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Stereotype content model across cultures: Towards universal similarities and some differences

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The stereotype content model (SCM) proposes potentially universal principles of societal stereotypes and their relation to social structure. Here, the SCM reveals theoretically grounded, cross-cultural, cross-groups similarities and one difference across 10 non-US nations. Seven European (individualist) and three East Asian (collectivist) nations ($N = 1,028$) support three hypothesized cross-cultural similarities: (a) perceived warmth and competence reliably differentiate societal group stereotypes; (b) many out-groups receive ambivalent stereotypes (high on one dimension; low on the other); and (c) high status groups stereotypically are competent, whereas competitive groups stereotypically lack warmth. Data uncover one consequential cross-cultural difference: (d) the more collectivist cultures do not locate reference groups (in-groups and societal prototype groups) in the most positive cluster (high-competence/high-warmth), unlike individualist cultures. This demonstrates out-group derogation without obvious reference-group favouritism. The SCM can serve as a pancultural tool for predicting group stereotypes from structural relations with other groups in society, and comparing across societies.

When Celso Curzi first emigrated from Italy in the late 1950s to be a guest worker in Germany, his bosses treated him as 'shiftless' and 'unreliable' (Landler, 2003, July 20). Well aware of the prejudices between the two countries, he never expected to stay. But he fell in love with a German woman, married, and put down roots. Even so, the intergroup prejudices were entrenched, from 2,000 years of religious, cultural, and territorial struggles. Italians viewed Germans as expert but heartless mercenaries, and Germans saw Italians as gregarious but ineffectual buffoons. Mr Curzi explained to a New York Times reporter: 'Germans love Italians, but don't admire them. Italians admire Germans, but don't love them'. He illustrates (a) two potentially universal dimensions of social perception (Cuddy, Fiske, & Glick, 2008; Fiske, Cuddy, & Glick, 2007) and (b) two potentially universal, ambivalent: competent but cold versus warm but incompetent.

Such stereotypes stem from phenomena common to all humans: (1) the basic survival need to identify 'friends or foes' and (2) the ubiquity of hierarchical status differences and competition for resources. In the US, stereotype content and its social structural correlates have proved systematic, in three respects (Cuddy, Fiske, & Glick, 2007; Fiske, Cuddy, Glick, & Xu, 2002; Fiske, Xu, Cuddy, & Glick, 1999; Fiske *et al.*, 2007). First, across groups, stereotypes share common dimensions of content – warmth and competence. Second, many out-groups receive ambivalent stereotypes – more positive on one dimension and less positive on another. Third, group stereotypes follow from social structure: perceived status predicts competence stereotypes and perceived competitiveness predicts (lack of) warmth stereotypes. A variety of US samples, including a representative survey, support these hypotheses.

If these are general principles, then they should not be unique to US groups or respondents. On the contrary, they should be human universals (i.e. etics) (Triandis & Marin, 1983), regardless of groups and cultures. Alternatively, SCM phenomena could indeed be culture-bound (emics) – indigenous to the US. For example, given political correctness norms, US perceivers might more often balance a negative stereotype with a subjectively positive one (making ambivalent stereotypes). Or perhaps the SCM just reflects the unusually multicultural US. Cultural influences might preclude universal principles of stereotyping.

General overview

This research has three general goals. First, *while the contents of specific societal stereotypes may differ between cultures, several principles that predict those contents remain intact across cultures*.

Second, a previous tenet of the intergroup relations literature, namely that out-group derogation follows from in-group preference, may not hold in quite the way assumed. From Sumner (1906) and Allport (1954) onward, intergroup relations theory has assumed that people first love their in-groups and consequently hate out-groups. But the SCM provides a more nuanced analysis, suggesting that out-groups can be liked (even if not respected) or respected (even if not liked). If the in-group can admit that out-groups have some positive features, the logical extreme is that the in-group need not be viewed as extremely superior on every dimension, to differentiate in-group from out-group. Hence: *Out-group derogation does not require favouritism of reference groups relative to other societal groups*.

Third, *the SCM can serve as a pancultural measure of differences across cultures*. Applying the same valid and systematic framework in different cultures not only allows the discovery of similarities, it also puts differences in stark relief. For example, models of personality (e.g. Eysenck & Long, 1986; Katigbak, Church, Guanzon-Lapena, Carlota, & del Pilar, 2002; McCrae & Allik, 2002), implicit trait beliefs (Church *et al.*, 2003), emotion categories (Hupka, Lenton, & Hutchison, 1999), and value dimensions (Bond, 1988; Schwartz & Bilsky, 1990) all have proven worthy tools in key cross-cultural discoveries, transcending a US-centred understanding.

The stereotype content model

The term *stereotype* often implies uniform antipathy towards a social group (Allport, 1954; Crosby, Bromley, & Saxe, 1980; Sigall & Page, 1971). In this view, stereotypes are unidimensional, falling along a single general goodness–badness dimension. But stereotypes are neither univalent nor unidimensional.

Two primary dimensions of stereotype content

Upon encountering out-group members, we posit that people ask two questions: Do they *intend* to harm me; and are they *capable* of harming me? The two core dimensions of general stereotype content that we propose, warmth (e.g. friendly, good-natured, sincere, and warm) and competence (e.g. capable, competent, confident, and skillful), respectively, answer these questions (for reviews, see Cuddy *et al.*, 2008; Fiske *et al.*, 2007). These dimensions emerge in classic person perception (Asch, 1946; Rosenberg, Nelson, & Vivekananthan, 1968), social-value orientations (e.g. self- and other-profitability; Peeters, 2002), construals of others' behaviours (Wojciszke, 1994), and voters' ratings of political candidates (Kinder & Sears, 1981). In fact, they account for 82% of the variance in global impressions of other individuals (Wojciszke, Bazinska, & Jaworski, 1998). Related dimensions also describe national stereotypes and prejudices towards specific groups (both reviewed below). Data from US surveys illustrate how stereotypes array on the two dimensions (Figure 1) and support SCM hypotheses (Cuddy *et al.*, 2007; Fiske *et al.*, 2002).

Ambivalent stereotypes

Support for SCM's ambivalent stereotypes hypothesis – that many groups are tagged as proficient in one sphere (i.e. either warmth or competence) and inferior in the
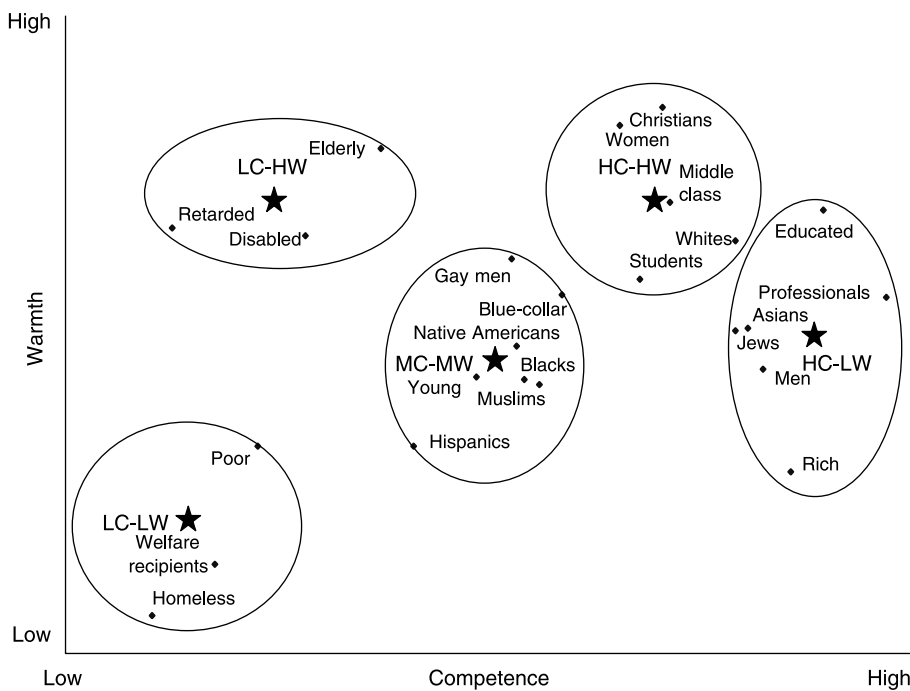
Figure 1. Group competence–warmth stereotypes (Fiske *et al.*, 2002, Study 3). *Key:* Stars indicate cluster centres. H, M, and L, respectively, indicate high, medium, and low; W, warmth; C, competence.

other – stems from stereotypes of specific social groups. Two types of stereotyped groups materialize in this literature – those viewed as kind but helpless, and those viewed as skillful but cunning. 'Envious' prejudice targets the latter, seen as threateningly competent and untrustworthy (Fiske *et al.*, 2002; Glick, 2002; Glick & Fiske, 2001a, 2001b).[1] For example, non-traditional women, such as career women and feminists, allegedly possess agentic but not communal traits, and are respected but disliked – embodying envious prejudice (Eagly & Kite, 1987; Glick & Fiske, 1996, 2001a; MacDonald & Zanna, 1998; Spence & Helmreich, 1979). Envious prejudice also targets Asian Americans and other "model minorities", stereotyped as excessively competent (too ambitious, too hardworking) and lacking sociability (Ho & Jackson, 2001; Hurh & Kim, 1989; Kitano & Sue, 1973; Lin, Kwan, Cheung, & Fiske, 2005; Maddux, Galinsky, Cuddy, & Polifroni, 2008). Similarly, stereotypes of Jews combine business acumen with interpersonal self-interest (Allport, 1954; Glick, 2002).

Groups seen as benevolent but incapable of competing in mainstream society sit in the opposite corner of the map. This 'pitying' prejudice reflects liking but disrespect (Glick & Fiske, 2001a, 2001b; Jackman, 2001) and often targets traditional women (Cuddy, Fiske, & Glick, 2004; Glick & Fiske, 1996, 2001a) and older people (Cuddy & Fiske, 2002; Cuddy, Norton, & Fiske, 2005; Heckhausen, Dixon, & Baltes, 1989; Kite, Deaux, & Miele, 1991), both perceived as high on communal, but low on agentic traits.

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[1] *The SCM also links each combination of high–low warmth–competence stereotypes to specific emotional prejudices: admiration (warm–competent); contempt (cold–incompetent); envy (cold–competent); and pity (warm–incompetent). For a discussion of these predictions and findings, please see Cuddy et al. (2007, 2008) and Fiske et al. (2002).*

Still, some groups receive evaluatively consistent stereotypes. Groups perceived as *both* hostile and indolent most elicit the antipathy traditionally associated with derogated groups. Conversely, in-groups and mainstream social groups are favoured as both warm and competent, eliciting pride and admiration (Fiske *et al.*, 2002).

Overall, these four clusters of stereotype content, defined in the competence × warmth space, should be universal. Our first goal examines this universality of content across cultures and groups.

Social structural correlates of stereotypes

All complex societies organize hierarchically and compete for resources. These structural relations forecast groups' location on the SCM's competence × warmth space. Stereotypes are shaped by perceived and actual economic, geographic, normative, and power relationships (Eagly & Kite, 1987; LeVine & Campbell, 1972; Linssen & Hagendoorn, 1994; Poppe, 2001). In the SCM, judged warmth and competence stem from appraisals of, respectively, (a) the potential harm or benefit of the target's intent and (b) whether the target can effectively enact that intent. In the stereotype space, competitors lack warmth, while non-competitors are warm; high status people are competent, while low status people are incompetent. Besides US surveys (Cuddy *et al.*, 2007; Fiske *et al.*, 2002), the structural predictors appear in experiments on intergroup perception (Caprariello, Cuddy, & Fiske, 2007; Oldmeadow & Fiske, 2007) and interpersonal perception (Russell & Fiske, 2007).

Social structure determines competence and warmth throughout the interpersonal and intergroup perception literatures. Impression-formation research (Wojciszke, 2005) demonstrates that perceived status predicts perceived competence, and self-interest (akin to competition) predicts perceived morality (akin to warmth). Similarly, European nations' perceived economic power (i.e. status) predicts perceived competence, and conflict (i.e. competitiveness) predicts perceived warmth (Poppe, 2001).

People link perceived traits with social structure for several reasons. First, they legitimate unfair social structures over which they feel they have no control (for a review, see Glick & Fiske, 2001a). For example, just-world thinking leads people to view outcomes as deserved (Lerner & Miller, 1978): groups with high status, well-paying jobs must have earned them through talent and hard work. And indeed, the status–competence correlation varies by individual differences in just-world beliefs (Oldmeadow & Fiske, 2007). Similarly, system-justification legitimates group-level sociopolitical and socio-economic inequalities (Jost & Banaji, 1994). Superordinate groups justify their advantage by viewing the *status quo* as fair, and even subordinate groups may endorse this view because it explains their own outcomes. In short, status predicts competence stereotypes because it justifies the apparent meritocracy. Competition negatively predicts warmth stereotypes because it can exclude groups with goals that conflict with those of the in-group. If they are not nice, why include them?

Additionally, people may simply infer a group's traits from their social position. In interpreting behaviour, westerners tend to over-use internal dispositions, ignoring the influence of the situation (Gilbert & Malone, 1995; Jones, 1979; Ross, 1977). Thus, when a group is supposedly overrepresented in high status positions, people may attribute this to the group's perceived competence. Likewise, when a group is viewed as competing for resources, such as tax dollars, people may attribute this behaviour to the group's alleged malice. Thus, our first goal also addresses potentially universal principles in predictors of stereotypes.

Out-group derogation and reference-group favouritism

Our second goal revisits a heretofore universal principle of prejudice, namely that in-group favouritism underlies out-group derogation (Allport, 1954; Brewer & Brown, 1998; Sumner, 1906). The SCM can re-examine this idea across societies, by comparing societal in-groups, relative to societal out-groups. If many out-groups are ambivalent, as the SCM predicts, then they may be positive on at least one dimension, calling into question the necessity of absolute in-group superiority. Because of potential cultural differences in views of the in-group (see below), a cross-cultural comparison allows us to explore this question.

Our societal level of analysis revives a construct with a rich history in social psychology: reference groups (e.g. Hyman, 1942; Merton, 1957). In US SCM maps, the only unambivalently positive stereotypes describe reference groups, including personal in-groups (e.g. students) and societal prototype groups (e.g. Christians, middle-class, Whites). Defined as 'psychologically significant for one's attitudes and behaviour' (Turner, 1991, p. 5), reference groups are those with which an individual identifies, and are often, but not always, in-groups (Allport, 1954; Mackie & Wright, 2001; Turner, 1991). They also can be societal prototype groups – valued mainstream groups that are not necessarily in-groups (e.g. middle-class and Whites in the US). Reference groups have theoretically served as normative standards for social comparison and most often, social aspiration (Hyman, 1942; Merton, 1957; Sherif & Sherif, 1953). Because the current studies ask participants to report societal stereotypes, we consider reference groups rather than demographic in-groups. The term '*reference group*' applies to both valued personal in-groups (e.g. students) and to societal prototype groups.

Reference-group favouritism – preferring personal in-groups (Allport, 1954; Brewer & Brown, 1998; Fiske, 1998; Sumner, 1906) or societal prototype groups (cf., Jost & Burgess, 2000) – has always seemed to underlie bias, more than out-group derogation. In the US, the Protestant work ethic exhorts people to work hard towards goals (Weber, 1905/1958); everyone can be optimistic about assimilating to the mainstream if some reference groups are apparently ideal (i.e. both warm and competent). The SCM predicts reference groups to lodge in the high–high cluster, separated from other groups, and the US data consistently support this (Cuddy *et al.*, 2007; Fiske *et al.*, 2002). Goal 2 explores the role of reference-group favouritism in out-group derogation.

Support for the SCM in the United States

Our third goal explores the SCM's applicability to cultural differences, in comparison with multiple US samples supporting the competence × warmth space and mixied stereotypes (as reviewed: Figure 1; Cuddy *et al.*, 2007; Fiske *et al.*, 1999, 2002). Supporting the social structure hypothesis, correlations between status and competence (positive) and between competition and warmth (negative) consistently showed moderate to large effects (see Table 1, top row), with high status groups viewed as highly competent, and competitive groups perceived as lacking warmth.

Challenges to the universality of the SCM

As David Schneider writes, 'it is hard to escape the notion that cultures provide much of the content of stereotypes; they tell us what to think' (1996, p. 432). Indeed, culture is a fundamental, pervasive environment that influences how people feel, think, and behave (Fiske, Kitayama, Markus, & Nisbett, 1998). Culture originates from

Table 1. Social structure-stereotype correlations, all studies

Study	Status–competence *r*	Competition–warmth *r*
Fiske *et al.* (2002b), Study 2 (*N* = 147)	.88**	− .31**
Preliminary study: Belgium (*N* = 40)	.75**	− .30**
Study 1: EU nations		
Belgium (*N* = 43)	.72**	− .48**
France (*N* = 150)	.63**	− .02
Germany (*N* = 98)	.68**	− .15*
The Netherlands (*N* = 122)	.84**	− .05
Portugal (*N* = 102)	.85**	− .17**
Spain (*N* = 199)	.87**	− .15*
UK (*N* = 41)	.85**	− .04
EU combined (*N* = 755)	.89**	− .25**
Study 2: Asian collectivist samples		
Hong Kong (*N* = 60)	.87**	− .15*
Japan (*N* = 83)	.75**	− .17**
South Korea (*N* = 91)	.64**	− .39**

Note. $*p < .05$; $**p < .01$. Correlations were calculated at the level of individual participants, not group means. European Union samples included: 43 (74% female, mean age = 20.3) at the Université Catholique de Louvain, Louvain-la-Neuve, Belgium; 150 (91% female, mean age = 19.7) at Université Blaise Pascal, Clermont-Ferrand, France; 98 (53% female, mean age = 23.4) at Eberhard-Karls-Universitaet Tuebingen, Germany; 122 (55% female, mean age = 19.7) at Leiden University, The Netherlands; 102 (no demographic data reported) at the University of Lisbon, Portugal; 199 (no demographic data collected) at the University of Granada, Spain; and 41 (66% female, mean age = 22.2) at Cardiff University, Wales, UK.

a society's geographic, ecological, economic, demographic, genetic, and historical features. The resulting cultural systems appear in a society's norms, ideals, and values, and persist through its institutions and socialization practices (Hofstede, 1980). No two societies are characterized by identical cultural systems, and societies' unique cultural predispositions influence perceivers and targets.

How culture affects perceivers
Countless cultural differences in how people perceive the world could undermine potentially universal principles of stereotyping. Within this vast literature, a few findings could limit the SCM's potentially universal principles: category use; dispositional bias; legitimating ideologies; valued traits; multiculturalism; and most central, individualism-collectivism (IC).

First, culture affects basic cognitive processes (Nisbett, Peng, Choi, & Norenzayan, 2001; Norenzayan, Smith, Kim, & Nisbett, 2002). For instance, compared with East Asians, North Americans tend to think more with the aid of categories (Chiu, 1972; Choi, Nisbett, & Smith, 1997; Norenzayan *et al.*, 2002), a social-cognitive process at the root of stereotyping (Fiske, Neuberg, Beattie, & Milberg, 1987; Taylor, Fiske, Etcoff, & Ruderman, 1978). If people in non-US cultures think less with categories, a skeptic might propose that they are less likely to fall prey to the social consequences of categorical thinking (i.e. stereotyping), thus rendering SCM dimensions inapplicable.

Second, North Americans more than members of other cultures attribute people's behaviours and outcomes (competitiveness and status) to dispositions (warmth and

competence) as opposed to situations (Choi, Nisbett, & Norenzayan, 1999; Miller, 1984; Morris, Nisbett, & Peng, 1995; Morris & Peng, 1994). As noted, the perceived relationship between social structure and stereotypes might rest on this attributional bias – people earn high status because they are competent, and people who are competitive must also be cold. According to the skeptic, cultures without a strong dispositional bias might not use structural outcomes to infer traits.

Third, culture shapes the ideologies that legitimate prejudice (Cohen & Nisbett, 1994; Crandall & Martinez, 1996; Crandall *et al.*, 2001; Glick *et al.*, 2000). Cultural ideologies govern what people see as good and bad, thereby stipulating which groups will become the targets of prejudice. For example, North Americans score particularly high in just-world thinking (Loo, 2002), which provides moral justifications for good and bad outcomes. Especially relevant to the perceived relationship between status and competence, cultures lower in just-world thinking might not perceive the same link.

Fourth, cultures come with different values that influence which traits reflect goodness, morality, and social acceptance (e.g. Markus, Mullally, & Kitayama, 1997; Morling, Kitayama, & Miyamoto, 2002; Sedikides, Gaertner, & Toguchi, 2003; Wheeler & Kim, 1997). For example, southern Mediterranean cultures (e.g. France, Greece, and Spain) especially value characteristics that reflect excitement-seeking and appreciation of novelty (Aaker, Benet-Martinez, & Garolera, 2001). Contrary to universality, some societies might not value highly enough SCM's traits – competence and warmth – to use them in forming stereotypes.

Fifth, a culture's political ideals influence how its citizens perceive out-groups. Political correctness, for instance, might lead US citizens to bestow on out-groups a partially positive stereotype, increasing the frequency of ambivalent stereotypes. Political correctness results in part from the US status as an immigrant society, with the world's longest continuous history of receiving immigrants (Dovidio & Esses, 2001). Thus, multicultural ideals also infuse US political dialogue, making diversity an objective (Berry, 2001), which might lead US perceivers to differentiate groups on more than one evaluative dimension. A skeptic could argue that this uniquely US context underlies the SCM.

In short, ample evidence would suggest to a skeptic that cultural influences should preclude universal principles of stereotyping. The preceding five issues all predict cultural differences at least between US and East Asian perceivers, consistent with Goal 3.

Finally, cultural analyses raise an issue consistent with both Goals 2 and 3: the generality of reference-group favouritism for collectivist cultures. Interdependent (i.e. collectivist) selves do not self-promote to the same extent as independent (i.e. individualist) selves (Kitayama, Markus, Matsumoto, & Norasakkunkit, 1997), to ensure social harmony (Markus & Kitayama, 1991; Triandis, 1995). Collectivists self-enhance less than individualists (Heine, Lehman, Markus, & Kitayama, 1999; Kitayama *et al.*, 1997), rate failures as more self-relevant (Heine *et al.*, 2001; Lee & Seligman, 1997), and self-criticize more (Kitayama *et al.*, 1997). This might generalize to the group level (Heine & Lehman, 1997; cf. Muramoto & Yamaguchi, 1997; but also see Hewstone, Bond, & Wan, 1983; Taylor & Jaggi, 1974). In-group favouritism may diminish in collectivist settings, befitting cultural ideals of maturity as modest, humble, and self-improving. Group ideals may depend on moderation: What is average is good. Collectivist cultures show less personal optimism (Heine *et al.*, 1999; Markus & Kitayama, 1991) and less interpersonal positivity bias (Yamagishi, Cook, & Watanabe, 1998), perhaps particularly towards reference groups. Considerable evidence thus

suggests that more collectivist cultures may not uniformly favour reference groups. If so, out-group derogation might also weaken in these cultures.

A variety of perspectives suggest cultural differences. But much of this research compares North American (more individualist) with East Asian (more collectivist) perceivers. Most cultural psychology assumes that other western perceivers, namely Europeans, would resemble North Americans, in contrast to East Asia. These are empirical questions we explore here.

How culture affects targets

Still our skeptic might persist: culture could rule out a pancultural canon of stereotyping through *target* group differences. The unusually diverse US population, representing myriad racial, ethnic, religious, political, professional, economic, and other types of backgrounds might force an efficient, meaningful, and systematic differentiation. The SCM's principles of stereotyping might be particularly well-suited to forming categories in the unusually diverse, heterogeneous US population. Less heterogeneous cultures might not have the same need.

Additionally, each nation's unique immigration history can shape that nation's level of diversity and therefore intergroup conflict. Realistic group conflict theory (Campbell, 1965) attributes anti-immigrant prejudice to perceived economic and value competition (Esses, Dovidio, Jackson, & Armstrong, 2001). Thus, from a skeptic's perspective, this particularly salient competition might strengthen the SCM's prediction of stereotypes in the US, compared with other places.

Pancultural principles of prejudice

The SCM proposes potentially universal principles of stereotyping. Other work also hints at universally used dimensions of stereotype content. As noted, multidimensional scaling of nationality stereotypes revealed morality and competence as two central dimensions across eastern, central, and western Europe, and these two dimensions correlated with structural relationships (e.g. power and conflict; Phalet & Poppe, 1997; Poppe, 2001; Poppe & Linssen, 1999; see also Alexander, Brewer, & Hermann, 1999). Similarly, western European multination stereotypes followed four content dimensions that roughly break down to our two-warmth (emotionality and empathy) and competence (dominance and efficiency) (Linssen & Hagendoorn, 1994). Research on ambivalent sexism (Glick *et al.*, 2000) discovered that attitudes towards women encompass both paternalistic (towards traditional women) and hostile components (towards non-traditional women) across 19 varied cultures. Ratings of German social groups also supported the SCM dimensions of warmth and competence and the existence of many ambivalent stereotypes (Eckes, 2002). And international samples documented pervasive stereotypes of Southerners as more emotionally expressive than northerners (in the northern hemisphere and vice versa in the southern hemisphere) (Pennebaker, Rimé, & Blankenship, 1996). All this evidence supports pancultural American–European principles of stereotype content.

Turning to predictors, similar threats can engender prejudice across cultures (Stephan, Diaz Loving, & Duran, 2000; Stephan, Ybarra, & Bachman, 1999; Stephan, Ybarra, Martinez, Schwarzwald, & Tur Kaspa, 1998). Universally, some attitudes, ideologies, and values support bias against specific groups. In many cultures, structural gender inequality is justified by the symbiotic relationship of hostile and benevolent attitudes towards both sexes (Glick *et al.*, 2004). Across cultures, prejudice also is

sometimes caused by cultural attributions of responsibility, for example in anti-fat stigma (Crandall & Martinez, 1996; Crandall *et al.*, 2001).

While these studies suggest that some aspects of prejudice may be pancultural, most focus on bias towards specific groups. To our knowledge, none has proposed *general* principles of stereotyping to hold across *widely varied* groups and perceivers – as in the current set of studies.

Overview of the studies

Identifying pancultural phenomena requires testing across multiple cultures (Bond, 1994). So we varied across cultures the two central factors that might have been driving the US SCM effects: perceivers and target groups. US perceivers might be influenced by unique norms, ideologies, and attribution biases that exclusively support the SCM. Likewise, SCM principles might be embedded in US society's unusually heterogeneous mélange of groups. Hence, we test our proposed principles across multiple non-American perceivers and target groups.

Each of the current three studies goes a step further to establish the proposed pancultural nature of the stereotyping principles. The preliminary study uses the same target groups as in the SCM's US studies, but surveys a non-US sample of perceivers (Belgian). If the SCM stereotype content principles stem from characteristics specific to the perceivers' culture, our model should fail to generalize to non-US respondents. Study 1 surveys perceivers from seven EU nations and introduces a new set of target groups (all 15 EU nations), which constitute a predetermined set of relevant groups, thereby eliminating concerns about biased selection of target groups and the potentially restricted applicability of the model to US target groups. Study 2 takes a combined emic–etic approach (Hui & Triandis, 1985) by asking perceivers in three East Asian, relatively collectivist cultures (Hong Kong, Japan, and South Korea) to rate indigenous groups. We present the following four hypotheses:

(1) The *two dimensions hypothesis* predicts: in each sample, (a) groups will array on perceived warmth and competence and (b) cluster analysis of warmth × competence ratings will point to multiple-cluster solutions, comprising some at high and low ends for both dimensions.
(2) The *ambivalent stereotypes hypothesis* predicts: in each sample, (a) many groups will significantly differ on warmth and competence and (b) in cluster analyses, each sample will include at least one high-competence/low-warmth cluster, and one low-competence/high-warmth cluster.
(3) The *social structural correlates hypothesis* predicts: in each sample, (a) perceived status will correlate positively with competence ratings and (b) perceived competition will correlate negatively with warmth ratings.
(4) The *reference-group favouritism hypothesis* predicts: relatively collectivist cultures may not uniformly favour reference groups, as relatively individualist cultures do.
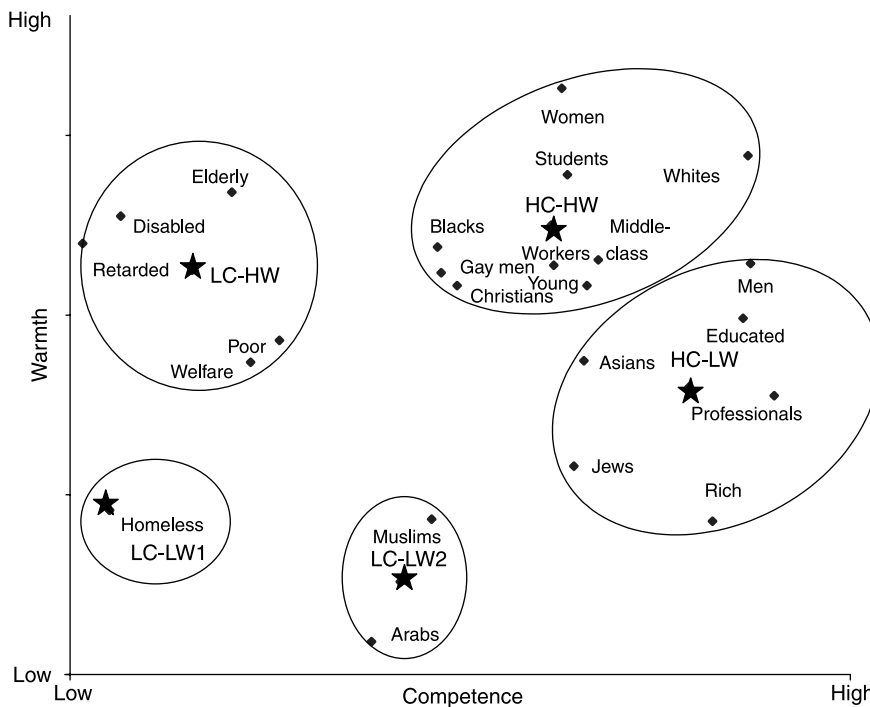
PRELIMINARY STUDY

Before examining cultural differences in perceivers – our main cultural comparison, we wanted to eliminate an inherent confound in cultural comparisons, namely that both

perceivers and targets vary at the same time. Above, we noted possible cultural effects on the targets of prejudice. Although this seemed an unlikely avenue for cultural differences, a preliminary study explored how US targets – perhaps unusually heterogeneous immigrant groups – might be viewed in another western culture. Thus, a preliminary study held target groups constant, but changed the perceivers – testing the SCM hypotheses on a western, but non-US, population of perceivers (40 Belgian undergraduates).

As Figure 2 indicates, the first, second, and fourth hypotheses received support, with groups spreading across the SCM space, many in ambivalent quadrants, and with societal reference groups rated as high on both dimensions. Also supporting the second hypothesis, the majority of the groups (74%) were rated as significantly more competent than warm (39%) or more warm than competent (35%) at $p < .01$. As Table 1 indicates, correlations supported the third, social structural predictions.

In this study, perceivers were changed (i.e. from Americans to Belgians) but target groups were held constant, so the SCM can apply to a European sample rating the (US) heterogeneous targets. With that set aside, we turn to Study 1, in which western samples rate groups meaningful to their own settings. Testing principles of stereotyping, with perceivers from different cultures rating indigenous groups, would provide powerful evidence of universality. Research in Germany on German-generated societal groups

Figure 2. Preliminary study, Belgian students rating groups identified by US samples, five-cluster solution. *Key*: Stars indicate cluster centres. HC–HW, high-competence/high-warmth; HC–LW, high-competence/low-warmth; LC–HW, low-competence/high-warmth; LC–LW1, low-competence/low-warmth 1; LC–LW2, low-competence/low-warmth.

(Eckes, 2002) suggests that the SCM will apply in other European societies, but we sought a larger cross-section of Europe.

STUDY 1: EUROPEAN NATIONS RATE EUROPEAN UNION MEMBERS

To provide a single shared stimulus set across varied European societies, seven samples rated the nations that then belonged to the European Union. The EU nations had the dual advantages of being culturally relevant to the respondents and a pre-determined set, eliminating any researcher bias in the selection of groups. What's more, the European nations provide western, still relatively individualist tests of the SCM, before examining East Asian samples that presumably might differ more dramatically from North American samples.

Method

Samples and participants

Respondents ($N = 755$) in seven (Belgium, France, Germany, The Netherlands, Portugal, Spain, and UK) EU nations volunteered in classrooms. Sample sizes varied ($N = 41 – 199$), mostly undergraduates, 69% female, averaging 21.07 years (see Table 1).

Questionnaire and procedure

The questionnaire listed the then-current 15 EU nations (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, The Netherlands, Portugal, Spain, Sweden, and UK). Translations for non-Anglophones were satisfactory in independent back-translations.

Participants read, 'We are studying how different European countries are perceived by citizens of the European Community (EC). We are not interested in your personal beliefs, but in how you think citizens of the EC view these countries. Using the scale below, write the number that best represents how you think these countries are viewed by citizens of the EC'. The instructions aimed to reduce social desirability concerns and to draw on perceived cultural stereotypes, as in our earlier work (e.g. Cuddy *et al.*, in press; Fiske *et al.*, 2002). Participants rated the 15 groups on scales of competence, warmth, status, and competition (see Appendix A for items and reliabilities).

Results

Competence and warmth scores for each target group (omitting in-group ratings) were first averaged across participants within samples, then across samples.

Hypothesis 1: Competence–warmth

Two types of cluster analysis examined whether stereotypes of groups array along the competence and warmth dimensions. First, hierarchical cluster analysis (Ward's method, minimizing within-cluster variance and maximizing between-cluster variance) determined an appropriate number of clusters. Second, *K*-means cluster analysis

(parallel threshold method) assigned each group to a cluster (Hair, Anderson, Tatham, & Black, 1995).[2]

We validated the hierarchical cluster analyses' most credible number of clusters by specifying a decision rule and checking that solution independently (Blashfield & Aldenderfer, 1988). First, t tests examined relationships among clusters on the two dimensions. Second, separate variables (status, competition) also differentiated the competence–warmth clusters.

For the combined data, the cluster analysis pointed to a three-cluster solution (see Figure 3, which also includes separate in-group ratings). As predicted, the clusters spread across two dimensions, using both equally. Respondents everywhere used the full range (1–5, standard deviations 0.60–0.84, median = 0.70). Warmth and competence had equivalent ranges and variances, as in the US. If either dimension had not sorted groups, the cluster analysis would yield a single-cluster solution, reflecting no differentiation on one dimension. Moreover, correlations will further support the dimensions' validity by providing two separate variables (status, competition) that correlate differentially with competence and warmth. Hypothesis 1, the utility of the competence × warmth space to differentiate these groups, is supported.

### Hypothesis 2: Ambivalent stereotypes

Three analyses tested the ambivalent stereotypes hypothesis (i.e. that many groups are stereotyped as significantly higher on one dimension than on the other): (a) independent samples t tests comparing warmth and competence between clusters; (b) paired t tests comparing warmth and competence within clusters; and (c) paired t tests comparing warmth and competence within groups. To be identified as ambivalent (high-competence/low-warmth or low-competence/high-warmth), clusters had to meet two conditions: (1) warmth and competence means differed significantly and (2) the mean for their high dimension was higher than groups low on that dimension, and the mean for their low dimension was lower than groups high on that dimension.

Table 2 provides cluster warmth and competence means. Cluster HHC–LLW, highest on competence and lowest on warmth, comprised two groups: Germany and UK. This cluster was marginally more competent than warm, diff = 1.28, $t(1) = 8.32$, $p = .07$, (surely the marginal p value was due to the fact that the analysis had only one degree of freedom). It scored higher on competence than the other two clusters, both ps < .01, and lower on warmth than the other two clusters, both ps < .01. By our definition, this cluster embodied an ambivalent stereotype.

Cluster HC–LW included Austria, Belgium, Denmark, Finland, France, Luxembourg, The Netherlands, and Sweden. This cluster scored higher on competence than on warmth, diff = .39, $t(7) = 7.48$, $p < .001$, lower on competence than cluster

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[2] *Hierarchical cluster analysis provides agglomeration statistics, which point to the ideal numbers of clusters for the data. Blashfield and Aldenderfer (1988) report that applied research employs subjective interpretation of the analysis in identifying the correct number of clusters. The agglomeration schedule specifies which cases or clusters have been merged in each stage, providing coefficients of distances between each pair of cases or clusters being merged. According to them (p. 463), 'A jump (in coefficients) implies that two relatively dissimilar clusters have been merged, thus the number of clusters prior to the jump is the most reasonable estimate of the number of clusters'. This technique resembles interpreting eigenvalue scree plots in factor analysis; the 'elbow' corresponds with the ideal number of factors. Although cluster analysis is often used in exploratory research using three or more variables, it is not limited to that application, and also applies to data using only two variables.*

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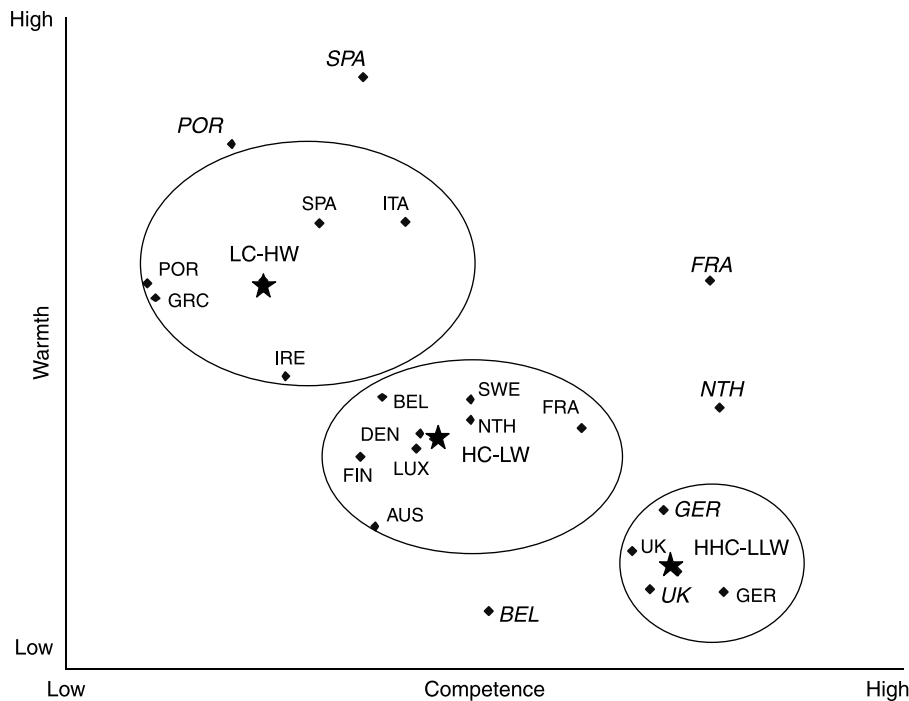
Figure 3. Study 1, EU nations, three-cluster solution. *Key*: Stars indicate cluster centres. In-group ratings, which are not reflected in the aggregated ratings, are separate, italicized, and in larger font. HC–LW, high-competence/low-warmth; HHC–LLW, highest-competence/lowest-warmth; LC–HW, low-competence/high-warmth.

HHC–LLW, $t(8) = 4.31$, $p < .01$, but higher on competence than cluster LC–HW, $t(11) = 3.44$, $p < .01$. Its warmth score was higher than cluster HHC–LLW, $t(8) = 4.24$, $p < .01$, and lower than cluster LC–HW, $t(11) = 5.53$, $p < .001$. Thus, this cluster embodies an ambivalent stereotype.

Cluster LC–HW included Greece, Ireland, Italy, Portugal, and Spain. It scored significantly higher on warmth than on competence, diff $= .40$, $t(4) = 3.95$, $p < .05$, outscored both other clusters on warmth (ps $< .01$), and scored lower than both other clusters on competence (ps $< .01$). This cluster also embodies an ambivalent stereotype.

Also supporting the ambivalent stereotypes hypothesis, paired t tests revealed that 13 of 15 (87%) groups differed significantly on competence and warmth, all ps $< .05$. Nine groups were rated more competent than warm (highest to lowest difference): Germany; UK; France; Austria; The Netherlands; Luxembourg; Sweden; Denmark; and Finland. Four groups were rated as more warm than competent (highest to lowest difference): Portugal; Greece; Spain; and Italy. Belgium and Ireland did not differ on warmth and competence.

Paired t tests compared competence and warmth means within perceiver nation. Differences were interpreted as significant for p values of $< .01$, to correct for possible family-wise error. The results identified 4 (France) to 11 (Portugal, Spain) high-competence/low-warmth groups. Low-competence/high-warmth groups ranged from 2

Table 2. Competence and warmth means for each cluster, both studies

Sample	Competence		Warmth
Study 1: EU nations combined ($N = 755$)			
HC–LW	3.49^b	>	3.10^b
HHC–LLW	4.01^a	>*	2.73^c
LC–HW	3.13^c	<	3.53^a
Study 2: Hong Kong ($N = 60$)			
HC–LW	4.28^a	>	2.65^c
LC–HW	2.52^c	<	3.65^a
MC–MW	3.35^b	=	3.10^b
LC–LW	2.34^c	=	2.55^c
Study 2: Japan ($N = 83$)			
HHC–LLW	4.55^a	>	$2.68^{b,c}$
HC–LW	3.41^b	>	2.94^b
LC–HW1	3.04^c	<	3.51^a
LC–LW	2.34^d	<	3.03^b
LC–LW	1.60^e	<	2.31^c
Study 2: South Korea ($N = 91$)			
HC–LW1	3.75^a	>	2.82^b
HC–LW2	3.50^a	>	2.21^c
LC–HW	2.98^b	=	3.20^a
LC–LW	2.14^c	=	$2.56^{b,c}$

Note. Within each row, within each sample, means differ ($p < .05$) if > or < is indicated; for *$p = .07$ (but note that this analysis had only 1 df). Within each column, means not sharing a superscript differ ($p < .05$). *Key*: HC–LW, high-competence/low-warmth; HHC–LLW, highest-competence/lowest-warmth; LC–HW, low-competence/high-warmth; MC–MW, middle-competence/middle-warmth; LC–LW, lower-competence/lower-warmth; LLC–LLW, lowest-competence/lowest-warmth.

(Portugal) to 5 (Belgium, UK). Across samples, 53 (France) to 100% (Spain) of groups differed significantly on competence and warmth.

Hypothesis 3: Social structural correlates

As predicted (Table 1)[3], perceived status–competence correlations averaged $r = .89$ (rs $= .63 – .87$, all ps $< .05$). And perceived competition–warmth correlations averaged $r = -.25$, $p < .05$ ($-.48$ to $-.02$, 4 ps $< .05$, 3 *ns*).[4]

Hypothesis 4: Favouritism–derogation

Six out-groups and one in-group rated each nation, providing a rare opportunity to compare in-group and out-group ratings of the same group. These data test whether

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[3] *Study 1 ecological (i.e. calculated at the level of group means) correlations follow for Belgium, France, Germany, The Netherlands, Portugal, Spain, and UK, respectively: status–competence rs $= .96, .91, .94, .98, .99, .98, .99$, all ps $< .01$; competition–warmth rs $= -.86, -.11$, ns, .04, ns, $-.20, -.46, -.30, -.18$, ps $< .05$; unless otherwise noted.*

[4] *We also examined correlations between status and warmth, and competition and competence. In three samples, status negatively correlated with warmth: Belgium ($r = -.35$); Germany ($r = -.24$); and UK ($r = -.25$). However, when we partialled out competition, these correlations dropped substantially: Belgium ($r = -.11$); Germany ($r = -.07$); and UK ($r = -.13$). Competition and competence correlated in a different combination of three of the seven samples, Belgium ($r = .38$), Portugal ($r = .53$), and Spain ($r = .32$). Likewise, with status partialled out, these correlations dropped substantially: Belgium ($r = .18$); Portugal ($r = .05$); and Spain ($r = .09$).*

out-group derogation requires reference-group favouritism, in three ways. First, we compared each nation's self-rated competence and warmth (e.g. Italians rating Italy) to that nation's average competence and warmth ratings of all the other groups (e.g. Italians rating all other EU nations). Second, we compared each participating nation's self-rated competence and warmth (e.g. Italians rating Italy) to that nation's aggregated other-rated competence and warmth (e.g. all other participating nations rating Italy) (this resembles two forms of individual self-enhancement; Kwan, John, Kenny, Bond, & Robins, 2005). Third, we merely examined the occupants of the high-competence/high-warmth (i.e. favoured) cell.

Differences between self-rating and other-ratings were surprisingly modest, only marginally significant for competence, $M = 0.17$, $t(6) = 2.16$, $p = .07$, and not significant for warmth, $M = 0.12$. Thus, it appears that participants rated their own nation as marginally more competent, but not as more warm, than other nations.

In the second analysis, each nation's perceived own location (Figure 3) showed sporadic in-group favouritism. Because participants supposedly reported shared European Community perspectives, or cultural stereotypes, reference-group favouritism reveals self-deception regarding consensus about the in-group. Some nations rated themselves significantly *higher* than they were rated by other nations on either competence (The Netherlands, Belgium) or warmth (Spain, Portugal) or both (France), whereas others disfavoured themselves on either competence (Germany) or warmth (Belgium), all $ps < .06$. Some self-ratings were *close* to the average other-ratings (Germany, The Netherlands on warmth, Portugal, Spain on competence, UK on both).

What is the pattern? Four of five higher-status nations rated their own nation (i.e. the in-group) higher on competence than warmth – Germany (status $M = 4.23$), UK (status $M = 4.07$), France (status $M = 3.96$), and The Netherlands (status $M = 3.65$), competence $M = 4.03$, warmth $M = 3.07$, all $p's < .05$ except France. Two of the three lower-status nations rated their own nation higher on warmth than competence – Portugal (status $M = 2.50$) and Spain (status $M = 2.94$), warmth $M = 4.00$, competence $M = 3.20$, $p's < .05$. In sum, higher-status groups favoured the in-group on dimensions that reflect obvious status differences (i.e. competence), while lower-status groups favoured the in-group on dimensions irrelevant to status (i.e. warmth), thus insuring positive differentiation from other groups (Ellemers, Van Rijswijk, Roefs, & Simons, 1997; Mummendey & Wenzel, 1999; Poppe, 2001; Spears & Manstead, 1989; Van Knippenberg & Van Oers, 1984).

The third test of the favouritism–derogation hypothesis consists in noting that the aggregate results favoured no nation as the EU societal reference group (high-competence/high-warmth). Despite this lack of reference-group favouritism, some out-group nations were derogated on warmth and some on competence. Ambivalent derogation thus does not need reference-group favouritism. Notably, however, no nation was assigned to the worst, low–low location, so these data leave open the possibility that extreme out-group derogation (low–low) requires the contrasting high–high cluster. Study 2 addresses this issue.

Discussion

Study 1 supported four hypotheses in the direction of universality, across new perceivers and new groups: (a) perceived warmth and competence differentiated stereotypes in

aggregated EU samples and in all individual nations, supporting the two dimensions' universality hypothesis. (b) The ambivalent stereotypes hypothesis, that many groups are stereotyped as high on one dimension and low on the other, also received support. Results of *t* tests reveal that many groups – 74% in the aggregated EU sample and 53–100% in national samples – received ambivalent stereotypes. As indicated by cluster analysis, all 15 groups fell into ambivalent quadrants, high on one dimension and low on the other. (c) Status highly correlated with perceived competence in the aggregated sample and in all national samples, and competition negatively correlated with warmth in the aggregated sample and in the majority of national samples. Finally, (d) although no groups fell into the high–high reference-group favouritism location, none fell into the low–low location, either, suggesting that true out-group derogation might require strong reference-group favouritism. Nevertheless, out-groups were either disrespected for perceived low-competence or disliked for perceived low warmth, so all groups were derogated on at least one dimension, even without the presence of a purely liked and respected reference group. Thus, this hypothesis remains open.

We had restricted our measure of competition to zero-sum negative inter-dependence (e.g. competition for finite resources), which might account for diminished competition–warmth correlations in some samples (i.e. France, The Netherlands, UK). All participants and groups belonged to the same superordinate category, the EU, repeatedly primed in the instructions. Thus, our construction of competition might have been less relevant in the current intergroup context. This is supported by competition-scale reliabilities for these samples, which were the three lowest (France $\alpha = .59$, The Netherlands $\alpha = .40$, and UK $\alpha = .61$).[5] Nonetheless, in most samples and in the aggregate, competition significantly correlated negatively with warmth.

Why did no low–low or high–high groups appear here, as in prior samples? US and preliminary studies' groups were cross-cutting categories (race, gender, and socio-economic status); participants belonged to multiple groups. As one contrast, the EU nations are larger categories, collapsing across many smaller groups. Second, they are discrete categories; virtually all participants belonged to only one nation. Third, for all of the groups in this study – nations – membership is ascribed, not achieved. Groups that have tended to fall into the low–low and high–high clusters may be those who are attributed responsibility for their position in that group (e.g. homeless people and college students; Weiner, 2005). Fourth, all groups were unchallenged members of the superordinate EU category. In other data, membership in the implied superordinate category (Belgian society, US society) is not so absolute. In fact, it could be considered continuous, ranging from outsiders (e.g. Arabs) to peripheral members (e.g. homeless) to central members (e.g. middle class).

Thus, the absence of HC–HW and LC–LW clusters may stem not from differences in perceivers, but from differences in the nature of the rated groups. Complete favouritism or derogation might be less likely when membership in the superordinate category is unchallenged. Perhaps, consistent with a social identity perspective, when groups are clearly categorized as sharing membership in a superordinate category (e.g., EU nations as members of the EU), intergroup bias diminishes (cf. the common in-group identity model; Dovidio, Gaertner, Isen, & Lowrance, 1995; Gaertner, Dovidio, Anastasio, Bachman, & Rust,

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[5] *This could not have been a translation problem: for the UK the questionnaire was in English, and for France, the identical questionnaire with the same English–French translation had been substantially more reliable ($\alpha = .71$) in Belgium.*

1993). The current study's repetitive instructions to rate the groups 'as they are seen by the EC' might have repeatedly primed shared membership in the superordinate category, decreasing the odds of seeing any nation as completely better or worse than others.

That Belgian participants (preliminary study) and German participants (Eckes, 2002) from the same population demonstrated reference-group favouritism suggests that the lack of reference-group favouritism here might also result from the groups assessed, not the respondents. Participants might have identified less strongly with their nation in-groups than with the smaller, more cross-cutting, sometimes voluntary in-groups rated in US studies and the preliminary study. Also, perhaps instructions to refer to 'how society views these groups' were more effective here than before.

STUDY 2: COLLECTIVIST SAMPLES RATE OWN GROUPS

Study 2, an emic–etic combination, most stringently tests universal versus culture-specific hypotheses two ways. First, Study 2's cultural samples differ substantially from the US on the often-used IC dimension, relevant to psychological processes that underlie stereotyping. Second, target groups were systematically generated within each nation. This eliminates concerns about cultural bias in target groups. Using the method of our US studies (Fiske *et al.*, 2002), participants from collectivist cultures (Hong Kong, Japan, and South Korea) rated indigenous social groups on warmth, competence, status, and competition scales.

Combined emic–etic approaches unite culturally indigenous stimuli with data collected by imported methods (Hui & Triandis, 1985). The goal is cross-cultural comparisons using equivalent stimuli, with ecologically valid qualities. This approach fairly tests cross-cultural hypotheses. Here, participants used imported (etic) measures, rating groups from their respective cultures (emic).

Collectivist cultures might contradict SCM principles because of the core IC distinction, namely differential focus on relationships. Cultures are considered collectivist if they chronically emphasize relationships, versus individualist cultures, which emphasize autonomy. This distinction is fundamental to self (Heine *et al.*, 1999; Markus & Kitayama, 1991), attribution (Miller, 1984; Morris, Menon, & Ames, 2001), locus of control (Lepper, Sethi, Dialdin, & Drake, 1997; Norenzayan, Choi, & Nisbett, 1999), and moral judgment (Miller & Bersoff, 1998). For example, collectivists are more likely than individualists to describe themselves via social groups and roles (e.g. mother) (Triandis, McCusker, & Hui, 1990) and refer more to other people in self-descriptions (e.g. 'I study with my friends') (Kitayama *et al.*, 1997). Collectivists also prefer workgroups with strong interpersonal (i.e. warmth) orientations, while individualists prefer workgroups with strong task (i.e. competence) orientations (Sanchez Burks, Nisbett, & Ybarra, 2000). In sum, ample evidence indicates a greater focus on relationships in collectivist cultures, which in turn might undermine universal stereotyping principles, as proposed in the introduction.

Method

Preliminary groups-listing study

In their respective native languages, participants at the Chinese University of Hong Kong ($N = 30$, 63% female, mean age approximately 20), the University of Tsukuba in Japan ($N = 53$, 72% female, mean age = 21.3), and the Ewha Women's University in South Korea ($N = 28$, 65% female, mean age unknown) read and answered the following three questions (from Fiske *et al.*, 2002, Study 2):

(1) Off the top of your head, what various types of people do you think today's society categorizes into groups (i.e. based on ability, age, ethnicity, gender, occupation, race, religion, etc.)?

(2) What groups are considered to be of very low status by (Hong Kong/Japanese/ South Korean) society?

(3) What groups, based on the same criteria used in the first question, do you consider yourself to be a member of?

Question 1 aimed at getting participants to list relevant social groups in the least constrained way. In US studies, this question typically yielded lists that neither included very low status out-groups that might fit the pure antipathy model of prejudice, nor did it typically generate in-groups. Thus, questions 2 and 3 were intended to insure that all types of groups would be listed. Groups listed by at least 15% of participants were included on the final questionnaire. In all samples, the number of distinct groups was 23 (South Korea), 25 (Japan), and 27 (Hong Kong). For the Japanese sample, the final list of groups included 21, excluding offenders, political parties, politicians, and a minority group, three of which were omitted from the remaining analyses because they scored more than 3 standard deviations below the warmth mean.

Samples and participants

Undergraduates from the three nations volunteered ($N = 233$, 57% female, mean age approximately 22) to participate in the main studies. They were: 60 students (58% female, mean age unknown) at the Chinese University of Hong Kong; 82 students (54% female, mean age = 21.3) at the University of Tsukuba in Japan; and 91 students (60% female, mean age = 22.5) at the Ewha Women's University in South Korea.

Questionnaires and procedure

Participants rated the groups generated in the respective preliminary studies on our standard questionnaire (Appendix A). To prevent fatigue, participants were randomly assigned to rate only half their groups on status, competition, warmth, and competence scales. Questionnaires were translated, and independent back-translations were satisfactory. Reliabilities were sufficient: competence $\alpha = .78 - .88$; warmth $\alpha = .74 - .86$; status $\alpha = .70 - .86$; and competition $\alpha = .60 - .71$.
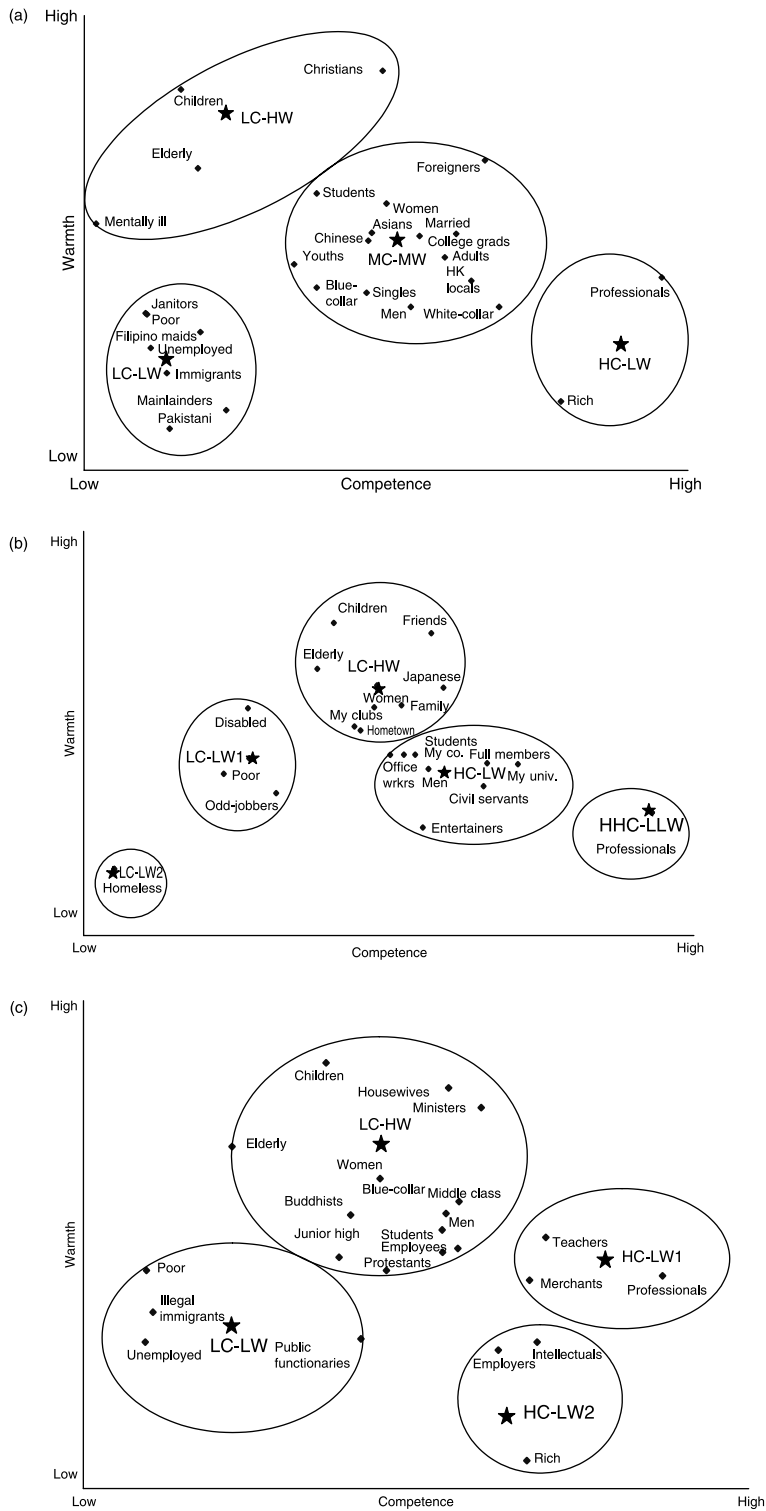
Results

Hypotheses 1 and 2: Competence–warmth space and ambivalent stereotypes

Each group received competence and warmth scores averaged across scale items and participants. Because each sample rated its own groups, we were not able to collapse across samples, as in Study 1. Following the same cluster analysis procedure used in Study 1, cluster solutions ranged from 4 (Hong Kong, South Korea) to 5 clusters (Japan). All samples recovered a low–low cluster, unlike EU data, but like previous US data. All samples recovered the two ambivalent clusters, at least one HC–LW and one LC–HW cluster. Everywhere, at least half the groups received ambivalent stereotypes.

Hong Kong

In the Hong Kong sample, a four-cluster solution best described the data (Figure 4b). The solution included one HC–LW cluster, one LC–HW cluster, one middle-competence/middle-warmth (MC–MW) cluster, and one LC–LW cluster (see Table 2).

(a)

High

Warmth

Christians
Children
LC-HW
Elderly
Mentally ill
Foreigners
Students
Women
Married
Asians
Chinese   College grads
Youths   MC-MW   Adults
HK
locals
Blue-
collar   Singles   White-collar
Men
Janitors
Poor
Filipino maids
Unemployed
LC-LW   Immigrants
Mainlainders
Pakistani
Professionals
HC-LW
Rich

Low

Low   Competence   High

(b)

High

Warmth

Children
Friends
Elderly
LC-HW
Japanese
Women   Family
My clubs
Hometown
Disabled
Students
My co.   Full members
LC-LW1
Office   HC-LW   My univ.
Poor   wrkrs   Men
Odd-jobbers   Civil servants
Entertainers
HHC-LLW
Professionals
LC-LW2
Homeless

Low

Low   Competence   High

(c)

High

Warmth

Children
Housewives
Ministers
LC-HW
Elderly
Women
Blue-collar   Middle class
Buddhists   Men
Junior high   Students
Employees
Protestants
Teachers
HC-LW1
Merchants
Professionals
Poor
Illegal
immigrants
Unemployed   LC-LW   Public
functionaries
Intellectuals
Employers
HC-LW2
Rich

Low

Low   Competence   High

Fifty-nine percent of the groups (16 of 27) differed on warmth and competence ratings at $p < .01$. Eight were rated as significantly more competent than warm (in descending order by difference scores): rich; professionals; white-collar; Hong Kong locals; men; adults; married; and single. Eight were rated as significantly more warm than competent (in descending order by difference scores): children; mentally disabled; elderly; Christians; janitors; poor; students; and unemployed. Eleven groups – Asians, blue-collar, Chinese, Filipino maids, foreigners, immigrants, undergraduates, Mainlanders, Pakistanis, women, and youths – received equal ratings on warmth and competence.

Japan

In the Japanese sample, a five-cluster solution best fit the data, containing one HHC–LLW cluster, one HC–LW cluster, one LC–HW cluster, and two LC–LW clusters (see Table 2 and Figure 4c). Eighty-six percent of the groups (18 of 21) differed significantly on competence and warmth ratings and $p < .01$. Eight were rated as significantly more competent than warm (in descending order by difference scores): professionals; (my) university; civil servants; entertainers; full-fledged members of society; men; (my) company; and students. Ten were rated as significantly more warm than competent (in descending order): children; disabled; senior citizens; poor; homeless; (my) family; (my) friends; women; (my) clubs; and odd-jobbers. Only three groups – (my) hometown, Japanese, and office workers – did not differ.

South Korea

A four-cluster solution best fit the South Korean data, with two HC–LW clusters, one LC–HW cluster, and one LC–LW cluster (see Table 2 and Figure 4d). Seventy-eight percent of the groups differed significantly on warmth and competence at $p < .01$: Nine were rated as significantly more competent than warm (in descending order by difference scores): rich; professionals; intellectuals; employers; merchants; teachers; public functionaries; men; and employees. Nine were rated as significantly more warm than competent (in descending order by difference scores): children; elderly; poor; illegal immigrants; housewives; unemployed; women; Buddhists; and ministers. Five did not differ: middle-class; protestants; college students; blue-collar workers; and junior high students.

Summary

Both warmth and competence differentiated the groups and did so equally. All samples used the scales' full 1–5 range, and although standard deviations for competence were

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Figure 4. (a) Study 2, Hong Kong, four-cluster solution. *Key*: Stars indicate cluster centres. HC–LW, high-competence/low-warmth; LC–HW, low-competence/high-warmth; MC–MW, middle competence–middle warmth; LC–LW, low-competence/low-warmth. (b) Study 2, Japan, five-cluster solution. *Key*: Stars indicate cluster centres. HC–LW, high-competence/low-warmth; LC–HW, low-competence/high-warmth; HHC–LLW, highest-competence/lowest-warmth; LC–LW1, low-competence/low-warmth 1; LC–LW2, low-competence/low-warmth 2. (c) Study 2, South Korea, four-cluster solution. *Key*: Stars indicate cluster centres. HC–LW1, high-competence/low-warmth 1; HC–LW2, high-competence/low-warmth 2; LC–HW, low-competence/high-warmth; LC–LW, low-competence/low-warmth.

slightly higher than for warmth (M diff $= 0.07$), the difference was less than comparable US data (M diff $= 0.19$). Thus the competence × warmth space describes collectivists as well as individualists, consistent with Hypothesis 1. Moreover, ambivalent groups dominate both, consistent with Hypothesis 2.

Hypothesis 3: Social structural correlates

Perceived status correlated with competence ratings in all three samples, average $rs = .64$ (South Korea) to .87 (Hong Kong), average $r = .74$, all $ps < .05$. Perceived competition negatively correlated with warmth in all three samples, $rs = -.15$ (Hong Kong) to $- .39$ (South Korea), average $r = -.22$, all $ps < .05$ (Table 1 for correlations for each sample).[6]

Hypothesis 4: Favouritism–derogation

One striking cultural difference emerged. Collectivists rated reference groups, including societal prototype groups (e.g. college graduates, full members of society, educated, middle-class) and clear-cut in-groups (e.g. students), less favourably than did US (Cuddy, Fiske, & Glick, in press; Fiske *et al.*, 2002), German (Eckes, 2002), and Belgian respondents (preliminary study). Reference groups, occupying individualists' HC–HW quadrants, migrated towards the collectivists' middle (Figure 4a–4c). Some reference groups occupied the HC–LW clusters (e.g. Japan: my university, students); some occupied the LC–HW clusters (e.g. Japan: family, friends, Japanese, my clubs; South Korea: college students, middle-class), and some occupied a MC–MW cluster (e.g. Hong Kong: Asians, Chinese, students). *Not one collectivist sample included a HC–HW cluster*, the spot typically reserved for reference groups in western samples.

A more fine-grained analysis isolated one group guaranteed to be in-group for all samples, namely students. Table 3 compares these three collectivist samples with three individualist samples that rated similar groups. The individualists rate students significantly higher than the average other group ($ps < .01$), whereas none of the collectivists do. Collectivists demonstrating less reference-group favouritism fits well-documented IC differences concerning self. Thus, midward migration of reference-group clusters fits collectivists being less likely to rate themselves, their in-groups, and others too positively.

These samples show clear out-group derogation on one dimension (LC or LW) or both (LC–LW), even without reference-group favouritism. Out-group derogation thus might *not* require explicit reference-group favouritism, to our knowledge, the first demonstration of this.

Discussion

Study 2 most strongly tests pancultural hypotheses. In three collectivist cultures, using culturally indigenous lists of groups, perceived warmth and perceived competence differentiated out-group stereotypes. In all three, cluster analysis pointed to multiple-cluster solutions and recovered both ambivalent clusters, HC–LW and

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[6] *Study 2 ecological/group-level correlations follow, for Hong Kong, Japan, and South Korea, respectively: status–competence rs = .99, .88, .91, all ps < .01; competition–warmth rs = − .37, − .32, − .42, all ps < .05.*

Table 3. Reference-group favouritism ratings, all samples

Sample	Competence	Warmth	General positivity (warmth + competence mean)
Collectivist samples			
Hong Kong	− .06	.39*	.17
Japan	.10	− .07	.02
Korea	.19	.17	.18
Individualist samples			
Belgium	.36*	.51*	.44*
United States	.39*	.17*	.29*
(Fiske *et al.*, 2002, Study 2)			
United States	.72*	.46*	.49*
(Cuddy, Fiske, & Glick, in press)			

Note. Values represent difference between the mean for the in-group 'students' and the mean for all other groups in that sample. High numbers indicate higher scores for students (i.e. more reference-group favouritism).
*$p < .01$.

LC–HW. Warmth and competence differed for most groups ($M = 74\%$; 59%, Hong Kong, to 86%, Japan). All samples supported the social structural correlates. Status correlated with competence everywhere, and competition negatively correlated with warmth everywhere. Despite contrary cultural arguments, these three SCM principles appear even in collectivist samples.

Cultural differences come in more standard in-group–out-group comparisons (reference-group-favourable vs. out-group-unfavourable), showing low–low out-group derogation does not require explicit, uniform reference-group favouritism. Heine and Lehman (1997) also reported attenuated in-group enhancement (favouritism) in a Japanese university sample. However, their study differs from ours in important ways. First, participants rated only two groups – their own university and a rival university. Thus, the study did not include reference groups that were not also demographic in-groups, and the study did not include a variety of societal groups. Second, and most importantly, their study did not show simultaneous out-group derogation.

GENERAL DISCUSSION

Studies from 10 non-US nations support SCM stereotyping principles as similar across cultures, with one major cultural difference: no reference-group favouritism in Asian (collectivist) samples.

Towards pancultural principles of stereotyping

Across culturally varied perceivers and targets, cluster analyses corroborated the *two dimensions hypothesis* that perceived competence and warmth differentiate stereotypes. Comparing warmth and competence – within groups, within clusters, and between clusters – supported the *ambivalent stereotypes hypothesis* that many out-groups receive ambivalent stereotypes as competent but not warm or as warm but not competent. Across studies and samples, most groups (59–100%) significantly

differed on warmth and competence; both high-warmth/low-competence and low-warmth/high-competence combinations occurred everywhere.

Correlational analyses supported the *social structural correlates hypotheses* that high status groups are perceived as competent and non-competitive groups are perceived as warm. Everywhere, status strongly correlated with competence; mostly, competition significantly, negatively correlated with warmth.

Warmth and competence may not be the *only* dimensions of stereotypes; we argue they are two *central*, *theoretically meaningful*, *predictable* dimensions. What's more, they appear to be fundamental dimensions of social perception in general (Cuddy *et al.*, 2008; Fiske *et al.*, 2007). This claim builds on their observed prevalence in person perception and stereotypes, theoretical functions related to social structure, and relationships to intergroup emotions and behaviours, as we elaborate below. The current data fortify this claim by demonstrating the dimensions across cultures, perceivers, and groups.

The result was not *a priori* obvious. We introduced the cultural comparison by describing previous evidence of western versus Asian differences in category use, dispositional bias, legitimating ideologies, valued traits, multiculturalism, and, most central here, IC. The exploration of individualist European settings was more exploratory, as large cultural differences have not been identified. We found no evidence that the Asian–western contrast indicated any of the following: less category usage (consensual images of groups prevailed); less dispositional bias (structure-trait correlations replicated); legitimating ideologies (ditto); differently valued traits (warmth and competence ranges were comparable); or multiculturalism (ambivalent stereotypes appeared everywhere). We did find evidence consistent with collectivist modesty, locating the societal reference groups in a more moderate, humble location instead of the in-group-enhancing high–high quadrant, as in the western within-country samples.

Despite the main similarities in use of warmth and competence, these dimensions might be construed idiosyncratically to complement cultures' social values. For instance, warmth entails social harmony, central to collectivists, while competence entails individual-focused success, central to individualists. However, warmth also conveys social skill, necessary for individual-goal advancement. Likewise, competence conveys information about capability at helping in-groups achieve collective goals. These data do not preclude emic (culture-specific) construals of warmth and competence.

A critic might argue that our trait ratings are descriptive, but not evaluative. Our US research suggests otherwise. Warmth and competence ratings correlate strongly and reliably with distinct emotional prejudices (Cuddy *et al.*, 2007; Fiske *et al.*, 2002). Each quadrant carries a unique signature of prejudiced emotions: admiration; contempt; envy; and pity. To recap the introduction briefly, envy targets groups with supposedly controllable, coveted outcomes (e.g. economic success; Parrott & Smith, 1993); envy indeed hits high-competence/low-warmth groups. Pity targets groups with apparently uncontrollable stigmas (e.g. age, disability; Weiner, Perry, & Magnusson, 1988); pity indeed hits incompetent-warm groups. Those whose positive outcomes reflect on self receive admiration and pride (Alexander *et al.*, 1999; Smith, 2000), as do high-competence/high-warmth groups. Finally, contempt targets groups with allegedly avoidable negative outcomes (Barnett, Quackenbush, & Pierce, 1997; Weiner *et al.*, 1988); contempt indeed targets low-competence/low-warmth groups. Moreover, these intergroup emotions link to unique patterns of intergroup behavioural tendencies (Cuddy *et al.*, 2007). At least in the US, warmth and competence stereotypes relate to emotional and behavioural aspects of bias.

Cross-cultural stereotyping differences

Collectivist samples consistently lacked clear high-competence/high-warmth clusters. No personal in-groups or societal prototype groups were uniformly favoured over other societal groups. Nevertheless, these cultures demonstrated the same relative out-group derogation as individualists.

In the EU context, European samples neither nominated any exemplary shared reference group, nor consistently favoured personal in-groups. Nevertheless, they too derogated out-groups on either competence or warmth. Some have suggested that reference-group favouritism does not necessarily lead to out-group derogation (Brewer & Brown, 1998; Mummendey & Wenzel, 1999), so in-group favouritism is not a sufficient condition for prejudice. We show here that in-group favouritism is also not a necessary condition for prejudice. To our knowledge, these two studies are among the first to demonstrate out-group derogation without reference-group favouritism.

We explain the absence of the HC-HW societal-reference-group quadrant by two related reasons in these two samples. We suggest that collectivist cultures moderate the positive attributes of the societal in-group/reference groups, in keeping with East Asian well-documented modesty, humility, and harmony norms described earlier. Similarly, EU citizens deny any single country the status of EU in-group/reference group, to maintain the strict ideology of equality within the Union – so necessary to EU harmony. We do not suggest that EU nations, within their own borders are collectivist, because cultural psychology finds no evidence for this. But, in an apparent violation of parsimony, we note that they can follow collectivist norms in the EU setting as equal members, none being privileged over the others, at the same time as being western individualists towards groups within their own borders.

The SCM framework identifies basic principles that help explain cultural idiosyncrasies in stereotype contents within each country. For example, US respondents (Fiske *et al.*, 2002) stereotyped economically disadvantaged groups (i.e. welfare recipients) as lacking both competence and warmth, whereas Belgian respondents charitably viewed them as less competitive/exploitative, therefore as warm although still not very competent. Likewise, Blacks, blue-collar workers, and gay men gained both warmth and competence among Belgian respondents likely being perceived as less competitive and higher-status than in the US.

Conclusion: SCM as pancultural tool

Some overarching principles of bias are pancultural, while some manifestations are culturally idiosyncratic. Overarching principles include high-level constructs, such as social structure (Glick *et al.*, 2000, 2004), cultural ideologies (Crandall *et al.*, 2001), and threats to resources and values (Stephan *et al.*, 1998, 2000), all appearing across varied perceivers. Simultaneously, specific manifestations of these principles vary depending on culture and context. For example, the contents of particular groups' stereotypes often vary between cultures (Dion, Pak, & Dion, 1990; Shaffer, Crepaz, & Sun, 2000; Wheeler & Kim, 1997), as do endorsements of prejudice-legitimizing ideologies (Crandall *et al.*, 2001) and relative weights of intergroup threats in predicting prejudice (Stephan *et al.*, 1998, 2000). Our research suggests that everywhere, a group's stereotype follows from perceived status and competition with other groups. However, culture influences group status and perceived group competition. Hence, specific groups' stereotypes vary cross-culturally.

The SCM provides principles that emphasize similarities in basic structures of intergroup relations. The SCM framework remains intact across cultures, predicting

how groups are likely stereotyped, based on structural relations with other groups in their society. Applying the same valid, systematic framework in different cultures puts in stark relief potentially important cross-cultural differences, such as the lack of universally favoured groups in collectivist cultures. Both cross-cultural similarities and differences move the field beyond US-centred understandings of intergroup relations.

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Appendix A

Scales, both studies

Competence
  As viewed by society, how. . . are members of this group?
  Competent, confident, capable, and skillful
Warmth
  As viewed by society, how. . . are members of this group?
  Friendly, warm, good-natured, and sincere
Status
  How prestigious are the jobs typically achieved by members of this group?
  How economically successful have members of this group been?
  How well-educated are members of this group?
Competition*
  How much does special treatment given to this country make things more difficult for others
    in the EC?
  How much do *market* resources that go to citizens of this country take away from the *market*
    resources of others in the EC?
  As this country gains power, to what extent do others in the EC lose power?

Note. All items used five-point scales (1 = *not at all*, 5 = *extremely*). Study 1 reliabilities were sufficient for all scales in all samples: competence $\alpha = .67-.85$; warmth $\alpha = .67-.83$; status $\alpha = .69-.84$; competition $\alpha = .59-.75$ (The Netherlands $\alpha = .40$).
*After Study 1, Study 2 restored the standard competition scale items: If members of this group get special breaks (such as preference in hiring decisions), this is likely to make things more difficult for people like me. Resources that go to members of this group are likely to take away from the resources of people like me. The more power members of this group have, the less power people like me are likely to have.