginning of each academic semester thereafter, until they graduated from the universities. This sampling procedure would allow us to trace the change in intergroup relations in a cohort of university students for the whole period of study. The data reported in this paper are from the first three waves of data collection, which took place in March, 1996, and then in September, 1996 and March, 1997 respectively.

Briefly, in each wave of data collection, we assessed in a card sorting procedure the *trait* dimensions that Hong Kong college students used to categorize Hong Kong people and other national groups, including Chinese Mainlanders, as well as the participants' social identities and implicit theories. Because the card sorting task we employed was similar to the one used in Lam et al. (this issue), the dimensions yielded should be comparable to those found in Lam et al.'s study. That is, we may also find a two-



dimensional solution in multidimensional scaling, with the first dimension related to modernity and the second dimension related to Confucian Work Dynamism (i.e., Confucian work ethics). We were interested in how much weight the participants assigned to the two dimensions for categorizing the groups as a function of the participants' self-acclaimed social identity. Specifically we made the following hypotheses:

*Hypothesis 1.* Because the modernity dimension could differentiate Hongkonger positively from Chinese Mainlanders, we expected that entity theorists who identified themselves as primarily Hongkongers would rely more heavily on this dimension than would entity theorists who identified themselves as primarily Chinese.

*Hypothesis 2.* In contrast, because the Confucian Work Dynamism dimension could differentiate Chinese from non-Chinese, we expected that entity theorists who identified themselves as primarily Chinese would rely more heavily on this dimension than would entity theorists who identified themselves as primarily Hongkongers.

*Hypothesis 3.* Such differential tendency would become more noticeable as the day of the handover approached.

*Hypothesis 4.* Incremental theorists, not focusing on the fixed trait dimensions in differentiating the groups, might not display a differential reliance on these dimensions as a function of their social identity.

Should these hypotheses be borne out, it would suggest that *how* individuals make social comparisons in a changing social political context is systematically linked to their construction of the nature of human attributes.

## METHOD

### *Participants*

Two hundred and forty-two (103 males and 139 females, average age = 19.77) Chinese university students were recruited as participants in the first wave of the study, which was conducted in March of 1996. Among them, 216 participants took part in the second wave (conducted in September of 1996) and 208 participants also took part in the third wave (conducted in March of 1997) of the study. The attrition rate was 14%. In return for their participation, the participants were given HK\$40 (US\$5), HK\$45, and HK\$50 in the three waves of the study, respectively.



### Materials

*Implicit Theory Measure* The implicit theory measure (for reliability and validity information of the measure<sup>2</sup>; see also Chiu et al., 1997a; Chiu, Dweck, Tong & Fu, 1997b; Dweck, Chiu & Hong, 1995; Levy et al., 1998) consists of three items: “A person’s moral character is something very basic about them and it can’t be changed much,” “Whether a person is responsible and sincere or not is deeply ingrained in their personality. It cannot be changed very much,” and “There is not much can be done to change a person’s moral traits (e.g., conscientiousness, uprightness and honesty).” Respondents indicate their degree of agreement with each item on a 6-point Likert scale, from 1 (strongly agree), to 2 (agree), 3 (mostly agree), 4 (mostly disagree), 5 (disagree) and 6 (strongly disagree). Unlike individual differences measures that tap generalized needs or cognitive styles, our measure taps one simple, unitary belief. The items are intended to have the same meaning and continued repetition of the same idea becomes bizarre and tedious to the respondents. Thus, only three items are included. Respondents’ implicit theory is indexed by their mean score on these three items. In the present study, participants who scored below 3.50 on the measure were classified as entity theorists ( $N = 97, 113, 125$  for Wave 1, 2, and 3, respectively), and those who score above 3.50 were classified as incremental theorists ( $N = 140, 103, 83$  for Wave 1, 2, and 3, respectively). Internal reliabilities of the measure in the three waves were high (alphas for Wave 1, 2, and 3 are 0.80, 0.78, and 0.74, respectively).

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<sup>2</sup> Previous studies (Chiu et al., 1997b; Dweck et al., 1995) have shown that this scale is a reliable measure, with a high internal reliability ( $\alpha$ 's ranging from .73 to .96). Test-retest reliability for a two-week interval is .82 ( $N=62$ ). As far as the construct validity of the measure is concerned, the measure does not correlate with respondents' scores on academic aptitude tests (Verbal and Quantitative SAT scores), or with standard measures of socially desirable responding (the Paulhus, 1984, Social Desirability Scale) and self-presentation (the Snyder, 1974, Self-Monitoring Scale). This indicates that the measure is not confounded with intellectual ability or self-presentation concerns. Also, it does not correlate with a measure assessing optimism about human nature, the Coopersmith (1967) self-esteem measure, the Altemeyer (1981) Right-Wing Authoritarianism Scale, or the Kerlinger (1984) Measures of Conservatism and Liberalism (see Dweck et al., 1995). Thus, it is not confounded with positivity or negativity about the self and others, or with the respondents' ideological rigidity or political stance. Furthermore, the theories measured do not contain in their definition a processing style component or a motivational component. They are thus distinct from other process-oriented individual differences variables such as personal need for structure (Neuberg & Newsom, 1993), attributional complexity (Fletcher, Danilovics, Fernandez, Peterson & Reeder, 1986), and need for cognition (Cacioppo & Petty, 1982). In a just-completed study by Sheri Levy, the correlation between implicit theories and these other individual differences variables were only between .17 and .24.

*Social Identity Measure.* Whether the participants identified themselves as primarily Chinese or primarily Hongkongers was assessed by a questionnaire. They were asked whether they identified themselves as (a) "Hongkongers", (b) "Hongkongers, only secondarily Chinese", (c) "Chinese, only secondarily Hongkongers", (d) "Chinese", or (e) others.

Previous studies have shown that this measure of social identity is systematically associated with intergroup dynamics. For example, in a survey conducted by The Hong Kong Transition Project (see Hong & Chiu, 1995), respondents ( $N = 3112$ ) selected by random telephone dialing were asked if they could control history, what their preferred political status of Hong Kong after 1997 would be. Respondents who identified themselves as "Hongkongers" were more likely to favor a divergent position (66.6% of them wanted Hong Kong to become a political entity that is separate from China) than an assimilationist position (33.4% wanted Hong Kong to join China). In contrast, respondents who identified themselves as "Chinese" were more likely to favor an assimilationist position (65.9% of them wanted Hong Kong to join China) than a divergent position (34% wanted Hong Kong to become a political entity that is separate from China).

In another study (Hong, Chiu, Wong, Fu & Lee, 1996b), 219 Hong Kong college students' social identity was assessed. In addition, they were asked to indicate (a) whether they were proud to be a Chinese, and (b) whether they were proud to be a Hong Kong person. Respondents who identified themselves as Hongkongers were most proud of being a Hong Kong person while respondents who identified themselves as Chinese were least proud of being a Hong Kong person. In contrast, respondents who identified themselves as Chinese were most proud of being a Chinese while respondents who identified themselves as Hongkongers were least proud of being Chinese. In short, respondents' social identity was systematically associated with their self-reported feelings.

Taken collectively, past research has shown that the social identity measure is a useful measure for studying Hong Kong people's self-categorization in the face of 1997. To simplify the design of the present study, participants who identified themselves as "Hongkongers" ( $N = 42, 29, 21$  for Wave 1, 2, and 3, respectively) or "Hongkongers, only secondarily Chinese" ( $N = 97, 116, 113$  for Wave 1, 2, and 3, respectively) were classified into the Hongkonger social identity group, whereas subjects who chose to identify themselves as "Chinese" ( $N = 23, 11, 10$  for Wave 1, 2, and 3, respectively) or "Chinese, only secondarily Hongkongers" ( $N = 56, 49, 51$  for Wave 1, 2, and 3, respectively) were classified into the Chinese social identity group. Moreover, since only a relatively small proportion of participants identified themselves as "Chinese", classifying the participants into four groups would yield some cells that had too few participants in them. In short, the present study used a  $2 \times 2$  (Implicit Theory  $\times$  Social Identity) design.

*Intergroup Perception Measure.* To assess the trait-based dimensions on which participants evaluated Chinese Mainlanders, Hong Kong people and other social groups, a card sorting task was used. On the task, participants were asked to use 24 trait attributes to describe people from Hong Kong and six other countries: Mainland China, Taiwan, Thailand, Japan, U.K., and the United States of America. The countries were chosen to include Asian, American and European countries or areas, and countries or areas with a more and less developed economy. The 24 trait attributes included traits in six domains that have been identified in past research to be important in intergroup comparisons and comparisons of different national groups (Chinese Cultural Connection, 1987; Gibbons, 1987; Hofstede & Bond, 1988). Specifically, two traits representing each of the two poles of the six domains were used: solidarity (kind, altruistic, *dishonest, unfriendly*; traits in italics represent the contrary pole of the domain), status (successful, respectable, *unstylist, ignorant*), Chineseness (filial, adherent to Chinese tradition, *individualistic, Westernized*), instrumental work motivation (flexible, adherent to modern management, *inefficient, ambitionless*), political openness (rights-conscious, democratic, *politically conservative, authoritarian*) and social conscientiousness (polite, law-abiding, *disorderly, not civic-minded*).

### *Procedures*

In each wave of the study, participants were individually asked to perform the intergroup perception task. They were told that the task aimed at examining how they perceived people from different areas or countries. Then, they were presented with the 24 attributes and were asked to judge whether each of these attributes could be used to describe people from Thailand, Taiwan, the United States, Mainland China, Japan, U.K., and Hong Kong. They were told that there was no limit on the number of attributes they could use, i.e., they could use none or up to 24 attributes to describe each target group. To ensure that they understood the procedure, they were given a practice trial. In the sorting task itself, participants were asked to consider the applicability of the 24 attributes for one target group at a time. After the sorting task, they filled out the implicit theories measure and the social identity measure embedded in a battery of other questionnaires.

## RESULTS

### *Shifts in Implicit Theories and Social Identities Over Time*

We did not make predictions concerning the shifts in implicit theories and social identities over the one and a half year testing period, although

some changes were found. Thirty-seven percent of the participants changed their implicit theory endorsements. While 47% of the participants who endorsed an incremental theory in Wave 1 changed to endorse an entity theory in Wave 3, 23% of the participants who endorsed an entity view in Wave 1 changed to endorse an incremental theory in Wave 3.

Participants' social identities, however, were relatively stable: only 22% of them changed between the Hongkonger or primarily Hongkonger category, and the Chinese or primarily Chinese category over the 1.5 years period. Social identity change was more apparent within the Hongkonger or primarily Hongkonger category and within the Chinese or primarily Chinese category: 63% of the participants who identified themselves as "Hongkongers" in Wave 1 changed to "Hongkonger, only secondarily Chinese" in Wave 3; 39% of the participants who identified themselves as "Chinese" in Wave 1 changed to "Chinese, only secondarily Hongkonger" in Wave 3. It is interesting to note that very few people (only 7%) changed from a mixed identity (i.e., "Hongkonger, only secondarily Chinese," or "Chinese, only secondarily Hongkonger") to a unitary identity (i.e., "Hongkonger" or "Chinese"). In short, social identity changes between these two categories were relatively infrequent. Most social identity changes occurred within the "Hongkonger" and "Hongkonger, only secondarily Chinese" or within the "Chinese" and "Chinese, only secondarily Hongkonger."

Changes in social identities had no systematic relationships with the participants' implicit theories at Wave 1, 2 or 3. The distribution of the four types of individuals in the three waves were:  $N = 57$  entity-Hongkongers, 24 entity-Chinese, 80 incremental-Hongkongers, 50 incremental-Chinese, in Wave 1 (31 subjects chose the "other identity" option or did not respond to the question);  $N = 78$  entity-Hongkongers, 31 entity-Chinese, 67 incremental-Hongkongers, 29 incremental-Chinese in Wave 2 (11 subjects chose the "other identity" option or did not respond to the question);  $N = 83$  entity-Hongkongers, 35 entity-Chinese, 51 incremental-Hongkongers, 26 incremental-Chinese in Wave 3 (13 subjects chose the "other identity" option or did not respond to the question).

Interestingly, among the "Hongkongers" who believe in an incremental theory in Wave 1, 48% changed to believe in an entity theory in Wave 3. Among the "Chinese" who believe in an incremental theory in Wave 1, 35% changed to believe in an entity theory in Wave 3. Changes in the opposite direction were less drastic. Only 19% of entity-Hongkongers in Wave 1 changed to incremental-Hongkongers in Wave 3, and 19% of entity-Chinese in Wave 1 changed to an incremental-Chinese in Wave 3. We will discuss these findings further in the Discussion.

### *Perceptual Dimensions*

For each participant, we computed the perceptual distance of each pair of target social groups by counting the number of times both groups were described as having the same value on a trait (either that both groups possessed the trait or that both groups did not possess the traits) and the number of times the two groups were described as having different values on the same trait (only one group possessed the trait and the other one did not). The first number was subtracted from the second number. This allowed us to construct a distance matrix for the target groups based on each participant's trait judgements.

The distance matrices were submitted to individual differences multi-dimensional scaling (INDSCAL). The analyses revealed that for each wave, a two-dimensional solution would yield an optimal  $R^2$  (0.45 in Wave 1, 0.47 in Wave 2, and 0.45 in Wave 3), suggesting that a two-dimensional solution was the optimal solution for the data from each wave.

Furthermore, the coordinates of the seven target groups on the two dimensions in the three waves were almost identical: The correlations among target groups' coordinates on Dimension 1 in Waves 1, 2 and 3 all equalled 0.98, and the corresponding correlations for Dimension 2 ranged from 0.96 to 0.97. Thus, the configuration plots of the seven target groups on the two dimensions yielded in the three waves were almost identical, as represented by Figure 1.

Since a previous study has shown that economic wealth and Chinese work dynamism are two dimensions Hong Kong people often use to characterize various social groups (Lam, et al., this issue), to interpret the two dimensions in the present study, the coordinates of the target groups were correlated with the target group's gross national product per capita in 1997, their gross domestic product per capita in 1997, as well as their scores on the Confucian Work Dynamism index (reported in Hofstede & Bond, 1988). As in Lam et al. (this issue), Dimension 1 correlated highly with Gross National Product per capita in 1997,  $r = 0.92$ , and Gross Domestic Product per capita in 1997,  $r = 0.80$ , suggesting that Dimension 1 could be interpreted as a dimension of economic wealth. As shown in Figure 1, Chinese Mainlanders were rated lowest on this dimension, whereas Hong Kong people, together with such relatively wealthy groups as Americans, British, and Japanese ranked quite highly on this dimension.

We also computed the correlations between the coordinates on Dimension 1 and the total number of participants who attributed a particular trait to a target group. The results suggested that Dimension 1 was positively associated with the traits *respectable* ( $r = 0.93$ ), *Westernized* ( $r = 0.88$ ), *individualistic* ( $r = 0.83$ ), *democratic* ( $r = 0.88$ ), *rights-conscious* ( $r = 0.86$ ), *polite* ( $r = 0.76$ ), and *altruistic* ( $r = 0.76$ ), and negatively associated with the traits *ignorant* ( $r = -0.79$ ), *unstylish* ( $r = -0.87$ ), *politically con-*

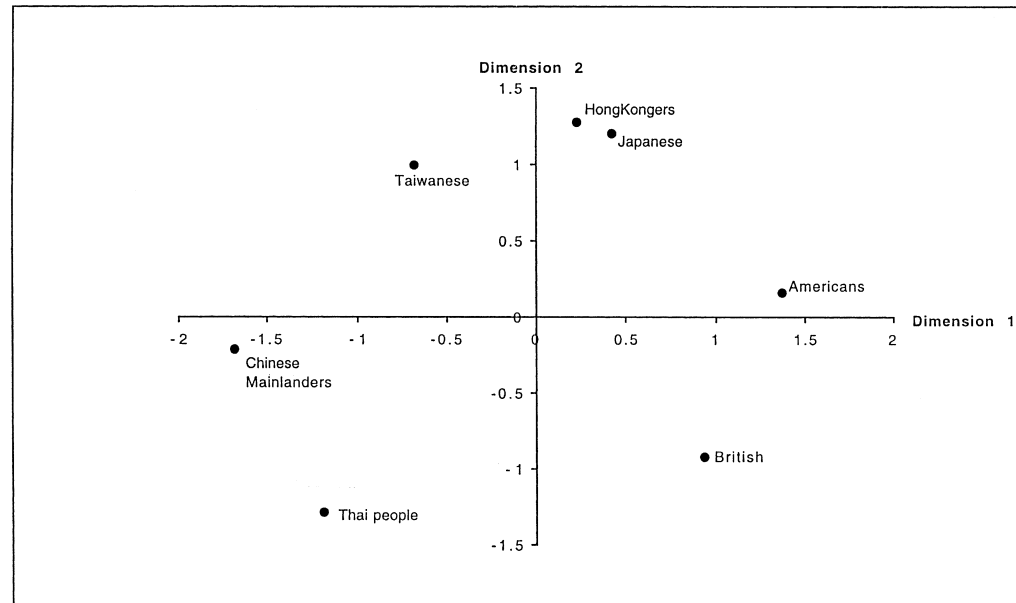


FIGURE 1. Configuration Plots of Seven Target Groups on Dimensions 1 and 2 for Wave 1.

*servative* ( $r = -0.81$ ), *not civic-minded* ( $r = -0.80$ ), *disorderly* ( $r = -0.89$ ) and *unfriendly* ( $r = -0.70$ ). Thus, participants who used this dimension to categorize the seven social groups also perceived Hong Kong people as similar to other relatively economically accomplished groups in terms of their shared higher social status, Western outlooks, democratic beliefs, and social conscientiousness. These participants also saw Chinese Mainlanders as different from Hong Kong people and other relatively wealthy countries because of Chinese Mainlanders' lower status, traditionalism, political conservatism, and lack of civic consciousness.

Unlike the findings in Lam et al. (this issue), Dimension 2 of the present study correlated only moderately with the Confucian Work Dynamism Index ( $r = 0.65$ ,  $p > 0.05$ ). However, it correlated significantly with the number of participants who attributed the following traits to the target countries: *flexible* ( $r = 0.83$ ), *adherent to modern management* ( $r = 0.80$ ), *inefficient* ( $r = -0.82$ ), and *ambitionless* ( $r = -0.83$ ). Thus, Dimension 2 seems to be related to instrumental work motivation. To further understand Dimension 2, we first asked seven graduate students to generate attributes that would distinguish the countries high on Dimension 2 from those that were low on it. Eleven attributes were generated: *poor*, *prosperous*, *wealthy*, *hardworking*, *persistent*, *aggressive*, *money-minded*, *materialistic*, *leisurely*, *energetic*, and *lazy*. Then, another 17 students rated the extent to which these attributes could be used to describe people from each of the seven target countries, using a 6-point scale from 1 (not at all), to 6 (very much). The seven countries' coordinates on Dimension 2 correlated significantly with the average ratings of the countries on the following eight attributes: *poor* ( $r = -0.82$ ), *prosperous* ( $r = 0.89$ ), *wealthy* ( $r = 0.85$ ), *hardworking* ( $r = 0.79$ ), *persistent* ( $r = 0.78$ ), *aggressive* ( $r = 0.86$ ), *money-minded* ( $r = 0.94$ ), and *materialistic* ( $r = 0.94$ ).

As shown in Figure 1, people from Hong Kong, Japan, and Taiwan were high on Dimension 2, whereas Chinese Mainlanders were at the middle of the dimension, and the British and Thai people were low on the dimension. Participants who used this dimension to categorize the target groups saw similarities between Hong Kong people and the people from the emerging economic powers in East Asia in terms of their wealth, but these participants also felt that the prosperity had brought to people in these countries a psychological fixation on money and materialistic well-being. They might also believe that Mainland people and other less wealthy groups have managed to positively distinguish themselves from the rapidly growing East Asian groups by being less materialistic and worldly in their life practices.

#### *Implicit Theories, Social Identity and Intergroup Perception*

We predicted that entity theorists would tend to engage in trait-based social comparison within the framework set up by their social identity.



According to this prediction, entity theorists with a Hongkonger identity should assign more weight to Dimension 1 than entity theorists with a Chinese identity (Hypothesis 1), who would in turn assign more weight to Dimension 2 (Hypothesis 2). As incremental theorists were expected to be less likely to engage in trait-based social comparison to affirm the inclusiveness and distinctiveness of their social identities, the weights they assigned to the two dimensions should be independent of their social identities (Hypothesis 4). In other words, we predicted an Implicit Theory  $\times$  Social Identity  $\times$  Dimension interaction. Moreover, as the differential tendency to engage in trait-based social comparison should become more salient as the day of the handover approached, the effect size of the three-way interaction should increase from Wave 1 to Wave 2 and Wave 3 (Hypothesis 3).

To test these predictions, we used the standardized weights each participant assigned to the two dimensions as computed from the INDSCAL solution as dependent variables. Because an appreciable proportion of the participants changed either their implicit theory or their social identity in the course of this three-wave study, instead of using a four-way ANOVA with time as repeated-measure factor, we tested our predictions by performing a separate 2 (Theory: entity vs incremental)  $\times$  2 (Social Identity: Hongkonger vs Chinese)  $\times$  2 (Dimension: dimension 1 vs dimension 2) ANOVA on the data from each wave.

The results are largely consistent with our predictions. The predicted Implicit Theory  $\times$  Social Identity  $\times$  Dimension interaction, although not significant in Wave 1,  $F(1,207) = 0.72, p = 0.40, MSE = 1.08$ , was marginally significant in Wave 2,  $F(1,201) = 3.67, p = 0.06, MSE = 1.08$ , and statistically significant in Wave 3,  $F(1,191) = 4.66, p = 0.03, MSE = 0.94$ .<sup>3</sup>

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<sup>3</sup> No effects reached or approached significance in Wave 1. In Wave 2, aside from the close-to-significant three-way interaction, no other effects reached or approached significance. In Wave 3, in addition to the significant three-way interaction, the Social Identity  $\times$  Dimension interaction was also significant,  $F(1, 191) = 4.47, p < .05$ . Similar to what Lam et al. (this issue) found, participants with a Hongkonger identity assigned a greater weight to Dimension 1 ( $M = 0.12, S.D. = 1.02$ ) than did participants with a Chinese identity ( $M = -0.26$  and  $S.D. = 0.88$ ),  $F(1, 193) = 6.34, p < .05$ . The weights assigned to Dimension 2, however, were not related to the participants' social identities,  $F(1, 193) = 1.36, ns$ . The Implicit Theory  $\times$  Dimension interaction also approached significance,  $F(1,191) = 3.73, p = .06$ . Compared to incremental theorists, entity theorists assigned a greater weight to Dimension 1 ( $M = 0.11$  and  $S.D. = 1.02$  vs  $M = -0.17$  and  $S.D. = 0.94$ ),  $F(1,206) = 3.98, p < .05$ , and a smaller weight to Dimension 2 ( $M = -0.12$  and  $S.D. = 1.00$  vs  $M = 0.18$  and  $S.D. = 0.98$ ),  $F(1,206) = 4.40, p < .05$ . Note that the simple main effect for entity theorists was qualified by the significant Social Identity  $\times$  Dimension interaction. For incremental theorists, however, the Social Identity  $\times$  Dimension interaction was not significant. That is, incremental theorists placed more importance on Dimension 2 than on Dimension 1, regardless of their social identity. Since Dimension 2 portrayed Chinese Mainlanders more favorably than did Dimension 1, we speculated that incremental theorists in general had relatively favorable perceptions of Chinese Mainlanders in Wave 3.

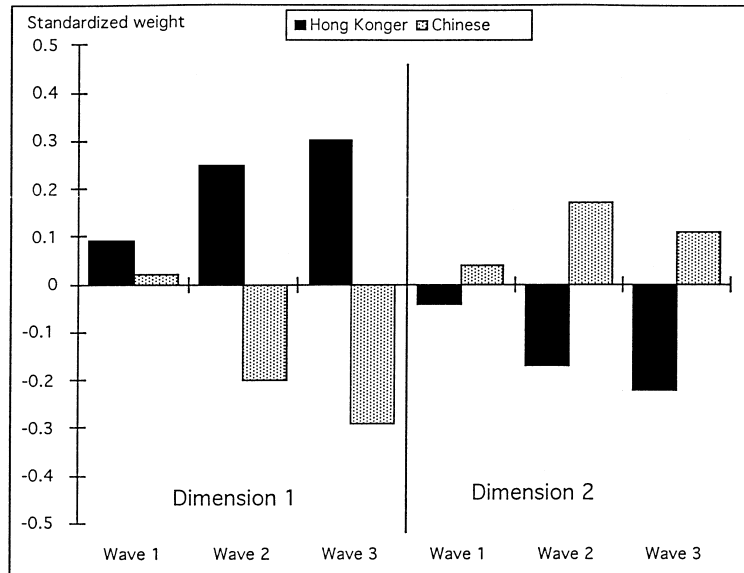
The close-to significant three-way interaction in Wave 2 was accounted for largely by the significant Social Identity  $\times$  Dimension interaction among entity theorists,  $F(1,107) = 6.23$ ,  $p < 0.05$ ,  $MSE = 1.12$ , and the nonsignificant Social Identity  $\times$  Dimension interaction among incremental theorists,  $F(1,94) = 0.05$ , ns,  $MSE = 1.03$ . As shown in Figure 2, entity theorists who identified themselves as Hongkongers assigned a greater weight to Dimension 1 than did entity theorists who identified themselves as Chinese ( $M = 0.25$  and S.D. = 1.04 for entity theorists who identified themselves as Hongkongers and  $M = -0.20$  and S.D. = 0.81 for entity theorists who identified themselves as Chinese),  $F(1,107) = 4.65$ ,  $p < 0.05$ . This pattern of findings supported Hypothesis 1.

Similarly, the significant three-way interaction in Wave 3 was accounted for largely by the significant Social Identity  $\times$  Dimension interaction among entity theorists,  $F(1,116) = 9.90$ ,  $p < 0.05$ ,  $MSE = 1.03$ , and the nonsignificant Social Identity  $\times$  Dimension interaction among incremental theorists,  $F(1,75) = 0.00$ , ns,  $MSE = 0.77$ . As shown in Figure 2, the difference on the weight assigned to Dimension 1 between entity theorists who identified themselves as Hongkongers and entity theorists who identified themselves as Chinese was further accentuated in Wave 3 ( $M = 0.29$  and S.D. = 1.05 for entity theorists who identified themselves as Hongkongers and  $M = -0.29$  and S.D. = 0.86 for entity theorists who identified themselves as Chinese),  $F(1,116) = 8.18$ ,  $p < 0.005$ . Again, this pattern of findings supported Hypothesis 1.

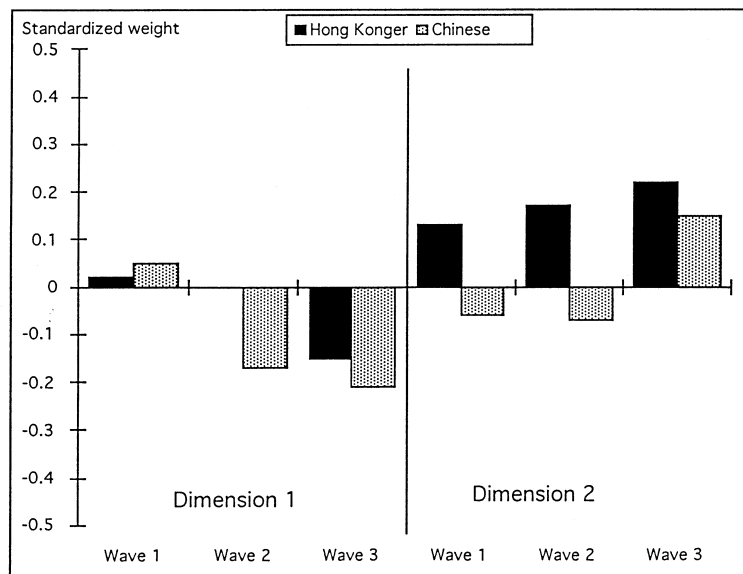
To test Hypothesis 2, the weight assigned to Dimension 2 were examined. In both Waves 2 and 3, there was a nonsignificant trend for entity theorists who identified themselves as Hongkongers to assign a smaller weight to Dimension 2 than did entity theorists who identified themselves as Chinese. In Wave 2,  $M = -0.17$  and S.D. = 0.93 for entity theorists who identified themselves as Hongkongers and  $M = 0.17$  and S.D. = 1.10 for entity theorists who identified themselves as Chinese,  $F(1,107) = 2.71$ ,  $p = 0.10$ . In Wave 3,  $M = -0.22$  and S.D. = 1.03 for entity theorists who identified themselves as Hongkongers and  $M = 0.11$  and S.D. = 0.97 for entity theorists who identified themselves as Chinese,  $F(1,116) = 2.74$ ,  $p = 0.11$ . This pattern of findings, although not statistically significant, is consistent with Hypothesis 2. The effects on Dimension 2 were comparatively weaker than those on Dimension 1, probably because Dimension 2, which pitted emerging Asian economic powers (including Japan) against other groups, might not be the best dimension for achieving a sense of inclusiveness with Chinese in different countries or areas and a sense of distinctiveness from non-Chinese.

Furthermore, to test Hypothesis 3, the effect sizes of the predicted Implicit Theory  $\times$  Social Identity  $\times$  Dimension interactions in the three waves were compared. As predicted, the effect size increased from 0.06 to 0.18 and 0.22 in Waves 1, 2, and 3, respectively. This increase was

Entity Theorists



Incremental Theorists



**FIGURE 2. The Mean Standardized Weights of the Four Implicit Theory  $\times$  Social Identity Groups on Dimensions 1 and 2 in Waves 1, 2 and 3.**

accounted for largely by the fact that, as the day of the handover approached, entity theorists who identified themselves as Hongkongers assigned increasingly more weight to Dimension 1 than did entity theorists who identified themselves as Chinese.

Finally, as noted, the Social Identity  $\times$  Dimension interactions were not significant for incremental theorists in any of the waves. Incremental theorists, as we predicted in Hypothesis 4, did not assign weight to Dimension 1 and 2 as a function of their social identities.

## DISCUSSION

The findings supported Hypotheses 1, 3, and 4. Hypothesis 2 was only partially supported as the predicted social identity effects on Dimension 2 were in the right direction but were not statistically significant for entity theorists. The major findings was that entity theorists tended to engage in social comparison within the frame of reference set up by their social identity. In both Waves 2 and 3, entity theorists with a Hongkonger identity relied more on Dimension 1 than did entity theorists with a Chinese identity. Furthermore, as the day of the handover approached, there was an increasingly greater tendency for entity theorists who identified themselves as Hongkongers to employ Dimension 1 for social comparison, so that their similarity with the relatively economically accomplished groups and their dissimilarity with the relatively economically backward Chinese Mainlanders could be enhanced. By contrast, incremental theorists did not display a systematic relationship between their social identity and the weight given to trait-based social comparison dimensions.

This pattern of findings suggests that entity theorists, believing that human attributes and character are fixed, may view social groups as entities, i.e., possess some coherent, homogeneous, and fixed attributes. With this perception, they may select trait-based dimensions that would allow them to achieve optimal distinctiveness in social comparison. By contrast, incremental theorists, believing that human attributes and character are malleable, may focus more on the dynamic aspects of social groups (group goals, norms, aspirations), and may thus find trait-based dimensions less useful for them to achieve optimal distinctiveness in social comparison.

Social Identity Theory (Tajfel & Turner, 1979) has also addressed how people's beliefs could be linked to different intergroup relations. The theory identified two different belief systems: the social mobility belief system and the social change belief system (see Hogg & Abrams, 1988). People who possess a social mobility belief system believe that intergroup boundaries are permeable, and that it is possible for people to move between groups.

Members of a low-status group who subscribe to this belief may try to leave their group and pass into a higher status group. In contrast, people who possess a social change belief system believe that intergroup boundaries are impermeable, and that it is difficult for people to move from a low- to a high-status group. Holding this belief, members from a low-status group may either search for new forms of social comparison that would put their group in a better light, at least psychologically, or to rectify the status inequality through group actions (such as revolution and war).

Note that the social identity approach and our approach focus on different aspects of intergroup relations. The social identity approach links the permeability belief to the assimilation vs divergence intergroup orientation, which is an important aspect of intergroup relations. However, our approach focuses on the link between the malleability belief and the type of social comparison dimension a person would use to achieve identity inclusiveness and distinctiveness. We assume that both entity and incremental theorists may seek for identity inclusiveness and distinctiveness. However, the preferred social comparison dimensions for achieving such objectives differed for the two theory groups. Entity theorists, believing in fixed traits, tend to focus more on global traits, whereas incremental theorists, not believing in fixed traits, have a lesser tendency to categorize groups by traits. This prediction has received some empirical support in the present study. We also proposed that incremental theorists focus more on dynamic group process than do entity theorists in social comparison. This proposal, which was not tested in the present study, merits empirical attention in future research.

Whether Hong Kong people would adopt an assimilationist or divergent orientation in their interaction with Chinese Mainlanders is an issue beyond the scope of the present paper. As a digression, it is important to note that the predictions from the social identity approach predicated on the assumption that the Hongkonger group occupies a lower status than does the Chinese Mainlander group. However, it is unclear whether or not Hong Kong people consider themselves to be a low status group (Chiu & Hong, this issue). On the one hand, a majority of Hong Kong people believe that they were superior to Chinese Mainlanders (Ho, Chau, Lam & Lee, 1995; Lam et al., this issue). However, in terms of political power and linguistic vitality, the Chinese Mainlanders could be considered the high status group. The relative dominance of the assimilationist vs divergent orientation among Hong Kong people in the post-1997 era thus depends largely on the distribution and re-distribution of social, economic, and political power between Hong Kong people and Chinese Mainlanders after the transition.

This analysis suggests a number of interesting issues for further research: First, what are the relationship between the permeability belief and the

malleability belief? Second, how may these two beliefs interact to affect intergroup relations?

Although we have focused on implicit beliefs as predictors of intergroup perceptions, it is important to point out that such beliefs are also social constructions. As such, an individual may revise his or her beliefs when the social conditions change. For example, in our study, we observed that in the advent of the handover, when contacts and conflicts between Hong Kong people and Chinese Mainlanders became more frequent, an appreciable proportion of Hong Kong people might begin to "see" some stable attributes in members of the two groups. Our findings indicated that as the handover approached, more participants changed from an incremental theorist to an entity theorist than did the other way round. These findings are consistent with the social identity approach's emphasis on how the immediate social context may effect belief changes. As Hogg & Abrams (1988) pointed out, "[the social identity theory] treats categorization and social comparison as psychological processes which provide the parameters within which sociohistorical factors, or more accurately, subjective understandings of those factors operate." (p. 54) An interesting implication is that a change to an entity belief may foster an entitativity view of social groups, which in turn may reinforce favorable comparison of one's own social group on fixed traits.

#### EXTENSIONS, IMPLICATIONS AND CONCLUSION

Although the present article focused on the social comparison processes, our analysis can be applied to other group processes as well. Recently, Brewer & Harasty (1996) have described in detail the possible perceptual, self-regulatory and motivational consequences that are more associated with a group entitativity assumption than with a group dynamics assumption. Regarding group perception, an entity representation of social groups is related to exaggeration in the perceived homogeneity of a group with respect to the defining attribute of the group (e.g., "Almost all Hong Kong Chinese are smart and efficient." or "Almost all Chinese Mainlanders are ignorant.") (Hong & Chiu, 1997, Study 1; see also Brewer & Harasty, 1996). Also, with an entitativity representation, individuals are also likely to have stereotypical perceptions of group members. Since a group is a "real" entity, group membership and its associated stereotypical attributes could be used as a valid basis for judging individual members of a group (Hong & Chiu, 1997, Study 3; cf. Oakes, Turner & Haslam, 1991).

In addition, when social groups are seen as real entities, group memberships may be seen as important bases for defining the self. In this respect, Hong & Chiu (1997, Study 4) have shown that some individuals may use a social category and its associated normative expectations as self-guides. Such individuals feel that their group identities are important

for organizing their goals, obligations, aspirations, beliefs, values and life-style.

Once social categories are represented as entities, not only can group membership be used as a heuristic for judging others and for regulating the self, it could also be used as an action guide. There is ample evidence to suggest that individuals who treat groups as entities tend to use group membership as a criterion for reward and punishment allocation (Hong & Chiu, 1997, Studies 1 and 2; Hong et al., 1996a).

In short, an entitative representation of a group seems to be associated with a number of interesting group processes. We posit that such group processes may also be related to implicit theories about the malleability of personal attributes. Indeed, we have recently obtained evidence that Hong Kong people who subscribe to an entity theory have a greater tendency to perceive Chinese Mainlanders as a homogeneous group, and to stereotype and discriminate against Chinese Mainlanders (Hong & Chiu, 1997). It thus appears that an entity belief is associated with a more rigid, global (evaluative) perceptions of the Chinese Mainlander group, as well as more prejudicial and discriminatory practices against them. Civic education that highlights the malleability of personal attributes and dynamic group processes may help change some Hong Kong people's entity beliefs of individuals and groups. Such changes in beliefs may in turn result in better intergroup relations after 1997.

To conclude, the present research suggests that many of the group processes social psychologists have studied maybe organized around the assumptions individuals make about social groups, which are in turn linked to individuals' beliefs about human nature.

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