

**Chubby but Cheery? Investigating the Compensatory Judgments of High, Medium, and  
Low Status Weight Groups in Malaysia**

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## Abstract

We examined two strategies that people use in their social judgements – indifference and compensation. Given their *average* position we reasoned that an indifference strategy would characterise perceivers' competence vs. warmth judgements of members of intermediate status groups because they do not possess features that deviate from normality. In contrast, high and low status groups deviate from normality, and we reasoned that an attention to the negative aspects of their competence vs. warmth should enlist a complimentary desire to compensate such groups in the opposite dimension, in line with societal norms of politeness. Results from Study 1 showed mixed support for these assumptions: Compensation was used for underweight faces (intermediate group) and ideal weight faces (high status), while an indifference strategy was used in the judgements of the overweight (low status) which we reasoned may be tied to cultural and individual differences. When these *noise* were removed in Studies 2a and 2b, we showed, consistent with our assumptions that the indifference strategy was used in the evaluations of the underweight (intermediate status), while compensation was used for the ideal-(high status) and over-weight (low status) categories. Finally, Study 2b showed that norms of politeness predicted the use of compensation, but only for the overweight low status category.

*Keywords.* Weight, stereotype content model, social judgements, social status, perceptual strategies, compensation vs. warmth.

## Chubby but Cheery? Investigating the Compensatory Judgments of High, Medium, and Low Status Weight Groups in Malaysia

The issue of how people perceive others and how such perceptions in turn impact people's treatment of others are central topics in the social and behavioural sciences (Angermeyer, & Matschinger, 2004). Recent research on the stereotype content model (SCM) has proposed that people make judgements on two dimensions (Fiske, 2012; Fiske, Cuddy, Glick, & Xu, 2002): (1) the warmth dimension, which reflects the presumed capacity to be friendly, moral and empathic to others' concerns, and (2) the competence dimension, which reflects the presumed capacity to overcome difficulties. However, the strategies that people use when making evaluations on these dimensions are not well understood, particularly when one considers membership of social groups that vary in social status. When do perceivers utilise a carefree approach in their warmth and competence judgements of others and when do they invest greater resources to calibrate their evaluations of a given group to be surer that they get it right? It is important to address these questions because mis-judging others can enact a range of micro level difficulties between individuals (e.g., contempt and envy, Fiske et al. 2002; and social isolation, Kaiser & Miller, 2001), that could catalyse macro-level conflict (e.g., genocide and wars in the case of Rwanda). Thus, following Fiske (2012), we propose that people use two broad strategies in their evaluation of others depending on whether such targets occupy a high, low or intermediate social status. These two strategies are *indifference* and *compensation*.

By indifference we mean judgements that are less biased (even neutral) and calibrated so as to avoid evaluating a target person as either particularly warm or particularly competent. In contrast, compensation refers to an evaluative strategy that undervalues a target on one dimension of social judgement (i.e. either warmth or competence) while compensating them on the other. So, for example, one might evaluate a person to be quite *chubby* and *fat* but then compensate for this evaluation by also rating him/her to be quite *cheery* and *nice*.



We predicted that an indifference strategy is likely to be used for targets that occupy an intermediate social status – that is, for targets that are not seen as being clearly high or low in social status. On the other hand, we predicted that the use of a compensation strategy would be most apparent when people are making judgements of targets that belong to clearly high or low status groups. We tested these predictions in the context of judgements of weight groups, reasoning that in this context targets could be seen as either of ideal weight (high status), overweight (low status) or underweight (intermediate status). Below, we explain the rationale for our predictions.

### **The Compensation Strategy**

The SCM proposes that people make asymmetric attributions of competence and warmth to high and low status groups as a form of compensation that is enacted in order to maintain prevailing status systems. In other words, people deny low status groups competence but compensate them with warmth, and they deny high status groups warmth, but compensate them with competence. This compensation strategy allows people to feel reassured that no group has a monopoly on positive attributes (Jost, Banaji, & Nosek, 2004).

In line with SCM, we accept that people may use a compensation strategy in their judgements of groups that are clearly high or low social status. However, we deviate somewhat from SCM's system justification account by suggesting that adherence to societal norms of politeness may also influence the use of this strategy. Because the norm of politeness is particularly strong and embedded in the reciprocity norm that often regulates human exchanges (Gouldner, 1960) it makes sense that perceivers might consider how they might feel if there were on the receiving end of negative social evaluations (cf. Owuamalam, Tarrant, Farrow, & Zagefka, 2013). Acknowledging their own strengths and weaknesses in this context, perceivers may attempt to soften or sugar coat their negative evaluations of others (Hornsey & Imani,

2004). Consequently, we reasoned that societal norms of politeness should predict the use of compensation strategy in the attributions of warmth and competence.

### **The Indifference Strategy**

In addition to SCM's compensation strategy, we were interested in the use of an *indifference* strategy in which people avoid evaluating a target group as either particularly warm or particularly competent. We reasoned that this latter strategy would characterise the judgements of groups that occupy an intermediate status within a given social hierarchy because, by definition, such intermediate groups do not elicit strong positive or negative evaluations. Consistent with this prediction, Fiske et al., (2002) found that some social groups (e.g., 'Blacks') clustered around the mid-section of the competence-warmth space, and suggested that an *indifference* strategy characterised the social judgements of these target groups. However, more recently, Bergsieker, Leslie, Constantine, and Fiske (2012) showed that perceivers used the compensation strategy with reference to 'African Americans.' In other words, African Americans were rated highly on warmth and less so on competence. This inconsistency in results makes it difficult to accept the indifference strategy as a robust phenomenon. It is possible that this inconsistency arose because the perceived status of Blacks in Fiske et al.'s (2002) study was more intermediate relative to the other social groups being considered than that of African Americans in Bergsieker et al.'s (2012) study. In other words, changes in the social groups that were being compared with Blacks/African Americans may have affected the perceived status of this group. In the present research, we aimed to provide a more definitive test of the indifference strategy by considering status *within the same social category system* rather than between groups from different social categories. This approach allowed us to present a much clearer status hierarchy to participants and, consequently, to conduct a clearer test of the indifference strategy. If indifference is a robust strategy that

perceivers use in their judgements of intermediate status groups, then it should also be visible within an intra-category status context.

### **Previous Research**

Past research within SCM tradition has typically focused on macro-level examination of competence-warmth judgements of different societal groups (Fiske et al., 2007) or the use of compensation strategies in the judgements of ingroup and outgroups (Hack, Goodwin, & Fiske, 2013) particularly in the context of intergroup conflict (e.g., Cambon, Yzerbyt, & Yakimova, 2014). Very little research, in comparison, has focused on micro-level exploration of competence vs. warmth judgements especially in an inter-status context where there is an intermediate status group. The few that have done so (e.g., Durante, Fasola, Mari, & Mazzola, 2014) show evidence that people use compensation and indifference strategies in their social judgements – albeit indirectly in the case of indifference. Specifically, Durante et al. (2014) found that Italian children compensated thin targets with competence when they evaluated these targets negatively on warmth, whereas the overweight targets were positively evaluated on warmth when they were also denied competence. These results are unsurprising given the cultural preference for thinness in the West and therefore the elevated social position of thin targets relative to overweight targets (Yam, 2013). Importantly, consistent with the use of an indifference strategy, Durante et al. (2014) also showed that participants attributed similar levels of competence and warmth to ‘average’ weight exemplars.

Although Durante et al.’s (2014) research provides initial support for the use of compensation and indifference strategies for high/low and intermediate status groups, the evidence for the indifference strategy is problematic. Recent evidence has shown that exposure to Asian (compared to Western) culture elicits greater preference for chubbier figures (rather than thin figures) amongst Asian Americans (Yam, 2013) and, consequently, the use of indifference versus compensation strategy may be culturally sensitive. Hence, it is important

to demonstrate that Durante et al.'s results generalize from Western (Italian) cultures to non-western (e.g., Asian) cultures. Such cross-cultural validation would provide more compelling support for SCM's propositions. Thus, the current research aimed to conceptually replicate the initial evidence for indifference vs. compensation reported by Durante et al (2014) in the context of weight groups but in an Asian culture.

### **Summary of Hypotheses and Overview of Studies**

We hypothesised that Asian perceivers would adopt a compensation strategy in their judgements of weight groups that are clearly high (ideal weight people) or low (overweight people) in social status, but indifference in their judgements of groups that occupy an intermediate status position (e.g., underweight). To be conceptually closer to the design used by Durante et al. (2014) we used images of faces of varying levels of facial adiposity. We focused on face stimuli rather than the whole body given cultural and religious sensitivity relating to exposure to 'indecent' human form in the Islamic State of Malaysia.

Study 1 used facial stimuli that were validated in a pilot study and focused on the competence vs. warmth judgements made by Asian adults. Study 2a built on the evidence in Study 1, to examine peoples' judgements of their own conjectures of three weight groups (underweight, ideal weight and overweight). Finally, Study 2b tested a system justifying account of the compensation strategy and compared this to a politeness norm explanation.

**Ethics Statement.** The series of studies that follow were closely guided by the ethical requirements for conducting research with human subjects, set forth by the British Psychological Association. Accordingly, the experimental protocols used across the studies reported in this thesis received ethics approval from the University of Nottingham's Malaysia Campus Faculty of Science Ethics Committee (application ID: KxW291013).

## Pilot Study

The purpose of this study was to ensure that our stimuli conveyed different (body) weights. To enhance the ecological validity of our stimuli, we used pictures of real individuals that were then morphed into the three target weight groups. We also assessed the attractiveness of the faces and used this as a proxy for social status. We reasoned that if the face stimuli that we generated differentiated the three weight groups in terms of status, then participants' perceived attractiveness of the target faces should place the ideal weight faces in the high status category; the underweight in the intermediate status range; and the overweight in the low status categories. That is, ideal weight targets should be perceived as the most attractive, followed by the underweight, with the overweight coming last.

### Method

**Participants.** Fifty two adults were recruited from the University of Nottingham's Malaysia campus. Participants comprised equal numbers of men and women (26 males, 26 females; mean age = 21.46,  $SD = 4.86$ ) who were able to read and understand the English language.

**Design, stimuli and materials.** To manipulate the weight status of faces, photos of three real individuals were uploaded into FaceGen Modeller. Using this software, we manipulated the weight of the faces while maintaining the stability of the other facial elements. Each face was morphed into a set of faces comprising a male and a female face of ideal weight, defined as the external golden proportions with a length-to-width ratio of 1.618:1 (Saraf & Saraf, 2013; see Figure 1). To create overweight faces, we morphed two of these faces (male and female) to deviate from the golden proportions by +20%, and to create the underweight faces we morphed two faces (male and female) to deviate from the golden ratio by -20%. To mask the identities of the target faces, each image was given a computer-generated hair-style

that was also similar within each gender group. The sets of faces generated in this exercise are presented in Figure 2.

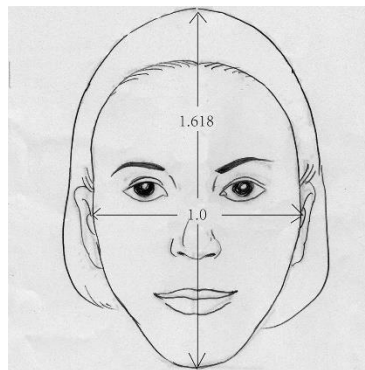


Figure 1. External golden ratio, face length 1.618: face width 1.0

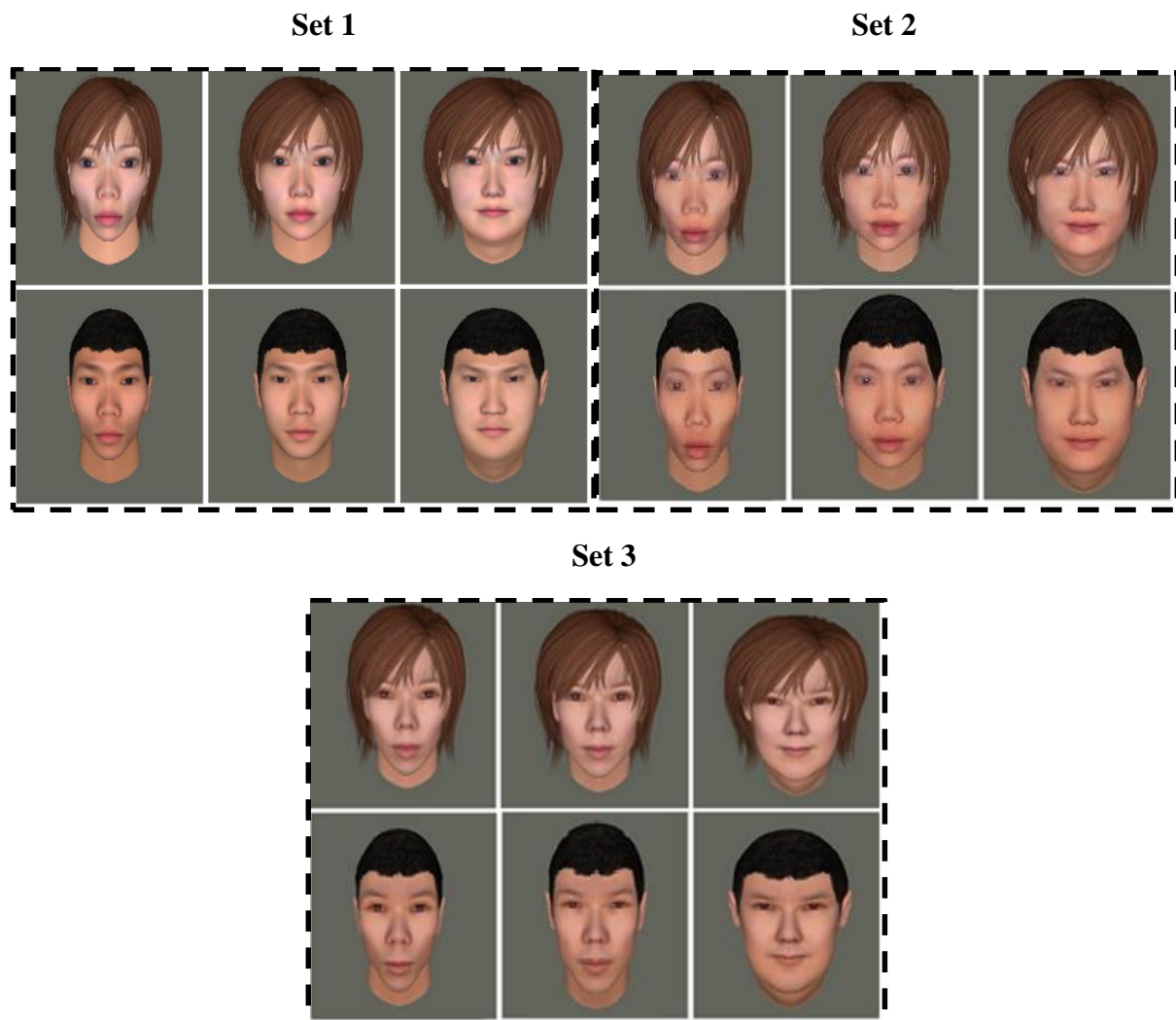


Figure 2. Study 1 stimuli. Images from left to right and for each set represent the underweight, the ideal weight and the overweight categories.

**Procedure.** Prospective participants were approached randomly in the computer labs at University of Nottingham Malaysia and asked whether they would be willing to take part in the study. Participants were exposed to all eighteen morphed faces in a random sequence via an online survey system called Qualtrics. Participants rated the extent to which they thought the person in each picture was attractive on a 10-point scale (1 = *not at all attractive*, 10 = *very attractive*). Participants also indicated the extent to which they thought the people in the images were of ideal weight, underweight or overweight. Specifically they were asked: “To what extent do you think the person in this picture is underweight?” This question was then repeated for ideal weight and overweight groups. Responses were collected on a 10-point scale (1 = *not at all underweight [ideal/overweight]*, 10 = *extremely underweight [ideal/overweight]*) and were collected separately for the male and female faces. At the end of the study, participants read a full debrief of the aims of the study and were thanked for taking part.

## **Results and Discussion**

**Perceived status (attractiveness) of target faces.** Although the interest was on how attractive the three weight categories were perceived to be, we also wanted to establish whether or not there were within weight-category variation in the attractiveness ratings for both male and female targets. For this reason, we performed a 3 (weight group: ideal weight vs. underweight vs. overweight) x 3 (face set: set 1 vs. set 2 vs. set 3) repeated measures ANOVA separately for male and female faces. Results revealed a main effect of weight group for both male faces,  $F(2, 102) = 44.87, p < 0.0001$ , and female faces, Greenhouse-Geisser:  $F(1.72, 102) = 63.02, p < 0.0001$ . Overall, the ideal weight faces were perceived as significantly more attractive ( $M_{\text{male}} = 3.97, SE = .22; M_{\text{female}} = 4.99, SE = .23$ ) compared to underweight faces ( $M_{\text{male}} = 2.98, SE = .19; M_{\text{female}} = 3.35, SE = .23$ ) and overweight faces ( $M_{\text{male}} = 2.50, SE = .18; M_{\text{female}} = 2.84, SE = .19$ ),  $ps < .001$ . Importantly, the perceived attractiveness of the intermediate status underweight category was significantly higher than those for the overweight group ( $ps$

< .01). There was also a main effect of face type for both male faces,  $F(2, 102) = 8.77, p < .0001$ , and female faces,  $F(2, 102) = 8.77, p < 0.0001$ , that was qualified by a significant weight group by face set interaction for men,  $F(4, 204) = 5.13, p < 0.0001$ , and women, Greenhouse-Geiser,  $F(3.31, 204) = 8.68, p < .0001$ . Although there were largely no significant differences between perceived attractiveness of the faces in the overweight category for both male and female targets (see Figure 3), this two-way interaction seemed to have occurred due to different levels of perceived attractiveness of faces within the underweight and ideal weight categories. Set 2 faces tended to be perceived as generally less attractive than Set 1 and 3 male and female faces in the underweight category, while the same Set 2 faces were perceived as relatively more attractive than Set 1 and 3 in the ideal weight category (see Figure 3).

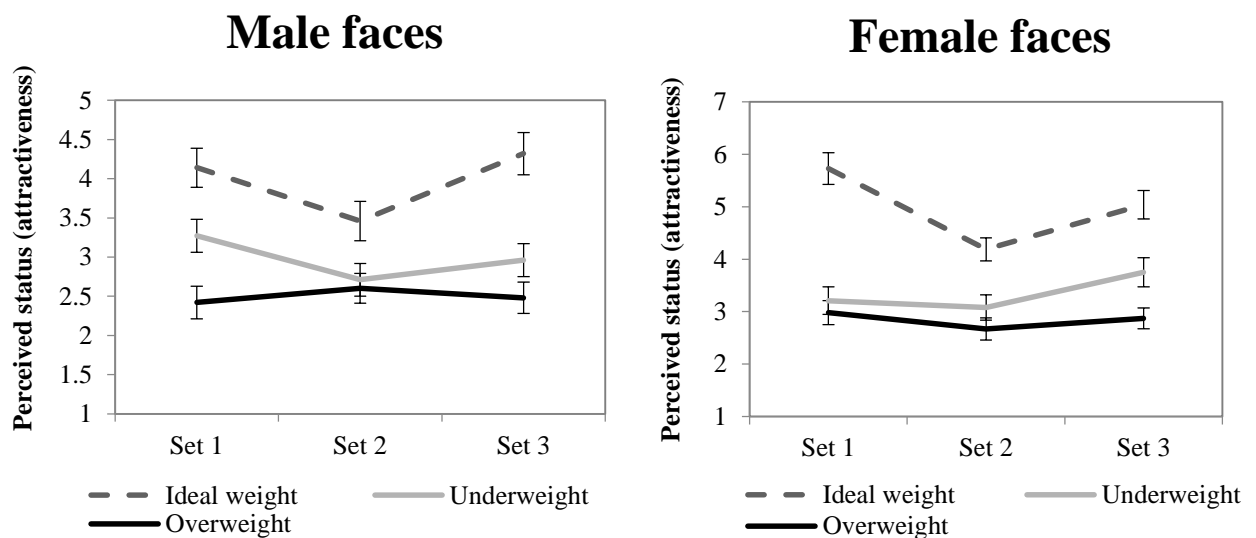


Figure 3: Perceived attractiveness of the three weight groups

The current study established the ideal weight faces were generally perceived as higher in status in terms of facial attractiveness, compared to underweight and overweight groups, and that underweight groups in turn were perceived as higher in status compared to overweight targets. It further showed that the faces operationalized as ideal weight were perceived as such relative to the two other face groups, while the faces designated as underweight and overweight



were also perceived as such relative to the other face weight groups. However, because Set 2 faces systematically differed from Sets 1 and 3 faces across the different weight categories, this face stimuli was dropped from the subsequent study to reduce within category variation as much as possible.

## Study 1

Study 1 provided an initial examination of competence and warmth judgements of underweight, ideal weight and overweight people using the images generated from the pilot study.

### Method

**Participants.** One hundred and twenty Chinese adults were opportunistically recruited from the University of Nottingham, Malaysia campus. Participants comprised equal numbers of men and women (60 males, 60 females mean age = 20.90,  $SD = 1.39$ ) who were able to read and understand the English language.

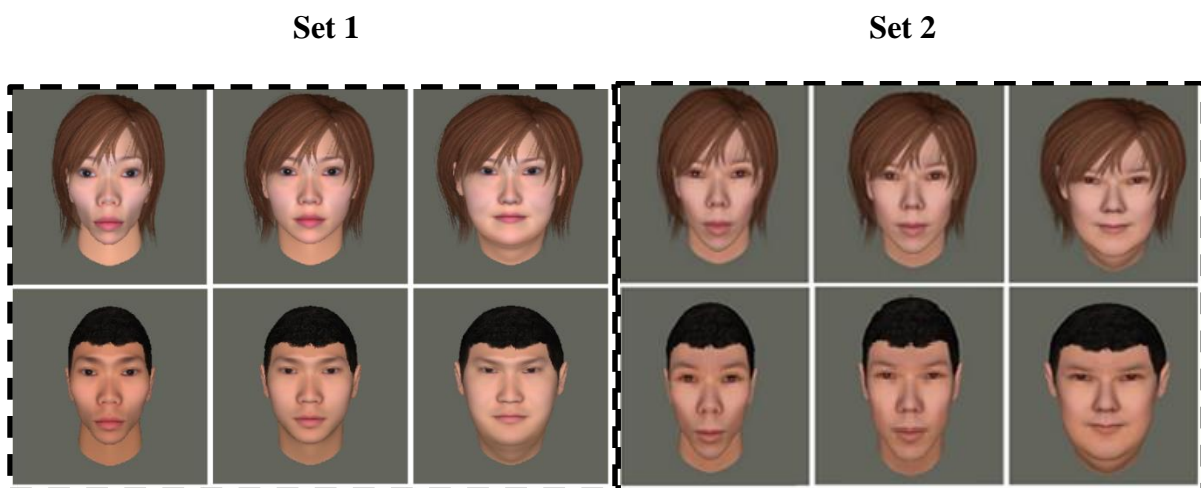
**Design.** A 3 (perceived face weight: overweight vs. ideal weight vs. underweight) x 2 (gender of face: male vs. female) x 2 (domain: physical competence vs. warmth) mixed design was used, in which the two latter factors were within-subjects. Dependent measures included were inter-alia: perceived physical competence (e.g., “the person in the picture is able to walk briskly for 15 minutes of more”) and perceived warmth (e.g., “the person in the picture is generous”).

**Stimuli and materials. Target faces.** We used the validated images from the pilot study as stimuli in the current study. Each weight group consisted of 2 female target faces and 2 male target faces (see Figure 4).

**Competence vs. warmth judgements.** To tap perceived physical competence, we adapted 5-items from Harter’s (1982) Physical Competence Subscale for Children (PPCSC), comprising 3 positive items (e.g., “The person in the picture can ride a bike for more than 30

minutes without getting tired and having to stop for a break”) and 2 negative items (e.g., “The person in the picture cannot exercise” reverse scored, Cronbach’s  $\alpha = .62$ ). Perceived positive warmth was measured using an adaptation of van Leeuwen and Tauber’s (2012) warmth scale (e.g., “The person in the picture is generous to his/ her friends;” “The person in the picture is a sincere person,” “The person in the picture cannot pay attention to a conversation,” reverse scored, Cronbach’s  $\alpha = .83$ ).

**Procedure.** Participants were approached randomly, and asked if they were willing to take part in the study. Participants were exposed to one of the 12 treatment cells and were afterwards required to rate the competence and warmth of each target face that they saw on-screen via Qualtrics. At the end of the study, participants were debriefed and thanked them for taking part.



*Figure 4.* Morphed target faces used in Study 1.

## Results and Discussion

Recall that the SCM predicts the use of a compensation strategy for the judgements of high and low status targets in relation to competence and warmth. If this is true, then overweight targets (stigmatised and therefore low status) should be evaluated poorly on physical competence relative to warmth. We expected the reverse of these patterns for their higher status counterparts (ideal weight group). People who are underweight are not stigmatised to the same

degree as people who are overweight. Thus, although they are low in status compared to people with ideal weight they are less stigmatised than their overweight counterpart. For this reason, we expected that perceivers' utilise an indifference strategy in their judgements of the underweight: that is, they would be seen as neither competent like the ideal weight group, nor as warm as the overweight group.

To test these assumptions, we first computed a 3 (perceived weight group: overweight vs. ideal weight vs. underweight) x 2 (domain: competence vs. warmth) x 2 (target face gender: male target face vs. female target face) repeated measures ANOVA. The results showed two significant main effects. First, there was a domain main effect,  $F(1, 117) = 17.23, p < .001$ , indicating that targets were generally perceived to be more physically competent ( $M = 3.71, SD = .06$ ) than they were warm ( $M = 3.48, SD = .03$ ). Second, a target face gender main effect also emerged,  $F(1, 117) = 15.93, p < .001$ : Male target faces were generally more positively evaluated ( $M = 3.70, SD = .04$ ) than female target faces ( $M = 3.492, SD = .04$ ) in line with the elevated social status accorded to men in Malaysian society. A main effect of target face weight also emerged,  $F(1, 117) = 3.266, p < .029$ , showing that although ideal weight targets received the most positive evaluations overall ( $M = 3.71, SE = .06$ ) compared to overweight ( $M = 3.50, SE = .06, p = .009$ ), participants evaluations of the ideal weight group did not differ significantly from the underweight ( $M = 3.57, SE = .06; p = .085$ ). Again, consistent with their intermediate status position, the evaluations of the underweight were no different to those of the overweight group ( $p = .342$ ) overall.

These main effects were qualified by domain x target face weight interaction,  $F(2,117) = 4.97, p = .008$ , which was not further qualified by target face gender,  $F(2, 117) = 2.96, p = .056$ . We therefore decomposed the domain x target face weight interaction by computing the simple effect of domain for each face weight group. Results from this simple effect analysis revealed, as expected, that participants used a compensation strategy in their judgements of the

ideal weight faces. That is, they attributed significantly greater competence ( $M = 3.93$ ,  $SE = .10$ ) than warmth ( $M = 3.50$ ,  $SE = .05$ ) to ideal weight faces ( $p < .0001$ ). The judgements of underweight faces also followed a compensatory pattern, with significantly greater competence attributions ( $M = 3.72$ ,  $SE = .09$ ) than warmth ( $M = 3.43$ ,  $SE = .05$ ,  $p = .004$ ). However, in line with expectations, this compensatory strategy was attenuated for the underweight faces compared to the ideal weight faces with effect size in the latter group being twice ( $\eta_p^2 = .14$ ) as high as the comparable effect for the underweight ( $\eta_p^2 = .07$ ).

Interestingly, participants in the current study did not discriminate between competence ( $M = 3.72$ ,  $SE = .09$ ) and warmth ( $M = 3.72$ ,  $SE = .09$ ) in their judgements of the overweight category ( $p = .941$ ). This lack of a clear compensatory strategy for the overweight could be due to the Asian cultural bias in favour of ‘chubbiness’ – at least compared to the West (Yam, 2013). That is, although, the images in the overweight category may be seen *relatively* ‘weightier’ than the images for the under- and ideal weight categories, it is entirely possible that the level of chubbiness represented in the overweight category may have been overly conservative in a society where a ‘bit of flesh’ is not as poorly regarded as in Western cultures. Similarly, images for the underweight category in the current study may have been overly generous in that a typical mental representation of a ‘deprived’ and therefore underweight individual in a society with wide income disparity may be that of extreme thinness.

In order to provide a clearer test of the compensation and indifference strategies in Study 2, we sought to eliminate the confounding effect of individual differences in the ways that perceivers interpret the physical sizes of the three weight groups. We did this by asking participants to imagine a typical person belonging to those categories and to then evaluate these prototypes in terms of competence and warmth. This more abstract approach ensured that perceivers would be considering what *they believed* to be underweight, ideal weight and overweight people, rather than what *we as researchers assumed* would be the case in the

context of a specific sociocultural setting based on a pilot study that was conducted on a different set of individuals.

### **Study 2a**

We examined the use of compensation and indifference strategies in judgements of the different weight groups in a context in which participants could create their own images of underweight, ideal weight and overweight people. Arguably the activation and applications of stereotypes should be most visible in situations when people have access only to minimal information about the object/subject of evaluation. Hence, the predictions derived from SCM regarding the use of an indifference strategy for the underweight group and compensatory strategies for the ideal and overweight groups should be especially pronounced in such context. If, however, we are unable to demonstrate the predicted effects in this context, and instead reveal patterns identical to those reported for the overweight group in Study 1, then we can be surer that Study 1 effects were not mere artefacts of the stimuli that were used in that investigation.

### **Method**

**Participants and design.** We randomly recruited a modest sample of forty Asian adults from the University of Nottingham's Malaysia campus to take part in this preliminary test of our abstract (imagined) judgement paradigm. Participants comprised equal numbers of men and women (20 males, 20 females mean age = 20.20,  $SD = 1.44$ ) who were able to read and understand the English language.

We used a 3 (weight group: underweight vs. ideal weight vs. overweight) x 2 (domain: competence vs. warmth) within-subjects design in this study. Participants provided repeated ratings of competence and warmth, in relation to underweight, ideal weight and overweight individuals.

**Materials.** Participants were asked to evaluate the three weight groups using trait adjectives that we derived from Anderson's (1968) 555 Personality Trait inventory. Four of these tapped physical competence. To reduce acquiescence bias we included two positive traits ("active" and "energetic;" overweight  $r = .47, p = .002$ ; ideal weight  $r = .31, p = .050$ ; underweight  $r = .56, p < .001$ ) and two negative traits ("clumsy" and "physically weak;" overweight  $r = .46, p = .003$ ; ideal weight  $r = .51, p = .001$ ; underweight  $r = .43, p = .006$ ) traits. A further four items tapped warmth: two positive traits ("sincere" and "warm;" overweight  $r = .62, p < .001$ ; ideal weight  $r = .46, p = .003$ ; underweight  $r = .380, p = .015$ ) and two negative traits ("selfish" and "mean;" overweight  $r = .28, p = .076$ ; ideal weight  $r = .66, p < .001$ ; underweight  $r = .69, p < .001$ ) ones. Participants then indicated on a scale from 0% to 100% the proportion of members of each of the three weight groups that could be described by each traits.

**Procedure.** Participants were approached randomly in a computer lab, and asked whether they would be willing to take part in the study. Participants were asked to imagine people who were either underweight, ideal or overweight, and to then evaluate them items that we adapted from the Personality Trait Inventory. Specifically, for each target group, participants were instructed to indicate the extent to which each trait is characteristic of people who are ideal [underweight/overweight] according to their knowledge of the stereotypes that exists in this society. Participants' responses were provided on a 0-100% scale with higher scores indicating greater agreement that a relevant trait is applicable to the target group. At the end of the study, participants were fully debriefed and thanked them for taking part.

## **Results and Discussion**

We first reversed scored the negatively worded items. We then averaged the scores on negative items with those on positive items separately for competence and warmth and for each weight category. To test our assumptions concerning the strategy that participants used in their

judgement of the three weight groups, we computed a 3 (weight group: overweight vs. ideal weight vs. underweight) x 2 (domain: physical competence vs. warmth) repeated measures ANOVA. Results from this analysis revealed a non-significant main effect of domain,  $F(1, 39) = 0.06, p = .813, \eta_p^2 = .001$ . However, there was a significant main effect of weight group,  $F(2, 78) = 10.75, p < .001, \eta_p^2 = .22$ . Participants' evaluations of ideal weight individuals were more favourable ( $M = 59.30, SE = 1.50$ ) compared to their evaluations of overweight individuals ( $M = 50.85, SE = 1.88, p < .0001$ ) and underweight individuals ( $M = 51.93, SE = 1.37, p < .0001$ ). Hence, as in Study 1, the underweight targets were evaluated no more positively compared to their overweight counterparts ( $p = .652$ ) although the overall pattern of means places the underweight targets in the intermediate status category,

Consistent with Study 1, these main effects were qualified by a significant interaction between domain and weight group,  $F(2, 78) = 43.23, p < .0001, \eta_p^2 = .53$ . To investigate this interaction, we examined the simple main effect of domain within each weight group.

**Overweight group (low status).** In line with SCM's compensation hypothesis, the overweight category elicited ratings of greater warmth ( $M = 60.11, SE = 2.34$ ) than physical competence ( $M = 41.79, SE = 2.49$ ),  $p < .001$ .

**Ideal weight group (high status).** Also in line with SCM's compensation hypothesis, the ideal weight category elicited ratings of greater physical competence ( $M = 68.96, SE = 2.27$ ) than warmth ( $M = 49.63, SE = 1.59$ ),  $p < .001$ .

**Underweight group (intermediate status).** Finally, and supporting the use of an indifference strategy in judgements of an intermediate status groups, participants rated underweight people as being no higher in competence ( $M = 50.86, SE = 2.41$ ) than in warmth ( $M = 52.99, SE = 1.47$ ),  $p = .466$ . That is, participants perceived underweight targets to be fairly competent and warm (see Figure 5 below).

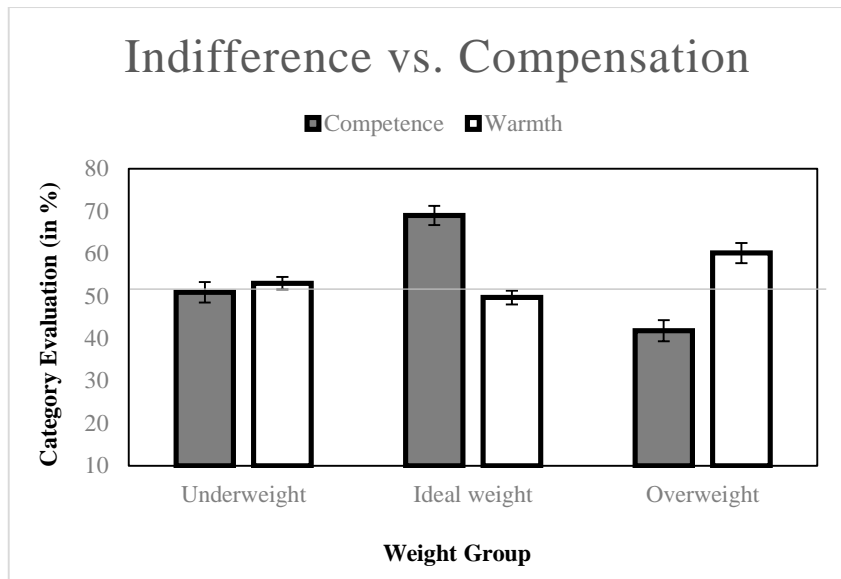


Figure 5. The use of indifference vs. compensation strategies in judgements of different weight groups as a function of perceived social status.

However, to be surer that participants calibrated their judgements using the indifference strategy we needed to show two things. Firstly, that the warmth ratings of the underweight were significantly lower than comparable judgements of the overweight on this dimension and, secondly, that the competence ratings of the underweight were significantly lower than those for the ideal weight category. These assumptions were met: the underweight category was evaluated less positively on the warmth dimension compared to the overweight ( $p < .022$ ), but also did not *necessarily* deny them this attribute as they did for the ideal weight category - with a slightly higher (but non-significant) warmth ratings compared to the ideal weight ( $p = .126$ ). Again consistent with our theorising, although the underweight were seen as less competent than the ideal weight category ( $p < .001$ , see Figure 5) they were nonetheless perceived as being more competent than the overweight ( $p = .005$ ). Taken jointly, then, this evidence suggests that participants largely did not dispute the competence or warmth of the underweight category.



To summarise, the present results corroborate the assumptions derived from the stereotype content model and show that: (a) people use two strategies in the judgements of social groups that vary in status: compensation for clearly high and low status groups, and indifference for intermediate groups.

Although the compensation effect has typically been explained in terms of the so-called tendency for people to justify and live with unequal social hierarchy (Fiske et al., 2002; Kay & Jost, 2003), there has been little systematic evidence for this system justification account. Consequently, other theoretical explanations for the use of compensation strategy in social judgements have been overlooked. In Study 2b, therefore, as well as examining the system justification account, we tested a politeness norm account. According to this politeness norm explanation, people use a compensation strategy because their harsh judgements in one domain run counter to established norms of politeness, and more positive judgements in a second domain allow them to be polite to the people that they are judging. In short, we reasoned that perceivers might express positive views of a given social category on an alternate domain in order to make their negative evaluations on another more tolerable (Hornsey & Imani, 2004).

### **Study 2b**

We aimed to establish two things in the current study, namely (a) to replicate the two strategies of compensation and indifference used in judgements of clearly low and high status, and intermediate groups respectively and, (b) to test two propositions for the use of a compensation strategy – system justification and norms of politeness. Because Study 2a demonstrated the efficacy of the *imagined* judgement paradigm using only but a small sample, we capitalised on this initial evidence in Study 2b and aimed to provide a fuller test of our assumptions (including those relating to gender) in a much larger sample.

## Method

**Participants and design.** One hundred and sixty seven adults were randomly recruited from the University of Nottingham, Malaysia campus. Participants comprised 96 men and 71 women (mean age = 20.53,  $SD = 2.42$ ) who were able to read and understand the English language.

We used a 3 (weight group: underweight vs. ideal weight vs. overweight) within-subjects design in this study. Participants provided repeated ratings of competence and warmth, in relation to their own imagined idea of underweight, ideal weight and overweight individuals.

**Materials. Competence vs. warmth.** As in Study 2a, participants indicated the extent to which a number of traits that differed in terms of domain (i.e., competence and warmth) applied to each of the three weight groups. We used the same warmth ratings as in Study 2a. To be surer about the robustness of the patterns that we showed in Study 2a, we used a more composite measure of competence that combined the physical competence measure used in Study 2a with a 8-item measure of generic competence (e.g., “efficient”, “productive”, “competent”, “confident”, “intelligent”, “indecisive” [reverse scored]), which we averaged to form an index of competence: overweight,  $r = .35, p < .001$ ; ideal weight,  $r = .43, p < .001$ ; and underweight,  $r = .14, p = .072$ ). The warmth measure was the same as in Study 2a (“sincere” and “warm;” overweight  $r = .54, p < .001$ ; ideal weight  $r = .54, p < .001$ ; underweight  $r = .56, p < .001$ ) and two negative traits (“selfish” and “mean;” overweight  $r = .48, p < .001$ ; ideal weight  $r = .60, p < .001$ ; underweight  $r = .55, p < .001$ ) and reverse scored the negative items prior to averaging into a single index of warmth ratings for each weight group. In all cases, participants indicated the extent to which each attribute applied to each of the three weight groups from 0% to 100%.

**Status awareness.** In this study, we used a more direct measure of group status that those used in Studies 1 and 2. Participants were asked to provide their judgements of the

perceived status of each of the three weight groups on a continuum from 1 = *low status* to 9 = *high status*.

**Predictor variables.** We measured system justification using a 9-item adaptation of Kay and Jost's (2003) system justification scale (e.g., "I feel that groups in society earn the reputation they get;" Cronbach's  $\alpha = .76$ ). We measured norms of politeness using a 2-item scale (e.g., "Generally it is socially acceptable to be polite to other people" and "It is not socially acceptable to dislike anyone without reason;"  $r = .16$ ,  $p = .036$ ). Responses on these measures were provided on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*).

**Procedure.** Participants were approached randomly in a computer lab and asked whether they would be willing to take part in the study. Participants were presented with the questionnaire on Qualtrics. To remove order effects, the presentation of system justification and politeness norm scales was counterbalanced with the competence and warmth ratings so that some participants completed these measures before the competence vs. warmth endorsements while others completed them afterwards. At the end of the study, participants read a full debrief of the aims of the current investigation and were thanked for taking part.

## Results and Discussion

**Status awareness check.** We included participants' status awareness check measure in a repeated ANOVA. There was a main effect of weight group,  $F(2, 332) = 27.80$ ,  $p < .0001$ .  $\eta_p^2 = .14$ . As expected, participants thought that the ideal weight people were higher in status compared to underweight people ( $M = 6.02$ ,  $SE = .16$ ,  $p < .0001$ ) and overweight people ( $M = 5.55$ ,  $SE = .20$ ,  $p < .0001$ ). Participants also thought that underweight people were higher in social status compared to overweight people,  $p = .055$ .

**Main analyses. Competence vs. warmth judgements.** As in Study 2 we performed a 3 (weight group: underweight vs. ideal weight vs. overweight) x 2 (domain: competence vs. warmth) repeated measures ANOVA. Consistent with Study 2, the main effect of domain was

not significant,  $F(1, 165) = 2.01, p = .159. \eta_p^2 = .01$ . Consistent with Study 2, there was a significant main effect of weight group,  $F(2, 330) = 7.11, p = .001. \eta_p^2 = .04$ : Participants evaluated individuals who are of ideal weight more positively compared to their conjectures of the underweight ( $M = 53.89, SE = .72, p = .013$ ) and overweight ( $M = 52.64, SE = .82, p < .0001$ ). Again, the difference between the evaluations of underweight and overweight people was not significant ( $p = .192$ ).

The above main effects were qualified by a significant domain x weight group interaction,  $F(1.84, 330) = 173.67, p < .0001. \eta_p^2 = .51$  (numerator  $df$  is Greenhouse Geisser adjusted). To investigate this interaction, we examined the simple main effects of domain for each weight group.

**Overweight group (low status).** Consistent with the SCM's compensation hypothesis, overweight targets were evaluated more positively in regards to warmth ( $M = 60.89, SE = .95$ ) relative to competence ( $M = 46.89, SE = .83, p < .0001$ ).

**Ideal weight group (high status).** Again, the results show that participants attributed greater competence ( $M = 62.62, SE = .71$ ) than warmth ( $M = 49.49, SE = .84$ ) to their conjectures of an ideal weight target,  $p < .0001$ .

**Underweight group (intermediate status).** Corroborating the trends that we observed in Study 2, participants evaluated underweight targets as no less competent ( $M = 51.78, SE = .89$ ) than warm ( $M = 53.50, SE = 1.03$ , see Figure 6). Following a similar approach as in Study 2, we again compared the competence evaluations of the underweight to those of their ideal weight counterparts, and then also their warmth ratings with those of the overweight. Results corroborated the patterns in Study 2, and showed that participants evaluated the underweight less favourably on competence compared to the ideal weight category ( $p < .0001$ ), even as they also acknowledged that the underweight people were not as poor in competence as they thought the overweight were ( $p < .001$ ). Although the underweights were seen as less

warm than the overweight, ( $p < .0001$ ) participants did not refute the warmth of the underweight as strongly as they did for the ideal weight category ( $p = .001$ , see Figure 6).

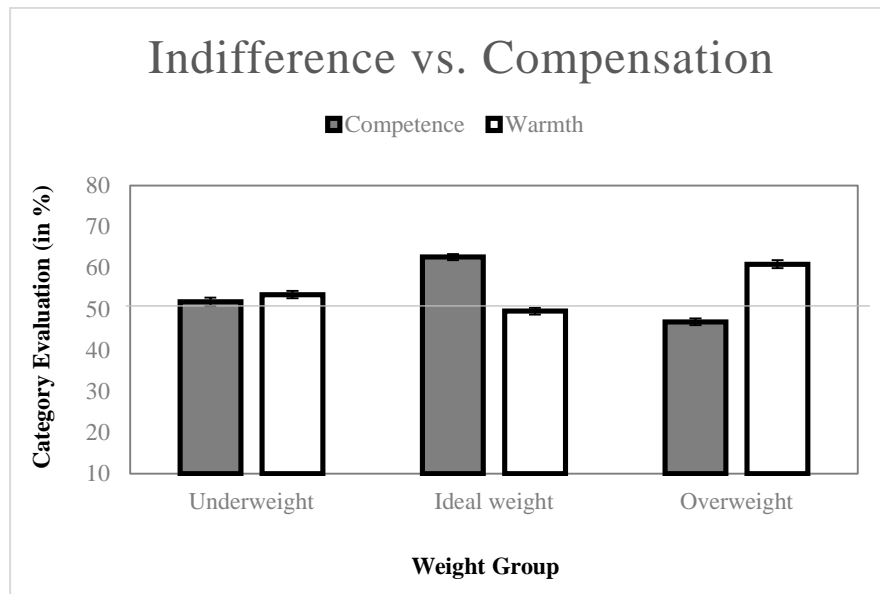


Figure 6. The use of indifference vs. compensation strategies in judgements of different weight groups as a function of perceived social status.

**But why does the compensation strategy occur?** We reasoned that a politeness driven compensation strategy should be particularly apparent on a dimension of competence that is tied to status differences between the three weight groups - physique. To test this prediction, we created an index of compensation bias by computing a difference score between warmth and physical competence ratings separately for ideal and overweight groups. We then regressed each of the indices of compensation bias on to system justification and norms of politeness in a multiple regression model. If system justification explains the use of the compensation strategy, then our measure of system justification should predict our index of compensation bias for the clearly high (ideal weight) and low (overweight) status groups. Alternatively, if norms of politeness explain the compensation bias, then our measure of politeness should predict the biases for high and low status groups.

The results revealed two striking results. Firstly, and contrary to SCM’s system justification explanation, the use of the compensation strategy was unrelated to system justification tendencies (see Table 1).

Table 1.

*Multiple Regression Model Results for the Predictive Effects of Politeness Norms and System Justification on the Use of Compensation Strategy in Social Judgements.*

<b>Compensation Bias</b>		
	<i>Ideal Weight</i>	<i>Overweight</i>
	$\beta$ (SE)	$\beta$ (SE)
<b>System Justification</b>	-.07 (1.54)	-.03 (1.66)
<b>Norms of Politeness</b>	-.08 (1.53)	.19* (1.65)

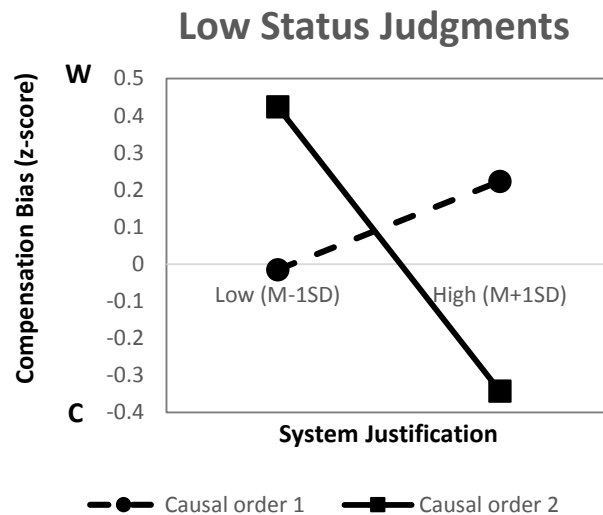
\* $p = .016$ .

Second, and consistent with our politeness norm explanation, there was a significant positive relation between our index of compensation bias and norms of politeness, but only for the overweight, and not for the ideal weight category (see Table 1). We also obtained a similar trend when the composite measure of competence that included both the physical and generic dimensions was used: The link between system justification and compensation bias for the overweight,  $\beta = -.06$ ,  $SE = 1.29$ ,  $p = .411$ , and the ideal weight,  $\beta = .09$ ,  $SE = 1.29$ ,  $p = .261$ , groups were non-significant. However, norms of politeness marginally predicted this latter compensation index again for the overweight ( $\beta = .14$ ,  $SE = 1.29$ ,  $p = .083$ ) but not for the ideal weight ( $\beta = .09$ ,  $SE = 1.28$ ,  $p = .230$ ).

*Is the above analyses a fair treatment of the system justification account?* It is entirely possible that a system justification account of compensation did not emerge because the conditions set out for this to occur were not taken into account in our previous analysis. For example, Jost et al. (2004) proposes that a system justification effect should be most visible amongst those that are likely to be most disadvantaged by the weight stigma – i.e., women. Also, we collapsed the scores of those that completed the predictors of compensation first, with those that completed the warmth vs. competence ratings first, and as Kay and Jost (2003) have demonstrated, the direction of causality matters: it is necessary to activate the stereotype first (e.g., the poor but happy) prior to system justification. For these reasons, we capitalised on the our counterbalancing sequence in which some participants completed the system justification measures prior to the trait evaluation (causal order 1) while the other group completed the trait ratings first prior to system justification (causal order 2). If the system justification account of compensation is true, then one should find (a) a positive relationship between system justification and our index of compensation bias for both the overweight and ideal weight groups (b) that such a relationship is particularly strong among groups that are targeted by weight stigma (women) and, (c) that the relationship is limited to causal order 2 condition but not causal order 1 condition. We explored these assumptions in moderated regression.

Results from a moderated regression analysis in which our index for compensation bias for the overweight was regressed on to system justification, gender and causal order as well as the 2 and 3-way interaction terms of these variables, yielded a significant 3-way interaction,  $\beta = -.96$ ,  $SE = .40$ ,  $p = .016$ . When we investigated this interaction by examining the interactive effects of system justification and causal order for men and women, we found that the system justification x causal order interaction was only visible for women,  $\beta = -.62$ ,  $SE = .31$ ,  $p = .045$ , but not for men,  $\beta = .34$ ,  $SE = .25$ ,  $p = .172$ . However, what initially looked like support for a system justification account of compensation quickly changed when we probed the simple

slopes for the relationship between system justification and compensation bias at each of the two causal order conditions. Women in the causal order 2 group were *less* (not more) likely to use the compensation strategy with increasing levels of system justification,  $\beta = -.47$ ,  $SE = .19$ ,  $p = .013$ . Meanwhile this relationship was absent amongst women in the causal order 1 group,  $\beta = .15$ ,  $SE = .24$ ,  $p = .546$  (see Figure 7).

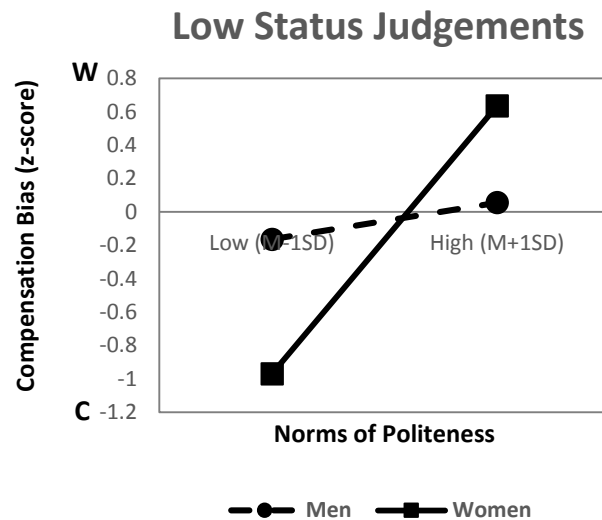


*Figure 7.* The relationship between women’s system justification and compensation bias for the overweight. W = warmth, C = competence. Zero represents no difference between W & C.

Put differently, women who were less likely to compensate low status groups in an alternate dimension in which such groups are negatively stereotyped generally also tended to be motivated to see social groups as fair or deserving of the reputation they get. If this is the case, then one should also find a complimentary positive relationship between norms of politeness compensation bias, such that women (but not men) who are most mindful of politeness norms should be the ones more likely to use a compensation strategy. Indeed results from a moderated regression in which compensation bias was regressed on politeness norms and its interaction with gender was significant,  $\beta = .40$ ,  $SE = .19$ ,  $p = .039$ : showing the expected patterns for women,  $\beta = .46$ ,  $SE = .15$ ,  $p = .002$  (see Figure 8), but not for men,  $\beta$



= .06,  $SE = .12$ ,  $p = .610$ . Neither the system justification 3-way interaction nor the politeness norm 2-way interaction emerged as significant predictors of the compensation bias for the ideal weight group.



*Figure 8.* The relationship between norms of politeness and compensation bias for the overweight. W = warmth, C = competence. Zero represents no difference between W & C.

In sum, the current study provided a conceptual replication of the dual perceptual strategy in status-based judgements in the context of weight groups (cf. Durante et al., 2014). Notably, we showed that system justification did not explain the compensation strategy that was used for either the ideal weight group or the overweight group. Instead, norms of politeness largely accounted for the differential attributions of warmth and competence, but only in relation to judgements of the overweight (but not the ideal weight) category and, is evident amongst groups that are susceptible to the weight stigma. This finding is consistent with the view that societal norms of politeness generally function to protect members of low status groups from harsh evaluation (Jeffries, Hornsey, Sutton, Douglas, & Bain, 2012) presumably because perceivers expect members of such groups to have less capacity to cope with

frustrating events, than their more capable higher status counterparts. Note too that this reasoning also explains why norms of politeness did not account for the compensation pattern of judgements for the ideal weight category.

### **General Discussion**

We examined the use of two strategies that perceivers use in their social judgement in the context of intra-category status where group boundaries are clearly defined. We hypothesised that, perceivers would adopt a compensation strategy in their judgements of groups that are clearly high or low in social status, but would use an indifference strategy in their judgement of intermediate social groups. Unlike previous evidence that has largely been conducted amongst Western samples, we tested these assumptions in a relatively understudied Asian context (Malaysia). In addition, we also examined two key explanations of the compensation bias put forward by SCM: system justification and norms of politeness, and like Fiske et al (2002) and Bergsieker et al. (2012) expect that both motives should predict the use of a compensation strategy in perceivers' warmth vs. competence judgements.

Using novel stimuli generated from our labs, Study 1 showed that perceiver used both a compensation and an indifference strategy in their competence and warmth judgements of the different weight groups. However, contrary to expectation, perceivers used a compensation strategy for groups that we presumed were intermediate (underweight faces) and high (ideal weight faces) in status, but an indifference strategy for the presumed low status group (overweight faces). We reasoned that this negative results could have resulted from individual and cultural level differences in perceivers' interpretations of the facial adiposity of the images they were shown. Indeed, when we accounted for these individual level difference using an imagined judgment paradigm in which participants based their judgements on their own conjectures of the three weight categories we did indeed observe the predicted patterns. Namely, perceivers' competence vs. warmth judgements of high and low status groups was

characterised by compensation, while those of the intermediate group was characterised by indifference (Studies 2a and 2b).

Importantly, we found evidence to suggest that perceivers use a compensation strategy, not because this allows them to justify existing status arrangements, but mostly due to an adherence to the strong societal norms of politeness. Indeed, our findings are similar to Bergsieker et al (2012) who provided compelling evidence that the need to present one's self in good light via adherence to societal norms of politeness drives perceivers' compensation bias in terms of warmth vs. competence judgements. So, as well as complementing Bergsieker et al.'s (2012), the current findings sheds new insights in the sense that it delineates the groups for whom such politeness-induced compensation would most apply to – i.e., the low status. In this sense, we concur that a politeness norm would be particularly visible in the judgement of 'protected' low status (or "David") groups (Jefferies et al., 2013) while unprotected high status ("Goliath") groups to whom mixed feelings are directed, may not benefit from the politeness norm put forward by SCM to explain the use of a compensatory strategy (Bergsieker et al.'s, 2012). In particular, we further demonstrated that vulnerable groups are the one likely to be the custodians of this 'protection' motivation since they have the most to benefit from maintain norms that eliminate (or at least reduce) social judgements that can have both symbolic and real consequences for themselves and groups to which they belong (Angermeyer, & Matschinger, 2004)

While we did not find evidence for a system justifying account of the use of a compensation strategy, a number of factors could explain the negative results we obtained here. For example, we used a specific operationalisation of system justification that is not particularly tied to the inter-status context of weight groups (see Sengupta, Osborne, & Sibley, 2014). It is not inconceivable that an operationalisation of system justification that is tied to weight could have yielded an effect in the direction that one might expect from a system

justifying account of compensation (Jost et al. (2004). However, specific operationalisations of system justification are often positively correlated, e.g., the general and economic system justification scales tend to show strong positive correlations (citations – Feygina, Jost, & Goldsmith, 2010). If anything, it is the size rather than the direction of the effects we show here that may be influenced by different operationalisation of system justification (see also Sengupta et al., 2014). Having said that, and because we cannot completely rule out the possibility of this alternative assumption with the current data, future replication attempts could incorporate a diverse set of system justification measures in their design. Such studies could also aim to address the outstanding issue of why the compensation strategy for high status groups occur.

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