



Rater wealth predicts perceptions of outgroup competence

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ARTICLE INFO

Article history:

Available online 10 August 2011

Keywords:

Stereotypes
National character
Wealth
Competence
Group perceptions

ABSTRACT

National income has a pervasive influence on the perception of ingroup stereotypes, with high status and wealthy targets perceived as more competent. In two studies we investigated the degree to which economic wealth of raters related to perceptions of outgroup competence. Raters' economic wealth predicted trait ratings when (1) raters in 48 other cultures rated Americans' competence and (2) Mexican Americans rated Anglo Americans' competence. Rater wealth also predicted ratings of interpersonal warmth on the culture level. In conclusion, raters' economic wealth, either nationally or individually, is significantly associated with perception of outgroup members, supporting the notion that ingroup conditions or stereotypes function as frames of reference in evaluating outgroup traits.

Published by Elsevier Inc.

1. Introduction

Ratings of ingroup (McCrae, Terracciano, Realo, & Allik, 2007) and outgroup (Poppe, 2001) stereotypes show that more economically advantaged target groups are perceived as more competent, perhaps demonstrating a correspondence bias (e.g., Gilbert & Malone, 1995; Ross, 1977) in attributing economic success to group competence rather than circumstances. This stereotype of the wealthy is ubiquitous; in a study where typical members of various social groups in 10 non-American cultures were rated on competence, “[e]verywhere, status strongly correlated with competence” (Cuddy et al., 2008, p. 24). These findings are consistent with the Stereotype Content Model (Fiske, Cuddy, Glick, & Xu, 2002), which predicts that stereotype judgments depend on the status of the target group, with wealthy groups perceived as competent by most raters. Furthermore, manipulated social status in *de novo* target groups led to increased ratings of competence in the experimentally high-status group (Caprariello, Cuddy, & Fiske, 2009). Despite intergroup agreement in the judgment of well-recognized social groups (Madon et al., 2001; Peabody, 1995), there is substantial variability among raters (Glick et al., 2006; Koomen & Bahler, 1996; Terracciano & McCrae, 2007). Such individual differences are likely to derive in part from idiosyncratic reasons, including knowledge of a particular group, personal experiences and attitudes. Examples of attitudes that affect perceptions of competence

include the Belief in a Just World, Social Dominance Orientation, and System Justification (Kay & Jost, 2003; Oldmeadow & Fiske, 2007). However, other variables that predict rater variability in group perception also can increase our understanding of both the process and the content of outgroup stereotypes.

Given the importance of targets' economic status to the perception of personality (Fiske, Cuddy, & Glick, 2007), we posit that raters' economic status might be one predictor of systematic variations in group perception. There is emerging evidence that rater status might be related to perceptions of outgroup members; in particular, Oldmeadow and Fiske (2010), in a study on perceptions of warmth and competence of students at two rival schools, found that the prestige of the rater's school, compared to the target's school, affected ratings of competence in outgroup students. On a cultural level, Terracciano and McCrae (2007) found that the *per capita* Gross Domestic Product (GDP) of raters' culture was negatively related to perceived conscientiousness of an outgroup country. In the current research, we elaborate on this hypothesis by quantifying the relationship between raters' economic status and their personality rating of targets at the cultural and individual level. Study 1 examines the relationship between rater cultures' *per capita* GDP and ratings of outgroup competence and warmth. Study 2 focuses on the within-culture relationship between family income and outgroup target ratings. With the target's economic status constant in both studies, we expected ratings of the target's competence to vary inversely with national wealth (Study 1) and individual wealth (Study 2) of the raters. This prediction follows directly from research on the target effects of economic status; a wealthier rater may see the target as relatively

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poorer, compared to a less prosperous rater evaluating the same target. Psychologically, then, the predictive power of rater wealth stems from the relative difference between rater and target wealth.

Along with competence, interpersonal warmth is the other key dimension in social perception (Fiske et al., 2007). Conceptually, warmth and competence are orthogonal dimensions, with target status mostly affecting perceptions of competence, and perceived competition from the target affecting perceptions of warmth. Fiske and colleagues (2002), in a cluster analysis of prevalent social groups in the United States, found four clusters roughly corresponding to the four quadrants in the warmth-competence two-dimensional space. In particular, members of the ingroup, or societally favored groups, occupied the high warmth-high competence quadrant. High-achieving outgroup members occupied the low warmth-high competence quadrant. Perceptions of the elderly usually resided in the high warmth-low competence quadrant, and the low warmth-low competence quadrant was reserved for groups such as drug users. Despite the theoretical orthogonality of the two dimensions, Judd, James-Hawkins, Yzerbyt, and Kashima (2005) experimentally found that most outgroup members are rated either in the high competence-low warmth or low competence-high warmth quadrants. Furthermore, effects of wealth on ratings of competence may also indirectly affect ratings of warmth through compensatory mechanisms. Participants prefer to view competent targets as less warm (Kay & Jost, 2003), and experimental manipulations of an outgroup member's competence led to attributions in the opposite direction of their warmth (Kervyn, Judd, & Yzerbyt, 2008). Whether directly or indirectly, characteristics of the target group affect perception on each of the two dimensions of social perception.

The present research expands the literature on stereotype perception by having raters from multiple cultures evaluate a constant target group that is likely to be well known across the globe (Americans). Furthermore, the wide array of countries (48) in Study 1 expands upon the typical cross-cultural study focusing on differences between Western European and East Asian cultures. To our knowledge, this is the only set of studies on rater wealth and stereotype judgments simultaneously across a globally diverse set of countries and within a specific cultural context.

2. Study 1

Existing research has found that wealthy targets tend to be perceived as competent; we extend this work to the wealth of raters. By holding the target group constant, we expected that as the wealth of the rater approaches the wealth of the target, the perception of the target as "rich" should be reduced, thus reducing the perception of the outgroup as competent. To the degree that warmth and competence are negatively correlated, we expected rater-target wealth differences to be related to ratings of warmth. Following Kervyn, Yzerbyt, Demoulin, and Judd (2008), we expected that outgroup ratings of warmth should be negatively related to ratings on competence.

In addition to the trait-specific effects above, general social cognitive processes of person judgment may help explain rater effects in the perception of personality traits. Mussweiler (2001, 2003) suggests that the competing processes of assimilation and contrast affect social perception as a function of the similarity between the target and comparison standards. When the target is similar to the comparison standard on one dimension, they will be rated similarly on another dimension; but when the target is dissimilar from the comparison standard on one dimension, they will be rated in a contrasting manner on another dimension. In the perception of outgroup members, the ingroup is often used as an implicit standard of comparison (Gawronski, Bodenhausen, & Banse, 2005),

and distinct outgroups are reliably differentiated, even when supplied with only a group membership label (Chan & Mendelsohn, 2010). If the ingroup is used as a comparison standard, we expected the outgroup to be seen as different from the ingroup, and therefore rated in contrast to the ingroup across a wide variety of traits. We examine these hypotheses in Study 1, and test whether the rater wealth effect is distinct from a general contrast effect.

2.1. Method

As detailed in Terracciano et al. (2005), participants in 48 cultures (excluding US samples, Mean sample size = 81.41, $SD = 61.19$, range = 39–351) rated a typical member of their culture and then rated a typical American. Cultures were operationalized as nations, except in situations where there are linguistically or politically distinct sub-national groups (e.g., Northern Irish and English, or French and German Swiss). Additional information on sample size, proportion of females, mean age, and language used in each culture have been provided elsewhere (Terracciano et al., 2005; Terracciano and McCrae, 2007).

2.2. Measures

The personality perceptions of the "typical" member of a culture were assessed using the National Character Survey (NCS; Allik, Möttus, & Realo, 2010; Kourilová & Hřebícková, 2011; Realo et al., 2009; Terracciano et al., 2005), which consists of 30 bipolar scales that correspond to the 30 facets assessed by the Revised NEO Personality Inventory (Costa & McCrae, 1992; McCrae, Terracciano, & 78 Members of the Personality Profiles of Cultures Project, 2005). NCS ratings were transformed into T scores ($M = 50$, $SD = 10$), based on the international norms for each of the facets (Terracciano et al., 2005). The focus of this study is on the Competence facet, which was assessed by the adjectives *capable*, *efficient*, *competent*, vs. *inept*, *unprepared*, and the Warmth facet, which was assessed by the adjectives *friendly*, *warm*, *affectionate*, vs. *cold*, *aloof*, *reserved*. In line with McCrae et al. (2007), national wealth of each country was represented by GDP *per capita* (purchasing power parity, US\$) estimates for the median year of data collection (2002) taken from an internet source (World Factbook, 2003). To assess the wealth of the rater culture relative to the target culture (Americans), we subtracted the GDP *per capita* of the United States from the GDP *per capita* of each rater culture, which represents the wealth of each culture relative to the United States.

2.3. Statistical analyses

The association between perceptions of Americans' competence and warmth and culture-level wealth was examined using a simple ecological correlation (that is, correlations between aggregate scores at the culture level) and with a multilevel approach, in which individual raters (level 1) are nested within culture (level 2). The multilevel analyses were performed using Hierarchical Linear Modeling (HLM 6.08; Raudenbush & Bryk, 2002). Specifically, we tested whether *per capita* GDP predicted differences across cultures in perceptions of Americans' personality, or in HLM terminology, whether the level-2 predictor *per capita* GDP explained a significant portion of the variance of level-1 intercept (Equations level-1: $y = b_0 + r_i$; level-2: $b_0 = g_0 + g_1PCGDP_j + u_j$). In a next step, we add to the model ingroup personality ratings (IR) as predictors of Americans' personality perceptions (Equation: $y = b_0 + b_1IR_i + r_i$) to test the relations between ingroup and outgroup ratings and whether *per capita* GDP was still a predictor of cross-cultural differences in perceptions of Americans.

As indicated above, the *per capita* GDP (in thousands) of the other nations was grand mean centered at the *per capita* GDP of the USA, to facilitate interpretation of *B* values.

2.4. Results

Across 48 cultures, mean attributions of competence to Americans were related to the wealth of rater cultures, $r(48) = -.51$, $p < .001$, such that raters from cultures with lower *per capita* GDP perceived Americans as more competent (Fig. 1). Additionally, mean attributions of interpersonal warmth to Americans also was related to rater wealth, $r(48) = .42$, $p < .01$, such that with increasing wealth, raters perceived Americans as more warm (Fig. 2). However, the relation between ratings of American warmth and competence was only marginally negative, $r(48) = -.27$, $p = .07$. Correlations between wealth of rater cultures and attributions of competence to Americans held controlling for attributions of warmth to Americans ($r(45) = -.46$, $p < .001$), and ingroup attributions of warmth ($r(45) = -.30$, $p < .05$), and competence ($r(45) = -.47$, $p < .001$). Correlations between wealth of rater cultures and attributions of warmth to Americans held controlling for attributions of competence to Americans ($r(45) = .34$, $p < .05$) and ingroup attributions of competence ($r(45) = .39$, $p < .01$) but not ingroup attributions of warmth ($r(45) = .02$, $p = .87$). Ratings of ingroup warmth were related to ratings of American competence ($r(48) = .52$, $p < .001$), but ingroup competence were not related to ratings of American warmth ($r(48) = .18$, $p = .23$).

HLM analyses supported the hypothesis that rater wealth is associated with ratings of outgroup competence and warmth. Higher *per capita* GDP predicted a lower rating of Americans' competence ($B = -.20$, $t(44) = -4.32$, $p < .001$). For example, the predicted ratings of Americans' competence by countries at the 25th and the 75th percentile on *per capita* GDP (a difference of about

\$25,000 GDP *per capita*) were 52.90 and 48.94 (a difference of about one-half SD on competence). Compared to the null model, 27% of the variance in ratings of Americans' competence was explained by the difference in *per capita* GDP. The addition of *per capita* GDP significantly improved model fit, reduction in deviance = 7.22, $p < .05$. Higher *per capita* GDP predicted a higher rating of Americans' warmth ($B = .21$, $t(44) = 3.62$, $p < .001$). The predicted ratings of Americans' warmth by countries at the 25th and the 75th percentile on *per capita* GDP were 44.27 and 48.42, respectively. In other words, a group with about \$25,000 lower *per capita* GDP than the mean perceived Americans to be about half SD lower on warmth. Compared to the null model, 17% of the variance in ratings of Americans' warmth was explained by *per capita* GDP. The addition of *per capita* GDP significantly improved model fit, reduction in deviance = 7.36, $p < .05$.

The notion that ratings of outgroup competence and warmth depend on rater *per capita* GDP relative to target may originate from a more general process of contrast in the evaluation of national character stereotypes. Indeed, ratings of the typical ingroup member of each of the 48 cultures were significantly negatively correlated with the ratings of the typical American within each culture for 22 of the 30 items on the NCS. This pattern supports the notion that ingroup evaluations are used as a reference to evaluate outgroups' traits. In particular, there were significant negative correlations between ingroup and outgroup ratings on both warmth ($r(48) = -.67$, $p < .001$) and competence ($r(48) = -.28$, $p = .05$). However, those relationships are distinct from the wealth effect on judgments of warmth and competence. Specifically, in HLM analyses where individual level ingroup ratings and group level wealth are predictors and ratings of Americans is the outcome, rater culture *per capita* GDP continued to be a significant predictor. In the model for warmth, rater culture *per capita* GDP ($B = .16$, $p < .01$) and ingroup warmth ($B = -.16$, $p < .01$) are both significant

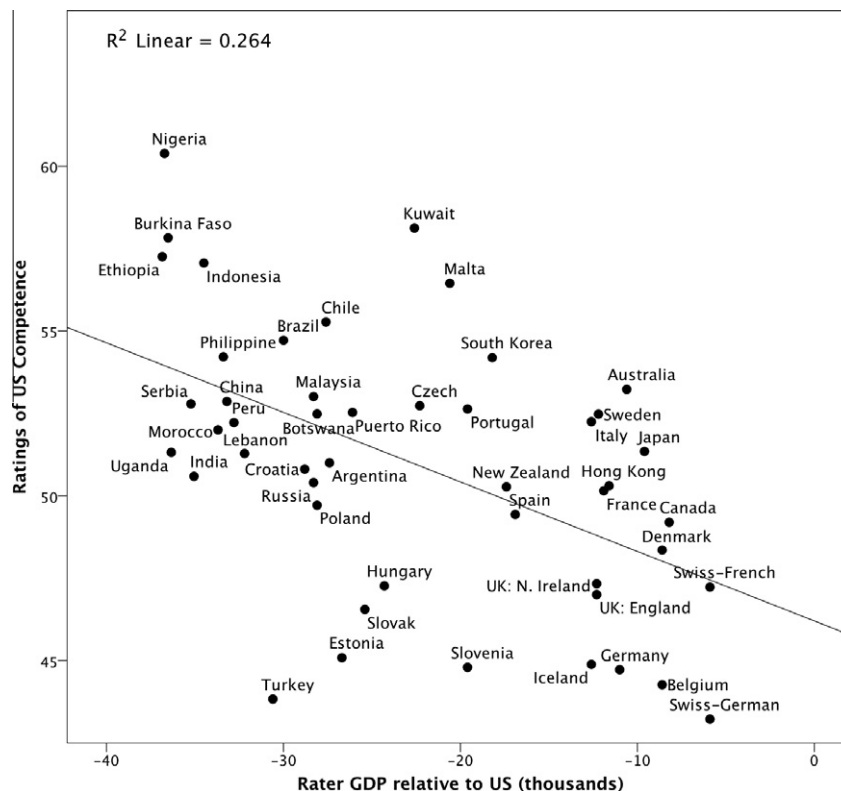


Fig. 1. Scatterplot of rater *per capita* GDP relative to the USA (x-axis) against mean ratings of Americans' competence (y-axis).

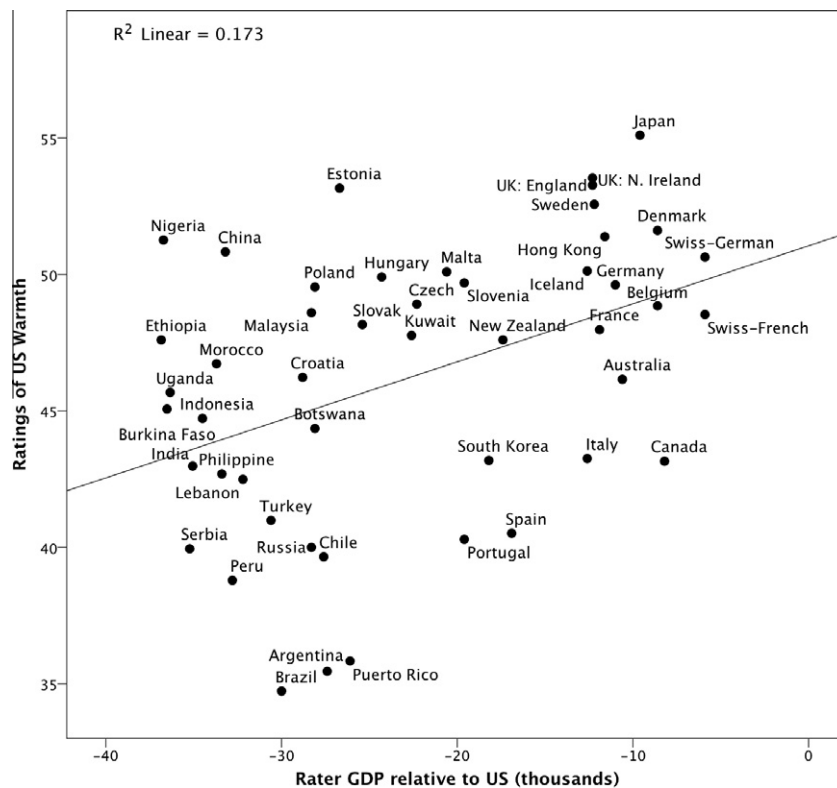


Fig. 2. Scatterplot of rater *per capita* GDP relative to the USA (x-axis) against mean ratings of Americans' warmth (y-axis).

predictors, whereas in the model for competence only rater culture *per capita* GDP ($B = -.13$, $p < .05$) remained significant but not ingroup competence ($B = .02$, $p = .16$).

2.5. Discussion

Study 1 supported the role of rater wealth in judgments of outgroup stereotypes. Across 48 cultures, views of the outgroup's warmth and competence varied as a function of rater wealth. Raters from relatively less affluent countries rated Americans as more competent and less warm than raters from more affluent countries. Additional analyses showed that the specific effect of rater wealth on warmth and competence is distinct from general social cognitive contrast effects.

There may be different cognitive mechanisms involved in the observed rater wealth effects. Participants could have been comparing their personal economic standing with those of the typical American, or they could have been comparing a typical ingroup member's economic standing with those of the typical American. Both of these mechanisms could be operating; in less affluent countries, most raters would be poor compared to Americans, and typical members of less affluent countries are worse off than typical Americans. Furthermore, people from different cultures may have different historical, social, and political experiences with Americans that may be related to perceptions of Americans' warmth as well as competence. Raters in countries in competition with the United States could very well rate Americans low on warmth quite independently of wealth, and only incidentally rate Americans high in competence as a compensatory consequence (Kervyn, Judd et al., 2008). Within any culture, however, there are always relatively rich and poor individuals. These within-culture individual differences may help discriminate between the different cognitive mechanisms. In Study 2 we held culture (and thus ingroup wealth) constant to investigate whether individual differences in wealth affect perception of an American national stereo-

type. Thus, ingroup comparisons are the same across raters, whereas self comparisons vary between raters.

3. Study 2

Study 2 shifts focus from culture-level *per capita* GDP to individual-level household income. Here we examine the effect of rater wealth on ratings of Anglo Americans by a group of Mexican Americans, who live in Texas in a region bordering Mexico. These raters are themselves American, therefore we specified "Anglo American" as the outgroup target. Given that mass media representation of Americans overwhelmingly focuses on Americans of European descent (Mastro & Greenberg, 2000), this definition of the outgroup maintains some parallels with the target outgroup in Study 1, while extending the findings to a group which has meaningful and frequent contact with the "outgroup". Another feature of Study 2 is that by having raters from a relatively homogeneous cultural group within the US, we controlled for between-culture differences of raters.

3.1. Method

Study 2 was conducted at a university in Texas, United States, where Mexican Americans comprise the majority of the student body. Self-identified Mexican American college students ($N = 120$, age $M = 23.40$, $SD = 6.50$, 76% female)¹ rated the typical Anglo American using the NCS. Participants reported their household income on a 4-point Likert-type scale, where 1 represents household income below \$20,000 ($N = 23$), 2 represents household income between \$20,000 and \$40,000 ($N = 43$), 3 represents household income between \$40,000 and \$80,000 ($N = 34$), and 4 represents household

¹ Of the 120 participants, 20 were Mexican-born. Excluding those participants did not substantially change the results.

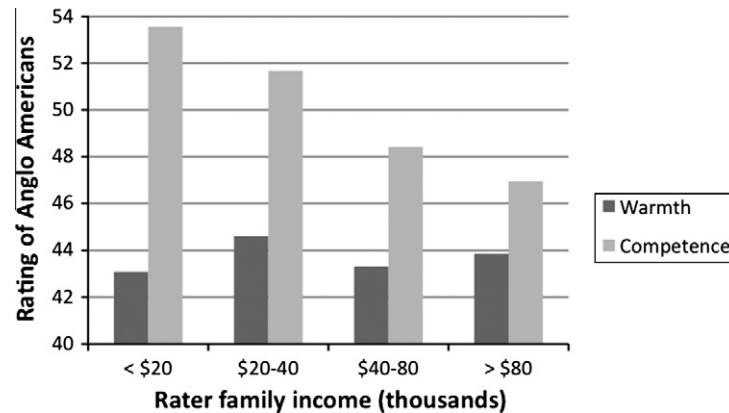


Fig. 3. Ratings of Anglo Americans on warmth and competence by rater family income.

income over \$80,000 ($N = 17$). Because the median household income of non-Hispanic Whites with likely college-aged children is about \$80,000 (Head of household age 45–55, median income \$83,622; age 55–65, median income \$77,230; DeNavas-Walt, Proctor, & Smith, 2010), lower values on this 4-point Likert scale may represent lower income relative to Anglo Americans.

3.2. Results

Consistent with predictions, rater family income was related to ratings of the outgroup's competence, Spearman's $\rho(117) = -.24$, $p < .01$, such that raters with lower family incomes viewed the typical Anglo as more competent. However, family income was not related to ratings of the outgroup's warmth, Spearman's $\rho(117) = .00$, $p = .95$ (Fig. 3). There was no relationship between ratings of Anglo Americans' competence and warmth, $r(118) = -.03$, $p = .72$.

3.3. Discussion

When testing raters with shared historical and geographical context, between-participants differences on economic status was significantly related to attributions of competence to outgroups. Participants with lower income than the outgroup were significantly more likely to rate the outgroup as more competent. Because participants in Study 2 were from the same American subculture, systematic rater variability was unlikely to originate from cultural differences among raters. Family income was unrelated to ratings of warmth, perhaps because Latin cultures have a pervasive stereotype that Americans are particularly low in warmth (see Figs. 2 and 3). Additionally, if family income measures only status and not competition, we would not expect it to be related to warmth, and the data bear out this interpretation. It is also worth noting that although Study 1 participants might have formed their impressions of Americans mostly through media representations, Study 2 raters were likely both exposed to media and direct contact with Anglo Americans. The better knowledge of their target may also explain the reduced intercorrelations of trait ratings (e.g. Borkenau & Liebler, 1994). Despite this variability, the above studies provide a compelling, consistent package relating both group wealth disparity and individual income disparity to the perception of outgroup members.

4. General discussion

The preceding studies extend previous research on stereotype perception by indicating that ingroup economic status, relative to the outgroup, may be a relevant predictor for ratings of outgroup competence. There is not only a cross-cultural tendency to see

the rich as competent; we may see the outgroup as more competent because they are *more* wealthy than *us*. To more affluent raters, they seem less competent, because their wealth no longer needs to be explained by the target's traits. Existing research suggests that raters use the ingroup as a comparison standard in the judgment of personality (Credé, Bashshur, & Niehorster, 2010), even in the case of minimal groups (e.g., Sherif & Sherif, 1953). As such, outgroup members were generally rated in contrast to the ingroup across personality facets in the current research. However, our data suggest that some participants may have also considered their own status in the process of social comparison. The social standing of the rater also contributes to group perception, in addition to the standing of the targets relative to each other. When aggregating ratings of targets across disparate raters, we should consider the social status of the different raters as well as that of targets.

We have demonstrated that the processes of rater-target economic comparison occur at both the cultural level and at the individual level. These results are not *a priori* obvious. Lower-status groups could have minimized the difference between themselves and the higher-status groups on the ratings of competence, and maximized the difference on warmth (e.g., Oldmeadow & Fiske, 2010, Study 2), rather than the systematic variation on ratings of target competence based on rater wealth, as we see here. Alternatively, status comparisons could be constrained to the comparisons between two targets without regard to rater status differences (e.g., Yzerbyt, Kervyn, & Judd, 2008). It is revealing that Mexican American students attending the same university in Texas vary in their view of Anglo Americans as a function of their family income. In the process of person perception, we seem to anchor on the self and adjust target ratings based on the similarity of self and target. Wealth may be one such dimension on which the self is compared against the outgroup. Individual income continues to predict outgroup ratings of competence when culture is relatively constant.

In our data, however, interpersonal warmth was related to rater wealth on the cultural level but not the individual level. There were also compensatory ratings of the outgroup's warmth and competence on the cultural level, but not the individual level. This may be due, in part, to individual-level effect sizes being smaller than the culture-level effect sizes, because aggregation across individuals eliminates individual differences and reduces error variances (Rushton, Brainerd, & Pressley, 1983). This pattern of findings could be partially explained by less affluent countries being located in warmer climates, among other cross-cultural differences linked to wealth. McCrae et al. (2007) reported that countries in warmer climates have lower *per capita* GDP, and those countries also were judged to have more interpersonal warmth

in their national character stereotypes. Indeed, in the current sample, the correlation between rater wealth and interpersonal warmth is reduced controlling for rater countries' mean temperatures ($r(45) = -.31, p < .05$). However, because within-cultures individual differences in family income occur in families living in the same region, there would be less systematic variability in climate that is incidentally related to wealth. The relationship between wealth and competence appears stronger than the one between wealth and warmth; lay raters may not necessarily think warm people are unable to accumulate wealth, whereas incompetence may resonate with an inability to accumulate wealth. This lends support to Fiske et al. (2002)'s notion that warmth and competence may be distinct dimensions in the perception of groups, with competence mostly related to status, and warmth being related to competition. However, as Study 1 and other literature have shown (e.g., Yzerbyt et al., 2008), the two dimensions may not be entirely orthogonal.

One limitation in our current research is the lack of variability in our target group. Though we did not include a target group that is of lower economic status, we do expect that less affluent nations and groups would be perceived as less competent as a function of rater wealth, due to experimental evidence showing that stereotypes of the poor tend to be negative in nature (e.g., Cuddy et al., 2008), and that when rating multiple targets, targets' status relative to each other contributed to ratings of competence (Oldmeadow & Fiske, 2007). Because of the documented negative relation between perceptions of outgroup competence and warmth in the literature (e.g., Judd et al., 2005), we might also expect that perceptions of the poor to be high in warmth. An expansion of the current program of research may include a large number of real or experimentally manipulated target groups that differ on the wealth continuum.

Rather than objective national and individual income per se, Adler (2009) has suggested that individuals' subjective social status might be a more powerful predictor of psychological outcomes². In line with Adler's predictions, research has linked subjective socioeconomic status with contextual attributions (Kraus, Piff, & Keltner, 2009) and contextual attributions to stereotyping (Spencer-Rodgers, Williams, Hamilton, Peng, & Wang, 2007). Kraus and colleagues found that participants who reported feeling subjectively less well off were more likely to make contextual attributions for life events, and Spencer-Rodgers and colleagues have found that participants making contextual attributions were more likely to apply stereotypes in judgment of a novel target. Low status in itself may independently lead to contextual explanations as a protective mechanism (Mendoza-Denton, Kahn, & Chan, 2008). Taken together, the existing literature suggests that subjective socioeconomic status may be related to stereotype perception, and our use of objective wealth may be a more stringent test of the phenomenon. Existing literature also has demonstrated a relationship between individual differences on endorsement of system-justifying ideologies and ratings of targets' warmth and competence (Oldmeadow & Fiske, 2007). Future research should explore other within-rater psychological variables in the pathway between status and the application of stereotypes to outgroups, such as contextualism, individuals' susceptibility to stereotypes, or personality traits.

Existing research suggests that perceptions of outgroup personality may have social, behavioral, and health consequences. For

example, negative stereotypes have been linked to higher incidence of depressive symptoms among Asian Americans (Chan & Mendoza-Denton, 2008), cardiovascular events among the elderly (Levy, Zonderman, Slade, & Ferrucci, 2009), and anxiety during cross-race social interactions (Page-Gould, Mendoza-Denton, & Tropp, 2008). Furthermore, the preferential hiring of high-status group members (e.g., Fiedler, 2001) may be partly due to perceptions of the wealthy as more competent. Such preferences may make stereotypically wealthy groups more able to accumulate wealth, creating a self-fulfilling prophecy. Future research could address how socioeconomic changes, either an individual's or nations' changes in wealth, may affect psychological perceptions of groups. It is possible that a reduced economic gap between groups may also make equal-status contact (Pettigrew & Tropp, 2006) more likely, by making status differences between groups less salient. Caveats notwithstanding, we are hopeful about this encouraging first step relating perceiver economic status to intergroup social judgment.

Acknowledgments

This research was supported in part by the Intramural Research Program of the National Institutes of Health, National Institute on Aging. We thank the members of the Personality Profiles of Cultures Project for collecting the data reported here. We thank Angelina R. Sutin and Lori Beason-Held for helpful comments on earlier revisions of this article. Electronic correspondence should be addressed to Wayne Chan at wayne.chan@nih.gov.

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² There is some controversy as to whether income is a pure measure of status. In terms of competition among nations, it seems likely that nations of similar military, cultural, or economic power would be in competition for domination in each domain, rather than competition being indexed by differences in GDP. In terms of individuals, it seems more likely that individuals with similar incomes would be competing for similar jobs, rather than those with more disparate incomes. Regardless, rater income is correlated with target competence in the current research, indicating that rater wealth is at least a measure that is correlated with status.

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