

ACCEPTED VERSION—CHILD DEVELOPMENT

Learning and Socializing Preferences in Hong Kong Chinese Children

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Abstract

The impact of social group information on the learning and socializing preferences of Hong Kong Chinese children were examined. Specifically, we investigated the degree to which variability in racial outgroup exposure affects children's use of race to make decisions about unfamiliar individuals (Chinese, White, Southeast Asian). Participants (N = 212; mean age: 60.51 months) chose functions for novel objects after informants demonstrated their use; indicated with which peer group member to socialize; and were measured on racial group recognition, preference, and identification. Overall, children preferred ingroup members, though outgroup exposure and the relative social status of outgroups mattered as well. At a young age, children's specific experiences with different races influence how they learn and befriend others across racial-group lines.

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Social interactions shape how children learn from and identify with others. By the time they enter preschool, children are highly selective, using numerous cues to determine trustworthiness (Harris, 2012; Harris & Koenig, 2006; see Corriveau & Harris, 2010b, and Mills, 2013 for reviews). Children attend to epistemic (e.g., previous accuracy; S. Birch, Vauthier, & Bloom, 2008; Corriveau & Harris, 2009a; Corriveau & Harris, 2009b; Jaswal & Neely, 2006) and social cues (e.g., consensus; Corriveau, Fusaro, & Harris, 2009; Corriveau & Harris, 2010a; Corriveau, Kim, Song, & Harris, 2013; DiYanni, Corriveau, Kurkul, Nasrini, & Deniela, 2015). The deliberate use of these cues is impacted by children's awareness of the social groups to which the informants belong, such as race (Chen, Corriveau, & Harris, 2011; 2013). Here, we examine how exposure to social *outgroups* may influence children's learning and socializing preferences. We measure racial group preferences in Hong Kong, where children of Chinese descent are exposed regularly to members of two racial outgroups (White, Southeast Asian) within two different contexts—home and school.

The ability to use social group information is an early-emerging skill (Kinzler & Spelke, 2011). By preschool, children show a robust implicit preference, comparable to adults, for their own racial *ingroups* over outgroups (Dunham, Chen, & Banaji, 2013; Qian et al., 2016). Children also show explicit social preferences for social ingroups based on gender and age (Shutts, Banaji, & Spelke, 2010). These ingroup preferences are especially prevalent among racial majority children (Dunham et al., 2013; Kinzler & Spelke, 2011).

The degree to which children prefer their social ingroup members depends on their respective ingroups. Gaither et al. (2014) found that White American children aged 3 to 8 years preferred to learn from and socialize with racial ingroup over outgroup (Black, Asian) adults and

children, respectively. However, monoracial Black American and Asian American children showed no preference for their racial ingroup. Similarly, other research has demonstrated that Black preschool and early-elementary school-aged children in South Africa show no preference for members of their racial ingroup (Shutts, Kinzler, Katz, Tredoux, & Spelke, 2011), and that racial minority children in the United Kingdom are less likely to choose ingroup members as playmates (Leman & Lam, 2008). This lack of racial ingroup preference may be attributed to children's awareness of relative social group status. For instance, children from South Africa (Olson, Shutts, Kinzler, & Weisman, 2012) and the U.S. (Shutts, Brey, Dornbusch, Slywotsky, & Olson, 2016) are more likely to categorize White families as having wealth—an indicator of social status—than Black families.

To date, research has largely focused on how young children from high-status majority groups and from lower-status minority outgroups evaluate one another. Less is known about children who belong to a majority social group that may not occupy the highest social status (but see Shutts et al., 2011). Thus, we examine Chinese children born and raised in Hong Kong, a Special Administrative Region in the People's Republic of China. The majority (94%) of Hong Kong residents identify as racially Chinese (Census and Statistics Department, 2012), and are often exposed to two other racial groups at home and school—one low-status group (Southeast Asian) due to Hong Kong's current policy of hiring Filipino or Indonesian domestic workers (Cortés & Pan, 2013) and one high-status group (White) because of its past as a British colony (Guan et al., 2011).

One in three Hong Kong households with young children employs a domestic worker, who usually lives full-time in the same residence (Cortés & Pan, 2013; Groves & Lui, 2012). These workers can substantially impact children's development. Previous work has shown that

their caregiving style, especially perceived warmth and control, relates to children's social competence, such as their ability to communicate with adults (e.g., Ip, Cheung, McBride-Chang, & Chang, 2008). Additionally, before British colonization ended in 1997, approximately 80% of the secondary schools used English as the main language of instruction (Chiu & Hong, 1999). Currently, kindergartens still determine their main language of instruction. In international kindergartens (10.6% of Hong Kong kindergartens; Ng, Sun, Lau, & Rao, 2017), students (the majority of whom are Chinese) receive English language instruction, often provided by White teachers, along with their Cantonese lessons (R. Wong, Perry, MacWhinney, & I. Wong, 2013). By contrast, local kindergartens (89.4% of kindergartens; Ng et al., 2017) typically employ all Chinese teachers and only use Cantonese for instruction (Education Bureau, 2015). Such variability in racial outgroup exposure, at home and at school, may differentially influence children's preferences.

Consistent with past research on children's understanding of social group information (e.g., Gaither et al., 2014; Shutts et al., 2010; 2011), we focused on preschool children, allowing us to examine their consideration of social groups once they formally enter school. Because these children are members of the racial majority, we expected that they would exhibit a robust ingroup preference when choosing from whom to learn and with whom to socialize (*race hypothesis*; e.g., Dunham et al., 2013). Second, we predicted that children would be sensitive to the social status of their ingroup relative to other groups, and that their ingroup preference would be stronger against a lower-status outgroup than against a higher-status group (*status hypothesis*). Finally, we anticipated that children would consider their familiarity with outgroup members when exhibiting their preferences for ingroup members, showing less ingroup bias—especially when choosing from which adult (ingroup versus outgroup) to learn—if they interacted regularly

with White teachers at school or with Southeast Asian domestic workers at home (*familiarity hypothesis*).

Method

Participants

Hong Kong Chinese children ($N = 212$; 105 female; M_{age} : 60.51 months, $SD = 7.21$ months; age range: 48-78 months) in their second or third (final) kindergarten year were recruited. Parents who shared family income information ($n = 190$) identified as high-income (18.9%), middle-income (59.5%), and low-income (21.6%). Most families reported living in communities inhabited by Chinese residents (83.5%); and for nearly all families (98%), their child's closest friend was racially Chinese. Children from two types of kindergartens (local, international) and from two kinds of families (with domestic workers or without) were included (see Table 1). A power analysis showed a sample size of 36 participants for each of the four groups, or 144 participants in total, would be sufficient (n determined by F -test with $df = 4$, a medium effect size, $f = .25$, and $\alpha = .05$; see Cohen, 1992). Although there were fewer participants in two of the groups (international schoolchildren raised with no domestic workers and local schoolchildren raised with domestic workers), post-hoc analyses using G*Power (Faul, Erdfelder, Lang, & Buchner, 2007) revealed that we had 95.1% power to detect a medium effect size, $f = .25$.

Materials

The *learning preferences task* included two pairs of female adult informants wearing differently-colored t-shirts, each consisting of a racial ingroup (Chinese) member paired with an outgroup (White, Southeast Asian) member. They sat at a table with neutral affect and silently demonstrated a novel object function (see Table 2).

In the *socializing preferences task*, 4 pictures of children (matched for participant age and gender) were shown; 2 pictures depicted Chinese children, and 2 pictures depicted outgroup members (White, Southeast Asian). Children were shown in Chinese-outgroup pairs, either with novel objects (see Table 3 for the novel labels of the objects) or with a question.

Procedure

Parents completed a questionnaire to provide family background information, including income, racial composition of the home, domestic worker presence, and children's native language. Children viewed the following two tasks on a laptop (see Gaither et al., 2014; Kinzler, Corriveau, & Harris, 2011).

Learning preferences task. Children completed 8 *learning preferences* trials. In one set of 4 trials, a Chinese informant was paired with a White informant; the other 4 trials consisted of a different Chinese informant paired with a Southeast Asian informant. The right and left position of the informants and the order of trial sets were counterbalanced.

A Hong Kong Chinese experimenter presented a novel object to the participant and said in Cantonese, "In this video, two people will show you how to use this toy. Do you know what this toy does? I don't know what this toy does, so let's see what they think." Children watched the informants silently perform different functions for the object. Next, the experimenter paused the video, repeated the actions, and asked, "Can you show me how you would use this toy?" Immediately following the fourth trial, participants were shown a still frame of both informants and were asked: a) if they recognized differences between the two informants, other than shirt color (*recognition*); b) if they liked one informant more than the other (*preference*); and c) if they were more like one informant than the other (*identification*). The same three questions were posed again after the eighth trial.

Socializing preferences task. Next, children completed 8 *socializing preferences* trials. In one set of 4 trials, a same-aged Chinese peer was presented with a White peer; in the other set of 4 trials, a different Chinese peer was paired with a Southeast Asian peer. Set order and peer position were counterbalanced.

Within each set, participants viewed two types of trials. In the former, the two children were matched with two different novel objects. The experimenter described each child's preference, "This girl likes to play *gung-gung*. *Gung-gung* is her favorite toy. That girl likes to play *sung-sung*. *Sung-sung* is her favorite toy. Would you like to play *gung-gung* like this girl, or *sung-sung*, like that girl?" Participants then selected one of the objects. In the latter, participants viewed pictures of two children along with a question (e.g., "If you have a secret, who would you want to share it with?"). Following each trial type, participants were asked the same recognition, preference, and identification questions as in the learning preferences task.

Results

Learning preferences

Scores on the learning preferences task represent the number of trials (maximum = 8) where the participant endorsed the label provided by the Chinese informant. Overall, children were above chance (= 4) in preferring to learn from the Chinese informant over the outgroup informant ($M = 4.27$, $SD = 1.45$), $t(211) = 2.75$, $p = .007$, $d = .38$.

Table 1 displays the proportion of children's ingroup learning preferences by kindergarten type, domestic worker presence, and outgroup informant race, with comparisons to chance levels. Whereas children from local schools without a domestic worker at home displayed a preference for learning from a Chinese informant—especially when the comparison outgroup

informant was Southeast Asian—no such preference was found for children exposed to racial outgroups either through school or presence of a domestic worker.

To further examine children's learning preferences, we ran a generalized linear mixed model (GLMM) analysis on children's total ingroup learning preferences with Kindergarten Type (Local, International), Domestic Worker Presence (Yes, No), Outgroup Race (White, Southeast Asian), Participant Age in months, and Participant included as a random effect (see Table 4). Inspection of Table 4 revealed a main effect of Outgroup Race, $F(1,418) = 9.53$, $p = .002$, and an Outgroup Race x Age interaction, $F(1,418) = 10.17$, $p = .002$.

To explore the Outgroup Race x Age interaction, we ran additional GLMM analyses separately for each level of Outgroup Race. When the outgroup informant was White, no main effects or interactions were found. By contrast, when the outgroup informant was Southeast Asian, analyses indicated a main effect of Age, $F(1,208) = 6.37$, $p = .01$, $b = .02$, $SE(b) = .01$, indicating an increased preference with age for the Chinese informant when the outgroup informant was Southeast Asian.

Socializing preferences

Scores on the socializing preferences task represent the number of trials (maximum = 8) on which participants chose to affiliate with the Chinese peer. Overall, children were above chance in preferring to socialize with a Chinese peer over an outgroup peer ($M = 5.08$, $SD = 1.85$), $t(211) = 8.54$, $p < .001$, $d = 1.18$. Table 1 displays children's socializing preferences in proportions by kindergarten type, domestic worker presence, and outgroup race, with comparisons to chance levels. Regardless of exposure to racial outgroups, at school or home, children displayed a selective preference for affiliating with a Chinese child.

We ran a GLMM analysis on children's total ingroup socializing preferences with Kindergarten Type (Local, International), Domestic Worker Presence (Yes, No), Outgroup Race (White, Southeast Asian), Participant Age in months, and Participant included as a random effect (see Table 5). Inspection of Table 5 revealed a main effect of Age, $F(1,419) = 4.65, p = .03$, and a trend for Kindergarten Type, $F(1,419) = 3.37, p = .07$. Older children displayed stronger ingroup socializing preferences than younger children. Children who attended a local kindergarten had stronger ingroup socializing preferences than children from an international kindergarten.

Social group recognition, preference, and identification

We next examined: a) recognition of racial group differences; b) preferences for any group member; and c) identification with any group member. For each response type (recognition, preference, identification), we ran a binary logistic regression, with responses coded as a dichotomous dependent variable (1 = successful recognition, preference for, or identification with ingroup member; 0 = no recognition, preference for, or identification with ingroup member). Participant Age, Domestic Worker Presence (Yes, No), Kindergarten Type (Local, International), Type of Task (Learning, Socializing), and Outgroup Race (White, Southeast Asian) were included as independent variables.

Recognition. On average, children recognized a difference 2.29 out of 4 times they were asked ($SD = 1.50$), with 81% of children claiming that they recognized a difference at least once. Participants were also asked to justify their answers. They received 1 point if responses were related to the race or nationality consistent with the individuals' appearance (e.g., saying "Chinese" for the ingroup individual), natural physical features (e.g., skin color), or language (e.g., noting that the outgroup member "speaks English" while the ingroup member "speaks

Chinese”). They received 0 points if they identified group-related differences but mislabeled the individual (e.g., noting that the Southeast Asian individual was “African”); noted superficial differences (e.g., “the way she smiles”); or answered “Don’t know.” Two coders blind to study predictions categorized the responses, with high interrater reliability ($\alpha = .83$); disagreements were resolved through discussion. Of the 172 children who stated seeing a difference at least once, 146 children successfully justified their response by referring to group differences. These 146 children were above chance ($= 2$) in recognizing social group differences ($M = 2.21$, $SD = 1.09$), $t(145) = 2.28$, $p = .02$, $d = .38$.

A binary logistic regression revealed that the most parsimonious model included significant effects of Task Type, $\beta = .98$, $SE = .15$, $p < .001$, Kindergarten Type, $\beta = -.52$, $SE = .15$, $p = .001$, Age, $\beta = .04$, $SE = .01$, $p = .001$, and no significant interactions. The odds of recognizing social group differences in the socializing preferences task were 2.66 times greater than in the learning preferences task. The odds of recognizing social group differences were .60 times lower for children enrolled in international schools than in local schools. Additionally, the odds of successfully recognizing social group differences were 1.04 times higher for every one-month change in age.

Preference. Next, we examined children’s responses when asked which of the two individuals (ingroup, outgroup) they preferred. Of the 208 children who responded to all four questions, participants showed a selective preference for the ingroup member ($M = 2.48$, $SD = 1.17$), $t(207) = 5.86$, $p < .001$, $d = .81$.

Binary logistic regression showed that the most parsimonious model included the main effects of Task Type, $\beta = .49$, $SE = .14$, $p = .001$, Outgroup Race, $\beta = .35$, $SE = .14$, $p = .02$, Domestic Worker Presence, $\beta = -.29$, $SE = .14$, $p = .04$, and no significant interactions. The odds

of preferring the ingroup member were 1.63 times greater in the socializing preferences task than in the learning preferences task. The odds of preferring the ingroup member were 1.41 times greater when the outgroup member was Southeast Asian compared to White. The odds of preferring the ingroup member were .75 times lower when they were raised with a domestic worker at home.

Identification. Finally, we examined children's social group identification responses. Of the 210 participants who responded to all four questions, children selectively identified with the ingroup Chinese member ($M = 2.50$, $SD = 1.34$), $t(209) = 5.48$, $p < .001$, $d = .76$.

A binary logistic regression revealed only a main effect of Task Type, $\beta = .70$, $SE = .14$, $p < .001$. The odds of identifying with the ingroup member were 2.01 times greater in the socializing preferences task than in the learning preferences task.

Discussion

We investigated the relative impact of race, social status, and exposure to outgroups through home and school on the learning and socializing preferences of Hong Kong Chinese children. In support of our *race hypothesis*, by 48 months of age, children preferred to learn from and socialize with ingroup members, and explicitly preferred and identified with ingroup members. In particular, older children preferred to socialize with Chinese over outgroup peers more than their younger counterparts, and showed a stronger ingroup learning preference when the outgroup comparison was Southeast Asian (lower-status) versus White (higher-status). Participants' explicit preference for the ingroup member was also stronger with a Southeast Asian individual. Lastly, children showed a weaker ingroup preference if they were being raised with a domestic worker at home.

Our main findings—showing for the first time that Hong Kong Chinese children exhibited a robust ingroup preference—are consistent with prior work with children from the dominant race in their society (Chen et al., 2013; Dunham et al., 2013; Gaither et al., 2014; but see Shutts et al., 2011). However, the specific outgroup race mattered when children were choosing between individuals, in support of our *status hypothesis*. Children selectively preferred to learn from an ingroup member over a lower-status (Southeast Asian) outgroup member, consistent with past research highlighting children’s use of social group membership for learning preferences (Chen et al., 2011; 2013; Corriveau et al., 2013; Gaither et al., 2014). Thus, despite the important role domestic workers often play in their upbringing (Ip et al., 2008), children seem cognizant of group status differences. By contrast, children demonstrated no learning preference between a Chinese member and a higher-status (White) outgroup member, suggesting an awareness of their ingroup’s standing relative to specific outgroups. By age four, children demonstrate sensitivity to group wealth differences (Horwitz, Shutts, & Olson, 2014), judge wealthy peers to be more competent and popular (Shutts et al., 2016), and use race as a marker of social status (Olson et al., 2012; Shutts et al., 2016). Here, we extend these findings by comparing Hong Kong Chinese children’s preferences when presented with White and Southeast Asian as outgroups, while also exploring whether teacher and caregiver interactions sway these preferences.

Regarding our *familiarity hypothesis*, we had anticipated that familiarity with racial outgroups might impact children’s learning and socializing preferences. Although no effects were found, the presence of a domestic worker at home was associated with a decreased likelihood to express an explicit preference for an ingroup over an outgroup member. Thus, close contact with outgroup members, even relatively low-status individuals, may affect children’s

explicit ingroup preferences, regardless of their implicit learning and socializing preferences (see also Baron & Banaji, 2006).

Finally, task type mattered. Children demonstrated better social group recognition, as well as stronger ingroup preferences and identification, in the socializing preferences task, which involved same-age peers, as compared to the learning preferences task, which involved adults. These findings are consistent with other research highlighting the role of informant age and perceived expertise on selective learning and socializing judgments (e.g., Jaswal & Neely, 2006; Shutts et al., 2010; Taylor, Cartwright, & Bowden, 1991; VanderBorghet & Jaswal, 2009). Furthermore, children may see adults as sources of factual information (e.g., Taylor et al., 1991) compared to peers who are more persuasive regarding toy preferences (e.g., L. Birch, 1980; Hendy & Raudenbush, 2000). Our data therefore suggests that children are more sensitive to an individual's race among their own age-group. Future research should examine children's learning and socializing preferences among both adults and same-aged peers to further understand the potential impact of outgroup status and familiarity on these preferences.

Recently, scholars have demonstrated that studies published in the majority of prominent developmental psychology journals primarily involve children in European countries and the U.S., with less than 10% of papers featuring participants from other countries, including only 4.37% from Asia (Nielsen, Haun, Kärtner, & Legare, 2017). By focusing on a relatively understudied population—children who belong to the dominant racial group within Hong Kong—we offer initial insight into the universal importance of group status (and, to a lesser extent, familiarity) on intergroup learning and socializing preferences in early childhood. Moving forward, the recruitment of larger and more balanced samples across the various target participant groups and the usage of stimuli consistent with the type of outgroup exposure

children have in their daily lives are needed to understand how specific experiences with outgroups shape the development of children's learning and socializing preferences. As societies become increasingly diverse, investigating the intersections of race, status, and other social dimensions is critical to gaining insight into the impact of cross-group contact and membership to multiple social categories on the judgments and preferences of young children.

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Table 1

Proportions (standard deviation) of learning and socializing preferences for the ingroup member and comparisons with chance, by the type of school attended, presence of domestic worker at home, and outgroup informant race.

	Local School ($n = 110$)		International School ($n = 102$)	
	No Domestic Worker $n = 86$	Domestic Worker $n = 24$	No Domestic Worker $n = 26$	Domestic Worker $n = 76$
Learning Preferences (8 trials)	.55 (.17)**	.51 (.14)	.49 (.17)	.53 (.21)
White Informant (4 trials)	.53 (.26)	.47 (.20)	.54 (.22)	.54 (.28)
Southeast Asian Informant (4 trials)	.58 (.24)**	.55 (.19)	.44 (.22)	.53 (.29)
Socializing Preferences (8 trials)	.68 (.21)***	.71 (.18)***	.64 (.21)*	.62 (.26)**
White Informant (4 trials)	.69 (.25)***	.78 (.19)**	.64 (.23)*	.62 (.30)**
Southeast Asian Informant (4 trials)	.68 (.27)***	.65 (.25)**	.63 (.28)	.62 (.31)**

* $p < .05$, ** $p < .01$, *** $p < .001$

Table 2

Objects used and functions performed in the learning preferences task.

Novel Object	Function 1	Function 2
Black kneepad	Snap like a slingshot	Pat on head
Black plunger piece	Spin like a top	Squish in and out
Wooden juicer	Roll with hands	Slap on hands
Yellow plastic attachment	Look through like a telescope	Hold to mouth and blow
Metal sprinkler	Use as an eye patch	Fly like a plane
White pool pipe	Listen with ear	Shake like a rattle
White garlic peeler	Twist it	Squeeze it up and down
Blue-and-white toilet topper	Spin end piece	Flap up and down

Table 3

Labels used in the socializing preferences task.

Object Preference Trial	Novel Label 1	Novel Label 2
1	<i>Gung-gung</i>	<i>Sung-sung</i>
2	<i>Fung-fung</i>	<i>Yung-yung</i>
3	<i>Sung-wan</i>	<i>Gung-wan</i>
4	<i>Ga-tit</i>	<i>Ka-tit</i>

Table 4

Results of general linear mixed models analysis on children's ingroup learning preferences.

	<i>b</i> (<i>SE</i>)	95% CI	
		Lower	Upper
Intercept	.58(0.59)	-.58	1.74
Kindergarten Type	.08(0.12)	-.15	.31
Domestic Worker Presence	.01(0.12)	-.24	.22
Outgroup Race	2.57 (.83)**	.93	4.21
Participant Age (months)	.03 (.01)	-.00	.05
Outgroup Race X Age	-.04 (.01)**	-.07	-.02

Note. Reference categories for Kindergarten Type, Domestic Worker Presence, and Outgroup Race are International, Domestic Worker Present, and Southeast Asian, respectively.

** $p < .01$.

Table 5

Results of general linear mixed models analysis on children's ingroup socializing preferences.

	<i>b</i> (<i>SE</i>)	95% CI	
		Lower	Upper
Intercept	1.51(0.45)***	.62	2.40
Kindergarten Type	.23(0.13)~	-.02	.47
Domestic Worker Presence	-.04 (0.12)	-.29	.20
Outgroup Race	.09 (.11)	-.12	.30
Participant Age (months)	.02 (.01)*	.00	.03

Note. Reference categories for Kindergarten Type, Domestic Worker Presence, and Outgroup Race are International, Domestic Worker Present, and Southeast Asian, respectively.

~ $p < .10$, * $p < .05$, *** $p < .001$.