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A Model of (Often Mixed) Stereotype Content: Competence and Warmth Respectively Follow From Perceived Status and Competition

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Stereotype research emphasizes systematic processes over seemingly arbitrary contents, but content also may prove systematic. On the basis of stereotypes' intergroup functions, the stereotype content model hypothesizes that (a) 2 primary dimensions are competence and warmth, (b) frequent mixed clusters combine high warmth with low competence (paternalistic) or high competence with low warmth (envious), and (c) distinct emotions (pity, envy, admiration, contempt) differentiate the 4 competence–warmth combinations. Stereotypically, (d) status predicts high competence, and competition predicts low warmth. Nine varied samples rated gender, ethnicity, race, class, age, and disability out-groups. Contrary to antipathy models, 2 dimensions mattered, and many stereotypes were mixed, either pitying (low competence, high warmth subordinates) or envying (high competence, low warmth competitors). Stereotypically, status predicted competence, and competition predicted low warmth.

Not all stereotypes are alike. Some stereotyped groups are disrespected as incapable and useless (e.g., elderly people), whereas others are respected for excessive, threatening competence (e.g., Asians). Some stereotyped groups are liked as sweet and harmless (e.g., housewives), whereas others are disliked as cold and inhuman (e.g., rich people). Surely, such differences matter.

However, social psychology of late has eschewed the study of stereotype content, focusing instead on stereotyping processes (for reviews, see Brown, 1995; Fiske, 1998; Leyens, Yzerbyt, & Schadron, 1994; Macrae & Bodenhausen, 2000). And for good reason. Stereotyping processes respond to systematic principles that generalize across different specific instances of stereotypes, so the processes invite social–psychological investigation, because

they are presumably stable over time, place, and out-group. If the contents of stereotypes come and go with the winds of social pressures, then no single stereotype remains stable and predictable from theoretical principles.

Alternatively, if stereotypes do come and go with the winds of social pressures, maybe we can understand those wind patterns and, thus, some origins of stereotype content. In short, perhaps we need a model that predicts the intergroup weather: Stereotype content may respond to systematic principles, just as stereotyping processes do.

If stereotype content responds to principles, then the first principle must identify common dimensions of content. Following Allport (1954), social psychologists have typically viewed only unflattering stereotypes as indicating prejudice, where prejudice is a uniform antipathy or contempt toward an out-group across a variety of dimensions. Flattering stereotypes have presumably targeted in-groups or, when they target out-groups, have presumably indicated compunction stemming from modern egalitarian ideals.

We argue instead that stereotypes are captured by two dimensions (warmth and competence) and that subjectively positive stereotypes on one dimension do not contradict prejudice but often are functionally consistent with unflattering stereotypes on the other dimension. Moreover, we argue that two variables long identified as important in intergroup relations—status and competition—predict dimensions of stereotypes. We suggest that for subordinate, noncompetitive groups (e.g., elderly people), the positive stereotype of warmth acts jointly with the negative stereotype of low competence to maintain the advantage of more privileged groups. For high-status, competitive out-groups (e.g., Asians), the positive stereotype of their competence justifies the overall system

but acts jointly with the negative stereotype of low warmth to justify the in-group's resentment of them.

Finally, we argue that different combinations of stereotypic warmth and competence result in unique intergroup emotions—prejudices—directed toward various kinds of groups in society. Pity targets the warm but not competent subordinates; envy targets the competent but not warm competitors; contempt is reserved for out-groups deemed neither warm nor competent.

Each of these issues—focus on dimensions of content, mixed (but functionally consistent) content, predictions of that content, and ensuing types of prejudice—follows precedents set by previous literature. Our innovation is to synthesize these insights into a model of stereotype content that cuts across out-groups.

Focus on Content: Competence and Warmth

Unencumbered by theory, the classic study of stereotype contents (D. Katz & Braly, 1933) was replicated at Princeton over about 20-year intervals (G. M. Gilbert, 1951; Karlins, Coffman, & Walters, 1969; Leslie, Constantine, & Fiske, 2001). These studies document changes in the favorability (mostly improving) and uniformity (decreasing) of stereotypes over time but do not uncover dimensions or principles therein. Although the Katz–Braly checklist method has limitations (Devine & Elliot, 1995; Madon et al., 2001), it does provide one of the few consistently documented measures of stereotypes across groups.[1] However, the Katz–Braly lineage does not claim theoretical roots.

From a functional, pragmatic perspective (Fiske, 1992, 1993b), we suggest that dimensions of stereotypes result from interpersonal and intergroup interactions. When people meet others as individuals or group members, they want to know what the other's goals will be vis à vis the self or in-group and how effectively the other will pursue those goals. That is, perceivers want to know the other's intent (positive or negative) and capability; these characteristics correspond to perceptions of warmth and competence, respectively.

A variety of work on intergroup and interpersonal perception suggests the relevance of these two dimensions in social perception. In the intergroup domain, early on, one ethnic out-group (i.e., Jews) was viewed as competent but not warm, and another (i.e., "Negroes") was viewed as warm but not competent (Allport, 1954; Bettelheim & Janowitz, 1950). Curiously, this older ethnic-group distinction echoes modern-day views about perceived subgroups of women (Deaux, Winton, Crowley, & Lewis, 1985; Eckes, 1994; Noseworthy & Lott, 1984; Six & Eckes, 1991): disliked, dominant, competent, nontraditional women (e.g., career women, feminists, lesbians, athletes) versus likable, dependent, incompetent, traditional women (e.g., housewives, sometimes "chicks"). Overall, the ethnic and gender distinctions both fit our hypothesized dimensions of competence and warmth.

From various out-group stereotypes, Fiske and Glick (Fiske, 1998, p. 380; Fiske, Xu, Cuddy, & Glick, 1999; Glick & Fiske, 1999, 2001b) constructed a preliminary model of stereotype content: Stereotype content may not reflect simple evaluative antipathy but instead may reflect separate dimensions of (dis)like and (dis)respect. Some out-group stereotypes (e.g., housewives, disabled people, elderly people) elicit disrespect for perceived lack of competence; other out-group stereotypes elicit dislike for perceived lack of warmth (e.g., Asians, Jews, career women). Al-though some groups may elicit both dislike and disrespect (e.g., welfare recipients), qualitative differences among stereotypes are captured by the crucial dimensions of competence and warmth.

The plausibility of competence and warmth as core dimensions also springs from person perception research: Asch's (1946) warm–cold versus competence-related adjectives (Hamilton & Fallot, 1974; Zanna & Hamilton, 1977) and multidimensional scaling of trait descriptions (Rosenberg, Nelson, & Vivekanathan, 1968; see also Jamieson, Lydon, & Zanna, 1987; Lydon, Jamieson, & Zanna, 1988). Perceptions of individuals in groups also vary along a task dimension and a social dimension (Bales, 1970). Relatedly, Peeters (1983, 1992, 1995) has argued for the dimensions of self-profitability (e.g., confident, ambitious, practical, intelligent)—akin to competence—and other-profitability (e.g., conciliatory, tolerant, trustworthy)—akin to warmth. The Peeters distinction has been applied to national stereotypes (Peeters, 1993; Phalet & Poppe, 1997; Poppe & Linssen, 1999)[2], values (Wojciszke, 1997), and evaluations of social behavior (Vonk, 1999).

Across racial prejudice, gender subgroups, national stereotypes, and person perception, thus, come two dimensions. They fit the functional idea that people want to know others' intent (i.e., warmth) and capability to pursue it (i.e., competence). Groups (like individuals) are distinguished according to their potential impact on the in-group (or the self). Our stereotype content model's first hypothesis hence holds that perceived competence and warmth differentiate out-group stereotypes.

Mixed Stereotype Content

Across out-groups, stereotypes often include a mix of more and less socially desirable traits, not just the uniform antipathy so often assumed about stereotypes. Specifically, we suggest that mixed stereotypes for some out-groups include low perceived competence but high perceived warmth. These *paternalistic stereotypes* portray out-groups that are neither inclined nor capable to harm members of the in-group. Another, equally important mixture depicts out-groups that are seen as competent but not warm, resulting in *envious stereotypes*. These groups are acknowledged to be doing well (for themselves), but their intentions toward the in-group are presumed not to be positive. Consistent with this idea, Phalet and Poppe's (1997) multidimensional scaling of Central and Eastern European stereotypes revealed the majority (37 out of 58) in two quadrants: incompetent but moral/social (e.g., Byelorussians, Bulgarians, Czechs) and competent but immoral/unsocial (e.g., Germans, Jews).

Paternalistic and envious stereotypes result from the combination of two separate dimensions, which also allows for the more traditional kinds of prejudice, uniform derogation of a disliked and disrespected out-group and pure in-group favoritism toward the competent and warm in-group. But our model emphasizes the mixed combinations, the off-diagonal cells of a theoretical Com-

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[1] Case studies of specific groups (e.g., Americans, Sisley, 1970; Blacks, Devine & Elliot, 1995; see Fiske, 1998, for others) document continuity and change over time but do not provide comparable measures across groups.

[2] The Phalet and Poppe (1997) work supported two bipolar dimensions, which they termed competence and morality, but morality included honest, helpful, and tolerant–socially warm traits.

petence × Warmth matrix. We argue that these mixed combinations are frequent because they are functional. Our second hypothesis holds that many stereotypes are mixed on competence and warmth, as defined by low ratings on one dimension coupled with high ratings on the other.

Paternalistic Stereotypes

Paternalistic mixed stereotypes show up in race, age, dialect, and gender prejudice. Ambivalent racism (I. Katz & Hass, 1986) depicts a mix of anti-Black attitudes (e.g., perceived incompetence and laziness, violating the work ethic) and paternalistic pro-Black attitudes (e.g., perceived pitiful disadvantage, deserving help). Overall, paternalistic mixed stereotypes portray a group disrespected but pitied, which carries overtones of compassion, sympathy, and even tenderness, under the right conditions.[3] In ageism, dominant views of older people as not competent but kind suggest a similarly ambivalent dynamic (Cuddy & Fiske, 2002). Linguistic out-groups provide another example: Speakers of nonstandard dialects (e.g., Scottish accents in Great Britain, Chicano accents in the United States) are perceived as less competent but simultaneously friendly (Bradac, 1990; Ruscher, 2001). Paternalism appears prominently in gender stereotypes. The Ambivalent Sexism Inventory (ASI; Glick & Fiske, 1996, 2001a, 2001b) measures, in part, subjectively benevolent sexism (BS), which includes paternalistic power relations; BS is directed toward traditional women (homemakers), who are viewed as warm but not competent outside the home. When people rate women in general, traditional homemakers serve as the paternalistic default (Haddock & Zanna, 1994); this generates the "women are wonderful" effect: positive ratings of generic women (Eagly & Mladinic, 1989), but primarily on communal (i.e., warm), not agentic (i.e., competent), qualities. All four paternalistic stereotypes (regarding disadvantaged Blacks, elderly people, nonstandard speakers, and traditional women) describe out-groups perceived as low on competence but high on warmth.[4]

Envious Stereotypes

In contrast stands a different set of out-groups stereotyped as highly competent but not warm (Glick & Fiske, 2001a, 2001b): nontraditional women, Jews, and Asians. The ASI in part measures hostile sexism (HS), which includes competitive gender roles; HS is directed toward nontraditional women (e.g., career women, feminists, lesbians, athletes), who are viewed as task competent but not warm (see also Eagly, 1987; Glick, Diebold, Bailey-Werner, & Zhu, 1997; MacDonald & Zanna, 1998). Anti-Semitic notions of a Jewish economic conspiracy exaggerate Jews' stereotypically feared competence, whereas views of them as self-serving portray them as not warm (Glick, in press). The modern American equivalent, Asians—who are viewed as the model minority—are seen as too competent, too ambitious, too hardworking, and, simultaneously, not sociable (Hurh & Kim, 1989; Kitano & Sue, 1973; Sue & Kitano, 1973; Sue, Sue, & Sue, 1975). The Anti-Asian-American Prejudice scale measures dislike for this perceived lack of sociability along with envious respect of perceived competence (Lin & Fiske, 1999). Thus, nontraditional women, Jews, and Asians elicit a shared stereotype as being too competent and not at all nice.

Why Mixed Stereotypes Occur

Although isolated analyses of specific out-groups suggest mixed competence–warmth ascriptions, the present research aims to examine whether these mixed stereotypes are sustained across a wider variety of out-groups, all compared at once.

Our approach emphasizes a 2 × 2 (Warmth × Competence) interaction (see Table 1). The mixed stereotypes hypothesis predicts that many out-group stereotypes fall into two cells: high warmth but low competence for compliant subordinates, and low warmth but high competence for successful competitors. For paternalized out-groups, the mixed stereotype justifies their subordination (i.e., low competence) and encourages their compliance (i.e., high warmth). They are seen as having no intent to harm societal reference groups and no ability to do so, in any case. The mixed stereotype functions to promote existing systems of privilege and to placate the nonthreatening but disadvantaged out-groups by assigning them socially desirable, though subordinating, traits (Ridgeway, 2001). Socioeconomically successful out-groups, however, pose a competitive threat, and their success elicits envy. For envied out-groups, the mixed stereotype explains their apparent success, thereby justifying the system of meritocracy that benefits societal reference groups and dominant ingroups. Stereotypes of low warmth justify taking action against envied groups by casting the groups as being concerned only with furthering their own goals. Thus, envied groups may be appropriately resented and socially excluded.

Because these mixed stereotypes involve two separate dimensions, they are not psychologically inconsistent—one may view a group as warm but not competent (e.g., the elderly as nice but dotty) or as competent but not warm (e.g., Asians as cold but efficient) without experiencing discomfort. Furthermore, the functional perspective suggests that both envious and paternalistic stereotypes maintain the status quo and defend the position of societal reference groups. We hypothesize that many out-groups are stereotyped as high on either competence or warmth but low on the other, precisely because these combinations are functionally consistent for perceivers. These mixed combinations have been

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[3] Although hostility and aggression have surfaced as content in some subtypes of Blacks (Devine, 1989; Devine & Elliott, 1995; Devine, Monteith, Zuwerink, & Elliot, 1991), this may be directed primarily toward criminal or militant Black people, with the generic out-group reflected in modern prejudice scales being those ambivalently perceived as lazy but disadvantaged (i.e., incompetent but deserving sympathy). We return to this point. Note also that these mixed racial stereotypes could reflect a conflict between predominantly negative stereotypes and egalitarian ideals (Allport, 1954; Devine, 1989; Gaertner & Dovidio, 1986; Kinder & Sears, 1981; McConahay, 1983). Although we do not dispute the importance of contemporary egalitarian norms, we note that paternalistic stereotypes of perceived low competence and high warmth are not a uniquely modern development. European colonialism and American slavery both were justified through stereotypes of non-Whites as warm and simple folk requiring the guidance of a superior culture (Jackman, 1994), a stereotype evident in older images of Black people in American films and literature (e.g., Uncle Tom). This low-competence, high-warmth stereotype clearly does not reflect an egalitarian sensibility.

[4] Attributions of warmth to targets should not be confused with perceiver feelings of warmth toward those same targets.

Table 1
Four Types of Out-Groups, Combinations of Status and Competition, and Corresponding Forms of Prejudice as a Function of Perceived Warmth and Competence

	Competence	
Warmth	Low	High
High	Paternalistic prejudice	Admiration
	Low status, not competitive	High status, not competitive
	Pity, sympathy	Pride, admiration
	(e.g., elderly people, disabled people, housewives)	(e.g., in-group, close allies)
Low	Contemptuous prejudice	Envious prejudice
	Low status, competitive	High status, competitive
	Contempt, disgust, anger, resentment	Envy, jealousy
	(e.g., welfare recipients, poor people)	(e.g., Asians, Jews, rich people, feminists)

neglected by prior treatments that focus on uniformly negative stereotypes (see Glick & Fiske, 2001b).

Of course, out-groups do not fall into only these two mixed cells. Low-status groups viewed as openly parasitic (i.e., opportunistic, freeloading, exploitative) underlings are banished to the not warm, not competent cell. These groups are rejected for their apparent negative intent toward the rest of society (i.e., not warm) and for their apparent inability to succeed on their own (i.e., not competent).

At the opposite extreme, who is favored as both warm and competent? We suggest three possible inhabitants of this cell: Through in-group favoritism, the in-group may be rated both warm and competent. Close allies in a hostile world might also be allowed a purely positive stereotype. And the cultural default (e.g., middle class) may be viewed in an unmixed, positive way. We refer to both in-groups and societal reference groups because in the United States, at least, many groups view themselves as part of the societal ideal; for instance, most Americans identify themselves as middle class (even if qualified by *lower* or *upper*). Similarly, Whites and Christians, even where they are not a local majority, may be viewed as culturally dominant, societywide reference groups. Even groups who acknowledge their own exclusion from the cultural ideal may still identify with aspects of the societal reference group. Hence, people's understanding of culturally shared stereotypes takes the perspective of society's dominant reference groups.

Predicting Stereotype Content

If stereotype contents systematically vary along competence and warmth, with many stereotypes falling in the mixed combinations, the question follows, what predicts where groups fall on these mixed dimensions? In their 1933 study, D. Katz and Braly noted that

> the degree of agreement among students in assigning characteristics . . . seems too great to be the sole result of the students' contacts with members of those races. . . . Prejudice of this kind seems largely a matter of public attitude toward a race name or symbol. (pp. 288, 290)

Stereotype content may result from shared public views of groups. Hence, we focus on perceived cultural—that is, shared—stereotypes. Why the consensus on groups' warmth and competence?

We suggest that cultural stereotypes result from the social structural relations between groups in two primary ways. Specifically, the social structural hypothesis proposes, first, that out-groups are perceived as more competent to the extent that they are perceived as powerful and high status or as less competent to the extent that they are perceived as powerless and low status. The perceived link between a group's societal outcomes and its perceived competence serves several functions. This link may represent a form of correspondence bias, namely, that people's behavior (in this case, their position) reflects their traits (D. T. Gilbert & Malone, 1995). Or it might reflect just-world thinking, namely, that people get what they deserve (Lerner & Miller, 1978). At the level of groups, it justifies the system (Jost & Banaji, 1994) and legitimates power–prestige rankings (Berger, Rosenholtz, & Zelditch, 1980; Ridgeway & Berger, 1986).

The opposite viewpoint is conceivable: Cultural stereotypes could instead reflect group-level sour grapes (with a bigot reasoning that the out-group may have high status, but they inherited it, lucked out, or cheated, so they do not deserve it, and they actually are stupid). However, we suggest that intergroup stereotypes turn in part on consciousness of power relations; stereotypes function to justify the status quo (Berger et al., 1980; Fiske, 1993a; Glick & Fiske, 2001b; Jost & Banaji, 1994; Jost, Burgess, & Mosso, 2001; Ridgeway & Berger, 1986). Envious stereotypes devolve on that high competence but low warmth lot who seem to be doing better than others. This prediction receives support from findings that perceived power strongly predicted perceived competence in Central and Eastern European stereotypes (Phalet & Poppe, 1997; Poppe & Linssen, 1999).

The second part of the social structure hypothesis holds that out-groups are seen as relatively warm and nice to the extent that they do not compete with others. Compliant subordinate groups fulfill a convenient role, so they receive paternalistic prejudice, which disrespects their competence but simultaneously likes the qualities that keep them subordinated as long as they do not pose a threat. Warmth-related identities placate subordinates by assigning them socially desirable traits that conveniently also imply deference to others (Glick & Fiske, 2001b; Ridgeway, 2001). Negative intentions are not attributed to noncompetitive out-groups, and attributions of warmth help to maintain the status quo with a minimum of conflict (Jackman, 1994).

In contrast, competitive out-groups frustrate, tantalize, and annoy, so they are viewed as having negative intent. Out-group goals presumably interfere with in-group goals, so they are not warm. A primary source of negative affect toward out-groups results from perceived incompatibility of their goals with in-group goals (Fiske & Ruscher, 1993). If out-groups are successful, they receive grudging respect for their envied control over resources but never are liked as warm.

Low–low groups (e.g., welfare recipients), viewed as parasites in the system, also compete with other groups, not for status but for resources nonetheless. In allegedly draining economic and political capital from society, they supposedly compete in a zero-sum allocation of resources. Their goals are incompatible with others (and in that sense are competitive), so they are not warm.

Finally, of course, the in-group, its allies, and reference groups do not compete with themselves, so they are acknowledged as warm. The cultural default groups (middle class, Christian, heterosexual) may not be viewed as competitive, precisely because they possess cultural hegemony. Support for the competition → warmth prediction also comes from the Phalet and Poppe (1997) and Poppe and Linssen (1999) studies, in which perceived internation conflict negatively predicted socially desirable traits (i.e., morality or warmth).

Generally parallel efforts to predict intergroup images from structural relations show up in previous work: for example, enemy images in political psychology (Alexander, Brewer, & Herrman, 1999)[5], the social role theory of gender stereotypes (Eagly, 1987; Eagly, Wood, & Diekman, 2000)[6], and analyses of city-dweller and rural-dweller stereotypes (Campbell, 1967; LeVine & Campbell, 1972).[7] Both the Eagly (1987) and the Campbell (1967) role analyses focus on characterizing behaviors that result from roles, hence their social utility. Nevertheless, our view is more general, at once applying to many more social groups and going beyond analyses of specific roles. We also emphasize the functional compatibility of combinations that mix perceived competence and warmth, whereby the high–low combination justifies resentment, the low–high combination justifies subordination, and both maintain the status quo.

Review of Hypotheses

The goals of this research are to investigate our proposals regarding stereotype content:

1. Perceived competence and warmth differentiate out-group stereotypes.

2. Many stereotypes include mixed ascriptions of competence and warmth, as defined by low ratings on one dimension coupled with high ratings on the other.

3. Stereotypes depict out-groups as competent to the extent that they are perceived as powerful and high status; stereotypes depict out-groups as relatively warm and nice to the extent that they do not compete with others.

Research Strategy

A preliminary study and three of the current studies (on eight samples) address these hypotheses. Each study uses a sample of 6–25 out-groups, which come primarily from judges' nominations of out-groups that are important in the current U.S. scene. Participants rated cultural stereotypes of the out-groups on a series of trait adjectives derived from previous work. We then separately factor analyzed each group's trait ratings and isolated those that loaded distinctly on competence and warmth dimensions. Traits that loaded consistently across groups constituted two common dimensions, which provides an initial evaluation of the hypothesis that competence and warmth differentiate out-groups. Each group, with its score on the common competence and warmth dimensions, became a unit in cluster analyses. Reasonable cluster solutions derive from standard decision rules. We compared clusters for distributions of groups across the entire space to examine further the dimensional hypothesis.

For the mixed stereotypes hypothesis, we examined (a) proportions falling into the mixed, off-diagonal combinations, (b) between-clusters group differences on competence and on warmth, (c) within-cluster group differences between competence and warmth, and (d) individual within-group competence and warmth differences.

Participants also rated each group on items assessing perceived status and competition, with specific items again derived from their reliability across a new set of factor analyses within each rated individual group. Correlations of status and competition scales with competence and warmth scales assess the third, social structural hypothesis.

A fourth study, on a ninth sample, examines unique affective responses for each of the four competence–warmth combinations. Elaboration of that hypothesis appears later.

Preliminary Evidence

Previous studies have lacked theory, cross-groups comparison, or generalizable samples. To examine the mixed content of stereotypes, as predicted by social structural variables of status and competition, we undertook some preliminary studies (Fiske et al., 1999). Forty-two undergraduates rated consensual stereotypes of 17 groups on competence and warmth traits.[8] A first study

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[5] When we examine internation images, we find that their taxonomy predicts that incompatible goals (paired with status or strength) lead to negative perceptions along the warmth dimension: hostile, untrustworthy, ruthless, evil. Low status and power lead to perceived lack of competence and some form of warmth. Their parsing of the dimensions differs from ours, as they separate status, capacity (strength), and compatibility, logically creating the possibility of a $2 \times 2 \times 2$ matrix, of which they specified four cells. Moreover, they did not theorize about fundamental dimensions or the mixture of stereotype content or address how the attribution of positive traits can reinforce some types of prejudice (e.g., attributed competence can be integral to feelings of envy and resentment). But their scenario studies support the point that social structure (status and competition) predicts out-group images.

[6] Broad gender stereotypes distinguish stereotypically female communal traits (e.g., warmth, nurturance) from stereotypically male agentic traits (e.g., competent, confident, assertive). Social role theory suggests that gender stereotypes result from three overlapping factors: division into homemakers and employees, sex-typed distribution in paid occupations, and high-status versus low-status roles. Social role theory holds that perceivers infer traits from observations of role-constrained behavior, so when groups tend to be concentrated in certain roles, they receive the stereotype that follows from these roles. As these roles shift, gender stereotypes should, too (Diekman & Eagly, 2000). In a fictional portrayal of city workers and child raisers, role-based stereotypes mimicked gender stereotypes, perhaps rationalizing the distribution of the sexes into social roles (Hoffman & Hurst, 1990). This framework for gender roles resembles ours, but applied so far only to men and women.

[7] Low-status rural people stereotypically are close to the earth, resemble animals, and inhabit a sphere related to sociality; when they are disrespected, their perceived faults follow primitive, emotional–social lines: sex, aggression, and laziness. In contrast, high-status city dwellers inhabit a sphere related to sophisticated, cerebral, economic enterprise; when they are disliked, their perceived faults follow achievement-related lines: greed, ambition, and dishonesty.

[8] We used a pool of traits derived from Conway, Pizzamiglio, and Mount's (1996) study of communality and agency in gender stereotypes, and the final scales included five competence traits (i.e., competent, intelligent, confident, competitive, independent) and four warmth traits (i.e., sincere, good natured, warm, tolerant). The original list of adjectives

indicated that many groups fell along the diagonal from being relatively high on competence but low on warmth to being relatively low on competence but high on warmth, forming two predominantly mixed clusters.

A second study examined social structure correlates of stereotypic competence and warmth, with the same groups rated on the single traits of competence and likability (for warmth) along with the hypothesized social structural correlates, status and competition.[9] Perceived status did predict perceived competence, and perceived competition predicted perceived (lack of) warmth.

Although they are generally supportive of our framework, these preliminary studies were theoretically undeveloped (i.e., did not include the functional analysis developed here), focused on a broad-brush description that has proven insufficiently sensitive (i.e., only two clusters), and did not include emotional reactions (i.e., prejudices). Moreover, the preliminary studies have several methodological shortcomings. First, they used groups that are certainly current on the U.S. scene but that were selected by our own judgment. Thus, a critic could argue that the results fit the hypotheses because the groups were selected to fit the model. Second, the entire trait scale appeared in the first study only, so the second study's social structural correlates tested only one trait for each dimension, which is hardly ideal but was necessary to prevent participant fatigue. A critic could argue that this creates a weak test of the hypotheses, generalizing inappropriately from one study to another without completely overlapping scales. Third, the respondents were University of Massachusetts undergraduates, so if they accorded some positive attributes to any given out-group (i.e., not rating any minorities as completely without positive attributes), perhaps this derived from their liberal political orientation, northeast subculture, or college egalitarianism. Fourth, a salient American out-group, Blacks, fell unaccountably in the middle on warmth and competence.

Current Studies

The current full-scale studies, long surveys on four samples and short surveys on five samples, formally test our hypotheses. To avoid potential bias in sampling out-groups, in our pilot studies we checked the selection of groups to be included in the surveys. To avoid separating the trait and social structure scales, we included both scales on each questionnaire. To include varied samples, we ensured that five out of nine samples comprised adult respondents, whereas four samples went outside Massachusetts to diverse locations across the United States. To address the puzzlingly nonde-

script stereotypes of Blacks, we better specified that out-group in terms of commonly used subgroups.

This research fills a gap in studies of stereotype content by simultaneously examining groups that cut across gender, age, race, ethnicity, nationality, social class, and disability. It investigates stereotypes that do not neatly fit into the antipathy model of prejudice. It also examines prejudices that correspond to different types of out-groups. Moreover, it offers theoretically guided social structure correlates as predictors of stereotype content. In addition, it taps a wide variety of respondents in the United States.

Pilot Study: Selecting Representative and Relevant Groups for Study 1

The pilot study sought a more representative array than the groups in our initial studies.

Method

Participants

University of Massachusetts undergraduates (24) and nonstudent Amherst, Massachusetts, residents (7) volunteered to complete the questionnaire (15 women, 12 men, 4 unknown; mean age = 21.5 years). They were completely unaware of our hypotheses and unacquainted with stereotyping research.

Questionnaire and Procedure

Participants completed a self-administered, open-ended questionnaire at home, reading the following:

> Off the top of your head, what various types of people do you think today's society categorizes into groups (i.e., based on ethnicity, race, gender, occupation, ability, etc.)? In the space below, please list between eight and sixteen such groups.

Most participants finished the questionnaire in less than 10 min.

Results and Discussion

The most frequently listed groups were Blacks (74%), Hispanics (45%), rich people (45%), poor people (42%), gay men (39%), Asians (32%), elderly people (29%), blue-collar workers (23%), Jews (23%), disabled people (19%), retarded people (16%), poor Whites (13%), physically attractive people (13%), professionals (13%), southerners (10%), welfare recipients (10%), business or

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included some negative ones, but our respondents did not use these consistently to describe societal stereotypes across groups, as revealed by patterns across factor analyses calculated for each group separately. Hence, we are left with two positive dimensions that run from low to high. This, however, seems acceptable for reasons of theory and precedent. First, much prejudice is indicated by the withholding of positive attributes and rewards from out-groups, as Mummendey (1995) and Dovidio, Kawakami, and Gaertner (2000) have shown, so one might expect more variation in positive attributes than in negative ones. Second, the person perception literature has shown for some time that people tend to use variations in the positive end of the scale to assess other people because negative evaluations carry disproportionate weight (Fiske, 1980; Skowronski & Carlston, 1989).

[9] The structural measures included perceived status (e.g., prestigious jobs, economic success, good education) and perceived competition with the in-group (e.g., special breaks, resource conflict, power trade-off). In addition, several measures involved what was intended to be cooperation or voluntary mutuality, which we expected to load on a bipolar cooperation–competition factor. Instead, these items (i.e., cooperative relations being necessary, difficult to achieve goals without their help, relying on them, being in a cooperative relationship to achieve common goals) ended up being perceived as obligatory asymmetrical dependence. That is, participants seemed to view these items as indicating that cooperative relations were necessary, often because the group being rated was perceived as powerful. Because repeated attempts to construct a reliable measure in Studies 1 and 3 yielded no useful results, these items are omitted in descriptions of these studies.

professional women (10%), and housewives (3%). Of the 17 groups used in the preliminary studies, 12 were listed by at least 1 person in our new sample, which suggests that the preliminary list was not too biased by our hypotheses. Nevertheless, these responses—as well as the prior results—changed some of the groups considered.

The new set included 23 groups, 12 of which appeared in both our preliminary studies and the pilot sample: rich people, gay men, Asians, elderly people, Jews, disabled people, retarded people, southerners, welfare recipients, businesswomen, housewives, and Latinos (which we changed to *Hispanic* to reflect respondents' own terms). The pilot study added blue-collar workers and poor Whites, which makes 14 groups that directly fit the pilot study.

Five groups were included for purely theoretical reasons. Because of the gender subgrouping literature, which indicates four consistently replicated subtypes (i.e., housewives, career women, feminists, and sex objects), feminists were retained, although they were not mentioned in the pilot, and sexy women were added.

Because of our interest in locating Blacks more precisely, we tried separating Black subgroups by social class on the basis of our pilot sampling listing poor Blacks among poor people, our own judgment, and prior studies (Bayton, McAlister, & Hamer, 1956; Smedley & Bayton, 1978): We chose Black professionals and poor Blacks. If respondents had been combining these two groups previously, the averaged response might land generic Blacks in the middle. If we were wrong to divide them, professional and poor Blacks should end up in the same middle location as before. We added poor Whites to examine race–class stereotypes suggested by this division of Blacks and also to fit the pilot study item *poor people*.

Finally, four groups resulted from psychometric concerns. Because of our interest in retaining groups that might be significant in the United States outside the northeast, we kept migrant workers and house cleaners and added Arabs. For continuity, we also retained blind people. Thus, the new set of groups, although it was not entirely determined by our pilot sample's response, included the major groups mentioned by them as well as some other theoretically and politically interesting ones. In any event, the essential sample was not determined a priori by our specific hypotheses.

Study 1, Long Survey: Competence, Warmth, Mixed Stereotypes, and Their Predictors

Students and nonstudents were surveyed about society's perceptions of social groups' traits and the structural relationships of status and competition. An adult and a student sample, both from Massachusetts, completed a questionnaire on which they rated 23 groups on warmth and competence traits and on social structure variables representing status and competition.

Method

Participants

Students. University of Massachusetts undergraduates, recruited from various psychology courses, completed the questionnaire for course credit (50 women, 23 men, 1 who did not indicate gender; mean age = 19.4). Of the 74 participants, 58 (78%) identified themselves as White or Caucasian, 6 (8%) as Black or African American, 4 (5%) as Asian, 3 (4%) as multiethnic, and 2 (3%) as European, leaving 1 (1%) unknown. Participants completed the questionnaires in groups of 10–20, using an empty classroom and taking less than half an hour. One questionnaire was eliminated because it had a completion rate of less than one fifth, which left us with $n = 73$.

Nonstudents. Fifty nonstudents (25 women, 13 men, and 12 who did not indicate gender; mean age = 35.2), recruited by undergraduate psychology students, completed the questionnaires in their own home on a volunteer basis. Most of the adults were friends or family of University of Massachusetts students. Two thirds of the participants identified themselves as White. The students who recruited participants received extra course credit for their involvement. Because of the unmonitored conditions under which the questionnaires were completed and some of the sample's apparent inexperience with questionnaires, 12 questionnaires were omitted because respondents failed to follow the instructions, which left us with $n = 38$.

Questionnaire and Procedure

The questionnaire named the same 23 groups listed on the second pilot questionnaire. Participants rated these groups on scales reflecting warmth, competence, perceived status, and perceived competition (see Table 2); items were scrambled. Participants were instructed to make the ratings, using 5-point scales (1 = *not at all* to 5 = *extremely*), on the basis of how the groups are viewed by American society. They read, "We are not interested in your personal beliefs, but in how you think they are viewed by others." As in all our studies, this instruction was intended to reduce social

Table 2
Scales, Study 1

Construct	Items
Competence	As viewed by society, how . . . are members of this group? [competent, confident, independent, competitive, intelligent]
Warmth	As viewed by society, how . . . are members of this group? [tolerant, warm, good natured, 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	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. The more power members of this group have, the less power people like me are likely to have. Resources that go to members of this group are likely to take away from the resources of people like me.

Note. For the Competence and Warmth Scales, the points of ellipsis were replaced by the words in brackets for each question.
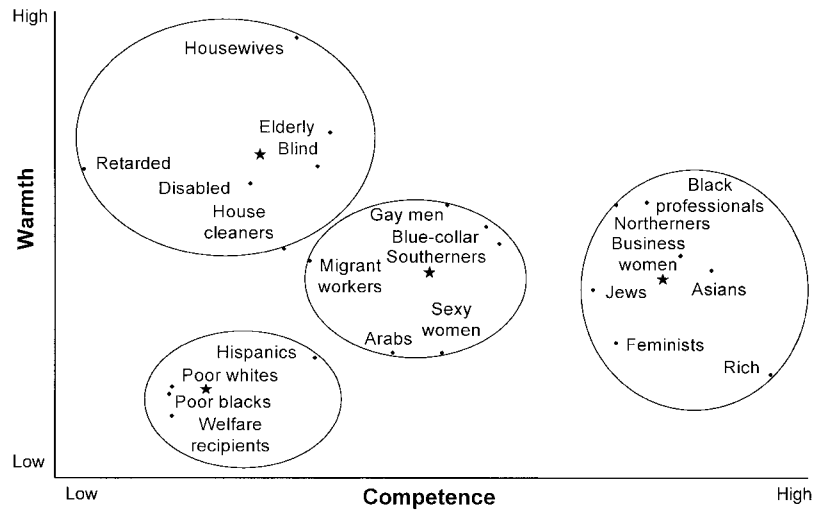
Figure 1. Four-cluster solution, Study 1, long survey, student sample.

desirability concerns and to tap perceived cultural stereotypes. Students received written feedback, and nonstudents received oral feedback.

Results

This study tests the introduction's three hypotheses. To test the utility of warmth and competence in describing out-groups, we examined their two-dimensional array in cluster analyses. To test the frequency of mixed combinations, we examined the distribution of groups into various clusters and assessed differences in warmth and competence ratings for each group. To test the structural hypotheses, we examined correlations of status with competence and competition with (lack of) warmth.

Perceived Competence and Warmth Differentiate Among Out-Group Stereotypes

To construct trait and predictor scales, we needed ones that worked for each group separately but that overlapped across groups. We calculated 23 factor analyses (one per group) examining all 26 response items; these typically yielded five–eight factors with eigenvalues greater than 1.0. Across groups, five similar factors emerged consistently, and these formed the scales of competence, warmth, status, and competition (as noted in Footnote 2, we omitted cooperation).

Each participant rated the 23 groups according to the competence scale (competent, confident, independent, competitive, intelligent; student $\alpha = .90$, nonstudent $\alpha = .85$) and warmth scale (tolerant, warm, good-natured, sincere; student $\alpha = .82$, nonstudent $\alpha = .82$). For each of the 23 groups, the competence and warmth ratings each were averaged across participants, so the means supplied competence and warmth scores for each group. According to these means, the 23 groups arrayed on a two-dimensional Competence × Warmth space (see Figures 1 and 2). As predicted, the two dimensions differentiated the groups.

To examine the structure of this two-dimensional space, we conducted two types of cluster analyses of the 23 groups. Following Hair, Anderson, Tatham, and Black (1995), we first conducted hierarchical cluster analyses (Ward's, 1963, method, which mini-

mizes within-cluster variance) to determine the best fitting number of clusters. We then conducted *k*-means cluster analyses (with the parallel threshold method) to determine which groups fell into which clusters. The distinction between the two analyses roughly parallels stepwise and simultaneous multiple regression.

To decide the number of clusters that best reflect the data, we examined agglomeration statistics from the hierarchical analysis. Using Blashfield and Aldenderfer's (1988) guidance, we interpreted the hierarchical cluster analyses with a twofold approach. First, we identified a plausible number of clusters using typical decision rules, and, second, we validated that solution several ways.[10]

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[10] Regarding the first step, Blashfield and Aldenderfer (1988) wrote, "Most resolutions to the number-of-clusters problem in applied research have involved some subjective analysis of the cluster solution" (p. 463). Hierarchical cluster analysis produces an agglomeration schedule that specifies which cases or clusters have been merged in each stage and that provides coefficients indicating distances between each pair of cases or clusters being merged at each stage. According to Blashfield and Aldenderfer (1988), "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" (p. 463). The SPSS statistical package Version 10.1 in-program tutorial also instructs, "The stage before the sudden change indicates the optimal stopping point for the merging clusters." This technique, as in the more familiar scree plots of factor analysis eigenvalues, searches for the "elbow" in the plot, using the relatively vertical portion of the plot as the number of clusters or factors to pursue. Thus, we used this graphical technique as the stopping rule for determining the ideal number of clusters for each data set.

Blashfield and Aldenderfer (1988) recommended validating a cluster solution by (a) replicating across samples. We follow this advice, as reviewed in each study. Additionally, as in factor analysis, one can validate the utility of the proposed solution by (b) examining the relationships of the obtained factors or clusters to each other. We provide *t* tests that compare clusters centers with each other. Moreover, one can validate cluster solutions by (c) examining their relationship to other variables. We provide a second pair of variables (the status and competition predictors) that map onto our warmth–competence clusters in Studies 1–3. And Study 4 examines the clusters' ratings on still another set of variables (emotions).
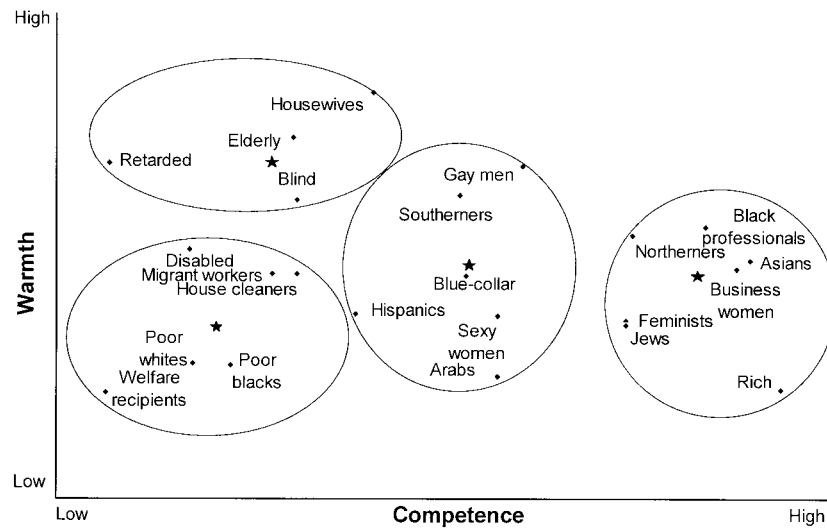
Figure 2. Four-cluster solution, Study 1, long survey, nonstudent sample.

For both student and nonstudent samples in this study, the last large change came in the break between three and four clusters, so we adopted a four-cluster solution. As footnoted, this decision rule resembles the scree test in factor analysis, whereby researchers have typically cut the number of factors at the bend in the eigenvalues, below which lies statistical rubble.

Next, we turned to the *k*-means cluster analysis to examine which groups fit into which cluster. For both the student sample (see Figure 1) and the nonstudent sample (see Figure 2), one cluster comprised seven groups: Asians, Black professionals, businesswomen, feminists, Jews, northerners, and rich people. These groups also clustered together in the less useful three- and two-cluster solutions in both samples (Table 3), so this cluster was stable across samples and across solutions.

Another cluster comprised three groups: blind people, elderly people, and housewives; for both samples, these were groups that clustered together also in the four-, three-, and two-cluster solutions, making these stable solutions. The student sample added to this cluster disabled people, house cleaners, and retarded people, who appeared with the others in all three student cluster solutions, making this addition a stable result for the student but not the nonstudent sample.

Another cluster also included, for both students and nonstudents, three groups: poor Blacks, poor Whites, and welfare recipients, groups that appeared together in all three cluster solutions for each sample, making this a stable result. Students consistently added Hispanics to this trio in all cluster solutions, making this group stable in this cluster for students. Nonstudents included house cleaners and disabled people here rather than in the previous cluster, in which the students had placed them; nonstudents also added migrant workers here; the last three groups remained in all nonstudent solutions.

The final cluster included only two groups that consistently appeared together across solutions and across samples: blue-collar workers and southerners. Across samples and across solutions, the remaining groups (Arabs, gay men, sexy women, and, for students, migrant workers) did not reliably cluster with these two or with each other.

In short, competence and warmth dimensions differentiated among four stable clusters that meaningfully and reliably accounted for 16 of the 23 groups (70%) across solutions and samples.

Table 3

Group Cluster Assignments in Two-, Three-, and Four-Cluster Solutions, Students and Nonstudents, Study 1

Group	Students			Nonstudents		
	4[a]	3	2	4	3	2
Asians	2	2	2	2	2	2
Black professionals	2	2	2	2	2	2
Businesswomen	2	2	2	2	2	2
Feminists	2	2	2	2	2	2
Jews	2	2	2	2	2	2
Northerners	2	2	2	2	2	2
Rich people	2	2	2	2	2	2
Blind people	4	3	1	3	3	1
Elderly people	4	3	1	3	3	1
Housewives	4	3	1	3	3	1
Retarded people	4	3	1	3	1	1
Disabled people	4	3	1	4	1	1
Housecleaners	4	3	1	4	1	1
Poor Blacks	1	1	1	4	1	1
Poor Whites	1	1	1	4	1	1
Welfare recipients	1	1	1	4	1	1
Hispanics	1	1	1	1	1	1
Migrant workers	3	3	1	4	1	1
Blue-collar workers	3	2	2	1	3	2
Southerners	3	2	2	1	3	2
Gay men	3	3	2	1	3	2
Arabs	3	1	1	1	2	2
Sexy women	3	3	1	1	2	2

Note. Groups indicated in boldface showed the most stable respective clusters, across solutions and across samples. Breaks between clusters indicate student solutions; nonstudent solutions differed only slightly, as indicated in the right three columns.

[a] Indicates the number of clusters in the solution.

Many Stereotypes Include Mixed Competence and Warmth

We defined mixed stereotypes as low ratings on one dimension coupled with high ratings on the other; our hypothesis holds that a substantial number of out-group stereotypes will prove high on either competence or warmth but low on the other. Three analyses address this hypothesis.

First, compare the means for the four cluster centers (Table 4). In both samples, the cluster with the highest competence ratings (student $M = 4.04$, nonstudent $M = 3.78$) is the one that reliably contains Asians, Black professionals, businesswomen, feminists, Jews, northerners, and rich people. In both samples, this cluster's rated competence differed significantly from all the other clusters (student $M = 2.29$ to 3.14, nonstudent $M = 2.41$ to 3.12, all $ps < .001$). Matched pair t tests reveal a significant difference between this cluster center's scores on competence (above) and warmth (student $M = 3.12$, nonstudent $M = 2.94$), student $t(6) = 5.61$, $p < .01$; nonstudent $t(6) = 6.34$, $p < .01$. Therefore, in both samples, this cluster was higher in competence than in warmth, a mixed combination by our definition.

The cluster with the highest warmth rating (student $M = 3.62$, nonstudent $M = 3.48$) was the one that reliably contained housewives, elderly people, and blind people, with some others included by students. In both samples, this cluster's warmth differed significantly from all other clusters (student $M = 2.66$ to 3.14, nonstudent $M = 2.74$ to 3.01; all $ps < .05$). Warmth scores (above) were significantly higher than the competence scores (student $M = 2.49$; nonstudent $M = 2.50$) for members of this cluster, student $t(5) = 6.76$, $p < .001$; nonstudent $t(3) = 6.98$, $p < .01$. For both samples, this cluster was higher in warmth than in competence and therefore mixed by our definition.

Note that, of 23 groups, the two mixed clusters contained 13 groups for the student sample and 11 groups for the nonstudent sample, which suggests a substantial number of out-groups that did not fit the pure antipathy hypothesis.

Who came closest to fitting the pure antipathy hypothesis? Poor Blacks, poor Whites, and welfare recipients (along with other groups that depend on the sample, as noted) reliably elicited low marks on both dimensions, which amounts to derogation relative to other clusters. The cluster that reliably scored the lowest on both warmth (student $M = 2.66$, nonstudent $M = 2.74$) and competence (student $M = 2.29$, nonstudent $M = 2.41$) differed significantly ($p < .01$) from the other means in 8 out of 12 comparisons across the two samples. Though lowest on both dimensions, they fared worse on competence than warmth, student matched $t(3) = 3.80$, $p < .05$; nonstudent matched $t(5) = 4.66$, $p < .05$.

The remaining cluster (which reliably contained southerners and blue-collar workers, and others depending on the sample and the solution) lay in the middle on both dimensions (student $M = 3.14$ and 3.14 for competence and warmth, respectively; nonstudent $M = 3.01$ and 3.12), which did not differ significantly from each other. They elicited neither pure derogation nor mixed prejudice, by our definition.

Finally, at the level of individual groups, we examined matched pair t tests comparing competence and warmth ratings for each of the 23 groups, separately for the student and nonstudent participants. Competence and warmth ratings differed significantly for 20 groups in the student sample and for 17 groups in the nonstudent sample (see Table 5). In both samples, 9 groups were perceived to be significantly more competent than warm (from highest to lowest difference): rich people, Asians, feminists, businesswomen, Jews, Black professionals, northerners, sexy women, and Arabs; all except the latter two (which showed the smallest differences) fell in the direction predicted by their cluster membership.

For students, 11 groups, and for nonstudents, 8 groups were rated as more warm than competent (from highest to lowest): retarded people, housewives, disabled people, elderly people, blind people, house cleaners, poor Whites, migrant workers, poor Blacks, welfare recipients, and gay men; the first six (the biggest

Table 4

Competence and Warmth Means for Each Cluster, Study 1

Cluster	Students ($n = 73$)			Nonstudents ($n = 38$)		
	Competence		Warmth	Competence		Warmth
Asians, Black professionals, businesswomen, feminists, Jews, northerners, rich people	4.04_a	>	3.12_b	3.78_b	>	2.94_b
Housewives, elderly people, blind people retarded people (student sample adds housecleaners, disabled people)	2.49_c	<	3.62_a	2.50_c	<	3.48_a
Poor Whites, poor Blacks, welfare recipients (student sample adds Hispanics; nonstudent sample adds housecleaners, disabled people, migrant workers)	2.29_c	<	2.66_c	2.41_c	<	2.74_b
Blue-collar workers, southerners (both samples four-cluster solution adds Arabs, gay men, sexy women; nonstudents add Hispanics; students add migrant workers)	3.14_b	=	3.14_b	3.12_b	=	3.01_b

Note. Groups clustered reliably across solutions and across samples, except for the variants noted parenthetically. See text for details of cluster membership. Within each row, within each sample, means differ ($p < .05$) if > or < is indicated. Within each column, means that do not share a subscript differ ($p < .05$).

Table 5
Mean Paired Differences (Competence − Warmth) for Student and Nonstudent Samples, Study 1

Group	Student (*n* = 73)	Nonstudent (*n* = 38)
Rich people	1.736***	1.493***
Asians	1.073***	0.897***
Feminists	1.016***	0.779***
Businesswomen	0.902***	0.824***
Jewish people	0.706***	0.733***
Black professionals	0.551***	0.625***
Northerners	0.429***	0.371*
Sexy women	0.374***	0.371*
Arabs	0.194*	0.601***
Southerners	0.143	−0.206
Hispanics	0.009	−0.006
Blue-collar workers	0.002	0.110
Gay men	−0.213*	−0.174
Welfare recipients	−0.401***	−0.422**
Poor Blacks	−0.500***	−0.118
Migrant workers	−0.511***	−0.383**
Poor Whites	−0.518***	−0.236
House cleaners	−0.654***	−0.429**
Blind people	−0.865***	−0.706**
Elderly people	−0.960***	−0.982***
Disabled people	−1.058***	−0.829***
Housewives	−1.475***	−0.991***
Retarded people	−1.755***	−1.460***

Note. Matched pair *t* tests revealed that the competence and warmth ratings significantly differed for most groups. Means of paired differences (competence rating − warmth rating) are reported.
* *p* < .05.   ** *p* < .01.   *** *p* < .001.

differences) all fell in the direction predicted by their cluster membership.

Competence and warmth ratings did not differ for southerners, blue-collar workers, and Hispanic people in either sample; this result fits their consistent location in the middle of the cluster space.

Levels of analysis for clusters and for individual groups can be combined: For the students, 13 groups, and for the nonstudents, 10 groups elicited mixed stereotypes (indicated by the within-group *t* tests) predicted by their cluster membership. Thus, roughly half the groups showed consistently mixed stereotypes across samples and methods of analysis.

Status Predicts Competence, and Competition Predicts Warmth

Having provided evidence of the importance of the competence and warmth dimensions as well as the substantial numbers of groups in the mixed combinations, we turn to social structural predictors of groups' places in the trait space. Out-groups are perceived as competent to the extent that they are perceived as powerful and high status or as incompetent to the extent that they are perceived as powerless and low status; out-groups are seen as relatively warm and nice to the extent that they are perceived as not competing with the mainstream in-group.

We had developed social structure predictor scales for status (student α = .92, nonstudent α = .78) and competition (student α = .69, nonstudent α = .61; see Table 2). The student participants and nonstudent participants rated the 23 groups on these

scales. We used two procedures to analyze the relationships between the traits (competence and warmth) and the hypothesized social structure correlates. First, the group-level procedure averaged the trait and social structure ratings across participants for each of the 23 groups and then entered each group's mean ratings for correlational analyses (see upper portion of Table 6). The second, individual-level procedure examined the correlation between traits and social structure for the 23 groups, separately for each individual participant (73 student participants, 38 nonstudent participants), after which the participants' correlation coefficients were averaged within sample (see lower portion of Table 6).

The results from the two procedures and samples are similar. Perceived status was highly correlated with perceived competence by both procedures for the student sample, group-level $r(21)$ = .98, p < .001; individual-level $r(71)$ = .83, p < .001, and the nonstudent sample, group-level $r(21)$ = .97, p < .001; individual-level $r(36)$ = .64, p < .001. Although the group-level correlations might seem surprisingly high, recall that they are based on the stable group means collapsed across all participants, so they aggregate across individual-level variation as well as across multiple items for each scale. However, even the individual-level mean correlations substantially support our hypothesis that perceived status confers competence.

Perceived competition negatively correlated with perceived lack of warmth for the student sample, group-level $r(21)$ = .98, p < .001; individual-level $r(71)$ = .83, p <.10, and the nonstudent sample, group-level $r(21)$ = .97, p < .001; individual-level $r(36)$ = .64, *ns*. Again, the group-level correlation takes advantage of the stability achieved when we averaged across all participants in the sample, and those correlations substantially support our hypotheses. The individual-level correlations are weak. Surprised by the discrepancy between the individual-level and group-level correlations, we examined the distributions of the individual correlations. For the students, the distribution was clearly bimodal, with 52 correlations centering on a mode of −.46, a dip at .00, and 20 correlations centering at .13. For nonstudents, although the

Table 6
Correlations Between Traits and Predictors, Study 1

Predictor	Competence		Warmth	
	Students	Nonstudents	Students	Nonstudents
		Group-level		
Status	.98***	.97***	.04	−.09
Competition	.33†	.55**	−.68***	−.53**
		Individual-level		
Status				
r	.83***	.64***	.08	.06
%	94	76	27	24
Competition				
r	.16	.19	−.22†	−.11
%	31	21	29	24

Note. Group-level *df* = 21; individual-level student *df* = 71; individual-level nonstudent *df* = 36. Individual-level correlations were converted to Fisher's *z* scores, averaged, then reconverted to correlations. Percentages are the percentage of participants for whom that correlation was significant (*p* < .05).
† *p* < .10.   ** *p* < .01.   *** *p* < .001.

distribution was not bimodal, 26 of 35 correlations were negative, ranging between $-.61$ and .00, with the minority again positive. Thus, the competition–warmth hypothesis holds at the group level of analysis for both samples and at the individual level of analysis for 72% of the student sample and 74% of the nonstudent sample.

The off-diagonal correlations (i.e., status with warmth, competition with competence) were nonsignificant, as predicted, except for unexpected group-level correlations between competition and competence. Examination of the competence items suggests why: In our preliminary studies, factor analyses of students' trait ratings indicated that competence included the traits *competitive* and *independent*. Those items naturally correlate with a scale of zero-sum tradeoffs. (Study 2 addresses this point.)

Discussion

This study focuses on three hypotheses. Support for perceived competence and warmth as differentiating out-group stereotypes appeared in cluster analyses that used competence and warmth; four stable clusters consistently accounted for 70% of the groups, across solutions and samples. Support for the substantial number of mixed stereotypes—low ratings on competence coupled with high ratings on warmth or vice versa—came from three analyses: For each sample, two cluster centers were rated significantly higher on warmth than on competence or vice versa. Half the studied groups fell into one of these two mixed clusters. And across samples, matched pair *t* tests indicated that the same half of the groups showed consistently mixed stereotypes. Finally, support for the hypothesized correlations between social structure predictors and traits is strong for the status–competence prediction at the group and individual levels of analysis. For the competition–warmth correlation, support is strong at the group level and weaker at the individual level, though in the predicted direction for 72–74% of the participants.

The reasons for this last discrepancy are not clear. One possibility is that a minority of respondents hurried through the questionnaire, using a halo heuristic, simply rating some groups more positively than others on all dimensions, thereby positively correlating warmth and competition in their own answers. This fits the bimodal pattern of these data for the student sample and is plausible for the nonstudent sample as well. Study 2 reassesses this relationship under circumstances that are less overwhelming for respondents. In addition, Study 3 reassesses the relationship using far fewer groups and scales to undercut any fatigue or carelessness caused by the sheer number of ratings in Study 1 (23 groups $\times$ 26 ratings = 598 responses).

Overall, the support for the hypotheses is substantial, as predicted for many of the included groups. Nonetheless, the exceptions are informative. Although cross-culturally a gender subgroup of sexy women appeared reliably (Fiske, 1998), this group did not emerge as incompetent but warm in these Massachusetts samples. Although we had brainless bimbo in mind, some of our respondents may have been thinking villainous vamp. Moreover, the blue-collar workers, gay men, Hispanics, and southerners did not fall into any of the expected quadrants. These groups may possess less consensual stereotypes in our sample. Alternatively, subgroups might explain the middling and unstable results for these groups; two polarized subgroups can cancel each other out.

This had been exactly the case for Blacks in our prior studies. The Study 1 results for Black professionals and poor Blacks explain the previously obtained nondescript stereotype for Blacks as a whole. That is, in the previous studies, the two distinct subgroups apparently had canceled each other out, leaving the generic group in the middle. In these data, the content of Black racial stereotypes depends entirely on social class (cf. Bayton et al., 1956; Smedley & Bayton, 1978). Along these class-oriented lines, participants did not distinguish poor people by race: Poor Blacks, poor Whites, and all welfare recipients were incompetent and not warm.

Revealing as these results are, our sampling of groups still is not fully representative. Although many were picked according to our pilot test, some were selected on the basis of our theories and our curiosities. One might argue that the empirical support emerges from the particular groups used. Study 2 adheres to stricter criteria for selecting groups.

The four-cluster solutions for Study 1 reveal clusters in three quadrants of a 2×2 Competence $\times$ Warmth matrix, with a fourth cluster indecisively stationed in the middle. What groups fit into the high competence, high warmth combination? Not out-groups, we suggest, but in-groups, their allies, or cultural default reference groups. To test this hypothesis, Study 2 explicitly includes in-groups.

Among the Study 1 groups, competence differentiated more than warmth did. For students, the range was 1.75 on competence and 0.96 on warmth; for nonstudents, the range was 1.37 on competence and 0.74 on warmth. Both dimensions differentiated significantly among the groups, and the warmth effect sizes are large by Cohen's (1992) standards (see General Discussion). The warmth differences may suffer merely in comparison with the larger competence differences, not because they are intrinsically small effects. In any case, these particular groups and scales do not establish whether competence is generally a stronger dimension in intergroup perceptions, so a new sample of groups and traits would be informative.

One might also critique the competence and warmth scales in their own right. The warmth scale includes elements of both sociality (good-natured, warm, tolerant) and morality (sincere), but all are prosocial traits. On the other dimension, we defined competence as task competence, in keeping with the person perception and small groups literatures. Moreover, undergraduates' own ratings of the adjectives went into the factor analyses that determined which traits entered the scales. But others might disagree, so a thesaurus resolved the issue in Study 2.

Turning to the social structure variables, we note that status and competition for the most part correlated respectively with competence and (lack of) warmth. The competition–warmth negative relationship held across groups and for the majority of participants at the individual level of analysis; the sizes of the group-level correlations indicate a substantial relationship between perceived competition and lack of warmth. However, in both samples, individual-level analyses showed weaker results; improved scales might increase the correlation, so Study 2 addresses this question.

On the other hand, the group-level correlation for status predicting competence might seem suspiciously high. One answer is statistical: Averaging across participants to derive a score for each group, then assessing the correlation across groups, allows an unusually large, stable correlation. A critic might argue that we are

measuring the same variable twice (after all, the correlations are in the range of more than satisfactory reliabilities). To this, we respond that social status variables (e.g., prestigious jobs, economic success, good education) are not conceptually identical to competence traits (e.g., competent, competitive, confident, independent, intelligent). Nevertheless, Study 2 sharpens the distinction between predictors and traits by removing the potential overlap between the predictor *well-educated* and the trait *intelligent*; it eliminates the former. It also adds new competence traits (e.g., capable, skillful) that are distinct from status.

If they are not the same conceptual variable, a critic might argue, the status–competence results are obvious. We respond that, a priori, our hypothesis was not obvious. As suggested in the introduction, the reported cultural stereotype could have viewed high-status groups resentfully, as not deserving their position but instead being incompetent and phony. People could have responded differently if they thought the cultural stereotype holds that many high-status people do not deserve their attainments or that outcomes are arbitrary. Finally, the extremely high status–competence correlation in our samples is further sustained by the Phalet and Poppe (1997) high beta coefficients for a similar relationship.

Finally, the oddly high (and not predicted) correlation of competence with competition is easily explained by the inadvertent inclusion of *competitive* and *independent* in the traits for competence. Study 2 deletes these traits.

Groups-Listing Pilot Study for Study 2

In addition to concerns that our inclusion of theoretically interesting out-groups may have biased previous samples, we noted that groups representing pure antipathy may not have been given sufficient chance to emerge, so we explicitly asked pilot participants for low-status groups. Moreover, our eliciting procedures may have omitted mainstream groups or the respondents' own in-groups, so we explicitly requested them as well.

Method

Participants and Procedure

Sample 1. Thirty Massachusetts students and nonstudents, recruited by undergraduates in psychology, volunteered to complete the self-administered, open-ended survey in their own homes. One respondent was omitted for failing to follow instructions, leaving $n = 29$ (16 men, 13 women; mean age $= 46.1$). The majority of participants (27) identified themselves as White (plus 1 biracial, 1 Black).

Sample 2. Thirty-one University of Massachusetts undergraduates completed the self-administered, open-ended survey in their own homes. Six were omitted for failing to follow instructions, leaving $n = 25$ (10 men, 15 women; mean age $= 20.1$). Most participants (18) were White (plus 5 biracial, 2 Black).

Sample 3. Twenty-one University of Massachusetts psychology undergraduates (4 men, 17 women; mean age $= 21.3$) volunteered to complete the third item in the questionnaire at the beginning of a class period. All were White except 1 participant (who was biracial).

Questionnaire

Sample 1 and 2 participants read and answered the following three questions:

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 American society?

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

Planning to survey students for the revised questionnaire, we desired a roster of in-groups relevant to that sample. Thus, we included only undergraduates in analyses of the in-group question.

Results and Discussion

In Question 1, 21 groups were listed by 15% or more of the participants, our criterion for inclusion on Study 2's revised long survey; they were (in descending order): Blacks/African Americans (65%), Whites (57%), Hispanics (56%), Jews (48%), women (46%), Christians (44%), elderly people (43%), men (43%), Asians (41%), blue-collar workers (30%), disabled people (26%), teens/young people (26%), poor people (22%), rich people (22%), middle class (20%), professionals (20%), educated people (20%), Muslims (20%), Native Americans (17%), students (17%), and gay men (15%).

Question 2 elicited some redundant groups: Blacks (57%), Hispanics (54%), poor people (28%), and blue-collar workers (26%). Also, the following four groups emerged: welfare recipients (37%), homeless people (26%), drug dealers (20%), and mentally retarded people (20%).

When asked to list in-groups (Question 3), participants named Whites (60%), students (40%), Christians (48%), middle class (38%), women (32%), educated (36%), and men (22%).

Study 2, Revised Long Survey: Competence, Warmth, Mixed Stereotypes, and Their Predictors

Armed with a new list of groups in Study 2, we aimed to use stricter inclusion criteria, determined solely by our pilot participants, and to explicitly include both in-groups and those out-groups that might most favor the antipathy hypothesis rather than our mixed prejudice hypothesis. Revised competence and warmth scales aimed to fit more closely with common usage and to see whether warmth would differentiate more strongly among groups and correlate more strongly with its hypothesized predictor, competition. For the status–competence correlations, Study 2 used scales with even less potential overlap than the Study 1 scales had. Finally, to prevent halo effects, we decreased demands on participants by dividing the groups list.

Method

Participants

University of Massachusetts undergraduates ($N = 148$; 111 women, 37 men; mean age $= 19.8$), recruited from lower level psychology courses, completed the questionnaire for extra credit. The majority of participants (122) identified themselves as White. Of the remaining 26 participants, 13 self-identified as Asian, 5 as Hispanic, 4 as Black, 2 as multiethnic, and 2 as being in no group. On a 5-point scale ranging from *low* (1) to *upper* (5), the average social class was 3.27, and the modal response was "middle."

Questionnaire and Procedure

Instructions and circumstances were the same as Study 1's student sample, except as follows: Participants rated 25 social groups (designated by the second groups-listing pilot) on items measuring competence, warmth, status, and competition (see Table 7). To prevent fatigue, participants rated the group list split in half (12 and 13). Because results are analyzed primarily at the group level (i.e., each out-group receives mean ratings, which are then compared with other groups' mean ratings), randomly assigning different participants to rate different groups and then combining the data sets seemed permissible. The order of presentation reversed for each list, yielding four versions of the questionnaire, to which participants were randomly assigned.

This questionnaire differed essentially from the first long survey in two regards: (a) Items were added and deleted to reflect warmth (we added friendly, well-intentioned, and trustworthy, and we dropped tolerance) as well as competence (we added capable, efficient, and skillful, and we dropped competitive and independent). (b) The roster of social groups, derived from the groups-listing pilot, now included in-groups and additional low-status groups.

Results

Using Study 1's technique, 25 factor analyses (1 per group) examining 25 items yielded five–eight factors with eigenvalues greater than 1.0. Across groups, five similar factors emerged consistently: Competence (competent, capable, intelligent, efficient, skillful, and confident; $\alpha = .94$), Warmth (warm, good-natured, sincere, friendly, well-intentioned, and trustworthy; $\alpha = .90$), and abridged scales of Status (prestigious jobs and economic success; $\alpha = .89$) and Competition ("special breaks . . . make things more difficult for me" and "resources to this group . . . take away from resources for me"; $\alpha = .67$). (See Footnote 9.)

Perceived Competence and Warmth Differentiate Among Out-Group Stereotypes, and Many Stereotypes Are Mixed

As in Study 1, two types of cluster analysis examined the first hypothesis, that stereotypes of groups fall along two main dimensions of competence and warmth. We calculated competence and warmth scores for each of the 25 groups by averaging across participants. Preliminary analyses indicated that on warmth, drug dealers scored three standard deviations below the mean of all other groups, so they seemed to be from a different population

distribution; we eliminated this outlier from the remaining analyses. (If included, it would constitute by far the lowest score on warmth, $M = 1.45$, and comparable to the lowest competence, $M = 2.31$.)

Agglomeration statistics generated by hierarchical cluster analysis point to a five-cluster solution as the best fit for the 24 groups, using the same rule as before. Because this survey added in-groups, which we expected to score high on both competence and warmth, but did not delete the previously middling groups, the five-cluster solution was expected.

As before, a *k*-means cluster analysis, parallel threshold method examined cluster memberships (see Figure 3). One cluster, high competence and low warmth, comprised six groups: Asians, educated people, Jews, men, professionals, and rich people. A matched pair *t* test on its cluster center shows this cluster to be perceived as significantly more competent ($M = 4.29$) than warm ($M = 3.23$), $t(5) = 7.80$, $p < .01$. The contents and center of the cluster closely resemble the comparable cluster in the first two samples, despite changes in scales and groups; feminists, businesswomen, northerners, and Black professionals are missing from Study 2, but otherwise the configuration is similar. This cluster scored the highest on competence (see Table 8).

Another cluster, containing disabled people, elderly people, and retarded people, scored significantly higher on warmth ($M = 3.73$) than on competence ($M = 2.28$), $t(2) = 8.04$, $p < .05$. This cluster resembles the comparable cluster in Study 1, except that Study 2 eliminated housewives and blind people. This cluster scored high on warmth, fully comparable to the in-groups (see below). Together, the two mixed clusters included nine groups, nearly a third of the groups sampled.

As before, pure derogation was directed only toward the poor— poor people, welfare recipients, and homeless people. Although this cluster was perceived to be lower on warmth than was any other cluster, its warmth score ($M = 2.42$) was still significantly higher than its competence score ($M = 1.97$), $t(2) = 4.95$, $p < .05$. The cluster's competence, however, was equivalent to that of disabled, elderly, and retarded people.

The middle included seven groups: gay men, blue-collar workers, Hispanics, Muslims, Native Americans, Blacks, and young people. The first few overlap the middle cluster in Study 1; new warmth and competence scales and new neighboring groups did

Table 7
Scales, Study 2

Construct	Items
Competence	As viewed by society, how . . . are members of this group?
	[competent, confident, capable, efficient, intelligent, skillful]
Warmth	As viewed by society, how . . . are members of this group?
	[friendly, well-intentioned, trustworthy, warm, good-natured, sincere]
Status	How prestigious are the jobs typically achieved by members of this group?
	How economically successful have members of this group been?
Competition	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.

Note. For the Competence and Warmth Scales, the points of ellipsis were replaced by the words in brackets for each question.
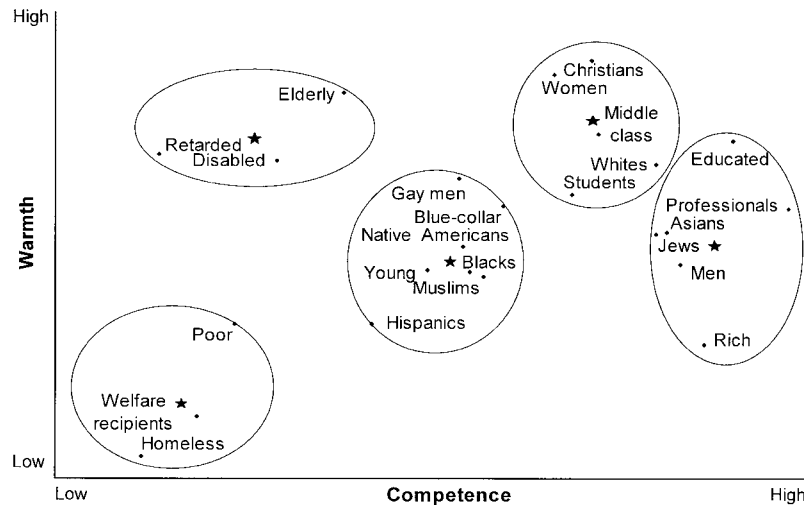
Figure 3. Five-cluster solution with the addition of in-groups, Study 2, revised long survey.

not change their position. Warmth scores ($M = 3.14$) did not differ from competence scores ($M = 3.16$), $t(6) = 0.20$, *ns*, as expected.

As predicted, a final, new cluster also emerged. The in-groups—Christians, middle class, students, Whites, and women—com-

posed the only cluster scoring high on both competence ($M = 3.78$) and warmth ($M = 3.79$). Warmth and competence scores did not differ for these groups, $t(4) = 0.05$, *ns*. They scored the highest on warmth and next to highest on competence, surpassed there only by the high-status groups. The groups in this high–high cluster perfectly describe the majority of Study 2's participant sample, omitting only the potentially relevant groups young and educated people, designations that may have held a different meaning for our respondents than for us.

Finally, supporting the mixed stereotypes hypothesis at the level of individual groups, matched pair *t* tests reveal 19 of 24 groups to differ significantly on competence and warmth (see Table 9). Ten were significantly more competent than warm (from highest difference): rich people, professionals, men, Asians, Jews, educated people, Whites, Blacks, students, and Muslims. Nine were rated significantly more warm than competent (from highest): retarded people, elderly people, disabled people, poor people, women, homeless people, gay men, welfare recipients, and Christians.

Again, when we combine the cluster and individual group levels of analysis, nine groups show *t* test differences between warmth and competence that reflect their mixed cluster membership, so roughly one third show mixed stereotypes across analysis methods.

Social Structure Predicts Stereotype Contents

We examined relationships between the social structure variables of perceived competence and perceived status at both the group and the individual levels (see Study 1). Again (see Table 10), perceived status was highly correlated with perceived competence, group-level $r(22) = .98$, $p < .001$; individual-level $r(147) = .88$, $p < .001$. And, again, perceived competition correlated with perceived lack of warmth, group-level $r(22) = -w.64$, $p < .001$; individual-level $r(147) = -.31$, $p < .01$. Note that the individual-level results are stronger than in Study 1, and Study 1's anomalous competition–competence correlation is eliminated, presumably by more careful scale construction. However, this time the individual-level correlations reveal an unexpected status–warmth correlation; this does not occur in any of this article's other

Table 8

Groups in Two-, Three-, Four-, and Five-Cluster Solutions, and Means for Each of Five Clusters, Study 2

Group	Cluster solution				Mean for each of five clusters		
	5	4	3	2	Competence		Warmth
Asians	3	4	3	1	4.29_a	>	3.23_b
Educated people	3	4	3	1			
Jews	3	4	3	1			
Men	3	4	3	1			
Professionals	3	4	3	1			
Rich people	3	4	3	1			
Disabled people	5	3	2	2	2.28_d	<	3.73_a
Elderly people	5	3	2	2			
Retarded people	5	3	2	2			
Homeless people	1	1	1	2	1.97_d	<	2.42_c
Poor people	1	1	1	2			
Welfare recipients	1	1	1	2			
Christians	4	4	3	1	3.78_b	=	3.79_a
Middle-class people	4	4	3	1			
Students	4	4	3	1			
White people	4	4	3	1			
Women	4	4	3	1			
Black people	2	2	2	1	3.16_c	=	3.14_b
Blue-collar workers	2	2	2	1			
Gay men	2	2	2	1			
Muslims	2	2	2	1			
Native Americans	2	2	2	1			
Young people	2	2	2	1			
Hispanics	2	2	2	2			

Note. Within each row, means differ ($p < .05$) if > or < is indicated. Within each column, means that do not share a superscript differ ($p < .05$).

Table 9
Paired Competence–Warmth Differences, by Group, Study 2

Group	Difference
Rich people	1.598***
Professionals	1.304***
Men	1.091***
Asians	0.888***
Jews	0.833***
Educated people	0.705***
Whites	0.480***
Blacks	0.257***
Students	0.253***
Muslims	0.199**
Middle class	0.062
Native Americans	0.018
Hispanics	0.005
Blue-collar workers	−0.007
Young people	−0.018
Welfare recipients	−0.331***
Christians	−0.333***
Gay men	−0.345***
Homeless people	−0.390***
Women	−0.436***
Poor people	−0.612***
Disabled people	−1.233***
Elderly people	−1.293***
Retarded people	−1.813***

Note. $n = 73$ or 74 (each group was rated by half the sample). Matched pair t tests revealed that the competence and warmth ratings significantly differed for most groups. Means of paired differences (competence rating − warmth rating) are reported.
** $p < .01$.   *** $p < .001$.

six operationalizations of this relationship, and inclusion of in-groups may explain its appearance here. With that exception, these findings support the hypothesis that perceived status and competition respectively predict perceived competence and lack of warmth.

Discussion

Using groups nominated solely by pilot respondents and using improved trait and predictor scales, Study 2 supports findings from Study 1's two samples. The addition of in-groups created clusters of groups in all four quadrants of the Competence × Warmth space. Fitting hypotheses, many groups fell into the mixed quadrants, being high on either competence or warmth but low on the other. The pure derogation hypothesis fit only poor people, and the main diagonal followed through neutral groups to positively favored in-groups. Competence and warmth again differentiated out-groups, many with mixed stereotypes.

One concern about the Study 1 data is that competence distinguished among the out-groups more than warmth did. Study 2, with improved scales and an altered sample of groups, creates a bigger range from highest to lowest cluster on both competence (2.32) and warmth (1.37). Both were significant and substantial differences on a 5-point scale. Though the range for competence again was larger, the disparity was far less.

Study 2 lends considerable support to our first three hypotheses. Perhaps, however, students in Amherst, Massachusetts, and their friends or relatives believe, more than do most Americans, that the cultural stereotype endorses a just world where talent and hard work pay off. Perhaps, also, our other findings are limited by other world views peculiar to this region, for example, a politically correct concern with saying something good about almost any out-group. Either kind of sample bias would create a misleading picture. To explore these alternatives, we took our hypotheses outside the northeast.

Study 3, Short Survey and Varied Samples: Competence, Warmth, Mixed Stereotypes, and Their Predictors

Method

In Study 3, 230 participants completed surveys in five separate samples differing by participants' location (from Florida to Colorado) and age (college to late retirement). All participants were assured of the anonymity of their responses and received written feedback explaining the study. Materials and procedures varied slightly among the samples.

Participants and Procedures

Colorado students. The first sample consisted of 125 University of Colorado at Boulder undergraduate psychology students (54 men, 63 women, 8 unknown; mean age = 19.9) who volunteered to complete the questionnaire. The majority of participants (77%) were White. The questionnaire was administered to all participants in a lecture hall in the second half of a class period. Most participants completed the questionnaire in less than 15 min.

Massachusetts adults. Under the same recruitment and administration conditions used with Study 1's nonstudent sample, 61 nonstudents (25 men, 36 women; average age = 37.9) were recruited by University of Massachusetts undergraduates. Seventy-one percent of the participants were White. Extra course credit was awarded to the students who recruited.

Wisconsin adults. Students in an undergraduate psychology course at Lawrence University in Appleton, Wisconsin, volunteered to collect questionnaires from friends and family members. Sixty-four nonstudents (39 women, 17 men, 8 unknown; mean age = 47.7) completed the questionnaire in their homes. The majority of participants (84%) were White.

Table 10
Correlations Between Traits and Predictors, Group and Individual Levels, Study 2

Predictor	Competence	Warmth
Group-level		
Status	.98***	.35
Competition	−.16	−.64***
Individual-level		
Status		
r	.88***	.36**
%	93	29
Competition		
r	−.07	−.31**
%	28	33

Note. Group-level $df = 22$; individual-level $df = 147$. Individual-level correlations were converted to Fisher's z scores, averaged, then reconverted to correlations. Percentages are the percentages of participants for whom that correlation was significant ($p < .05$).
** $p < .01$.   *** $p < .001$.

Florida retirees.   The third sample was collected in a Northern Florida retirement community. Twenty-five participants (13 men, 12 women; mean age = 61.1) completed the questionnaire in their own homes on a volunteer basis. All of the participants were White.

Illinois retirees.   Nineteen residents (6 men, 10 women, 3 unknown; mean age = 78.4) of a Chicago retirement home responded to an ad in a community newsletter. For each questionnaire, $1 was donated to a communal fund. Sixteen identified themselves as White, 1 as Black, and the other 2 did not identify their race. The questionnaire replaced the group *elderly people* with the group *retarded people*. Two questionnaires were omitted because they were less than one third complete.

Questionnaires

An abbreviated version of the questionnaire listed 6 groups selected to represent a full range of the 23 groups sampled in Study 1 (this study was started before Study 2 was completed). We judged 6 groups to be the smallest number reasonable for analysis, and we made every effort to sample without regard to our hypotheses. The subset of 6 groups arose according to several simultaneous criteria: In the Study 1 nonstudent sample, we calculated a six-cluster solution in the two-dimensional space defined by Competence × Warmth. We picked six clusters to generate 6 groups from a cluster solution that would be sufficiently detailed not to privilege our hypothesized three-cluster solution for this dataset. Then, (a) we picked 1 group per cluster, to include groups fully distributed across the space to represent the greatest variety of different types of societal out-groups. Given those constraints, we chose the following groups: (b) within each of the six clusters, groups whose locations tended to be farther from the two-dimensional midpoint, to minimize groups viewed ambiguously or differently by different participants; (c) groups whose standard deviations on competence and warmth were low, indicating consensus within the sample; and (d) groups that did not overlap in meaning and identifying characteristics (i.e., the overall sample to include out-groups variously designated by gender, race, age, socioeconomic status). The resulting groups were welfare recipients, housewives, elderly people, feminists, Black professionals, and rich people, but in keeping with this study's focus on out-groups, for the Illinois retirees (average age 78.41), retarded people replaced elderly people.

Twelve items, two for each dimension, represented the trait (competence and warmth) and social structure correlates (status and competition). Item selections (see Table 11) were based on the most reliable item–scale correlations in the Study 1 Massachusetts samples.

Results

As in the three long-survey samples, we predicted that the out-groups would be differentiated by competence and warmth,

Table 11
Items in Abbreviated Questionnaire, Study 3

Construct	Items
Competence	How confident are members of this group? How competent . . .?
Warmth	How sincere . . .? How warm . . .?
Status	How well educated . . .? How economically successful . . .?
Competition	If members of this group get special breaks, 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.

with mixed stereotypes well-represented, and that the status–competence and competition–warmth correlations would replicate. We used the main statistical techniques used in Studies 1 and 2: cluster analysis, *t* tests, and correlations.

Perceived Competence and Warmth Differentiate Among Out-Group Stereotypes, and Many Stereotypes Are Mixed

Cluster analyses are relatively unsuited to examining only six items, but the groups do array in the Competence × Warmth space. Hierarchical cluster analysis indicated a three-cluster solution; agglomeration statistics were aggregated over the five samples (which separately show the same pattern). The selected groups included neither in-groups nor moderate, middling groups, so the three-cluster solution would be expected.

The *k*-means parallel threshold cluster method identified the predicted groups (see Figure 4). Rich people, feminists, and Black professionals, in one cluster, centered on 3.93 competence and 2.83 warmth (averaged across samples), differing over a full scale point, $t(14) = 7.06$, $p < .001$. This cluster scored significantly the highest on competence, $p < .001$ (see Table 12). The included groups fit the results of Studies 1 and 2, despite changes in format, groups, items, and samples.

The elderly (or retarded) people and housewives in the other mixed cluster averaged 2.94 on competence and 4.00 on warmth, a substantial and significant difference, $t(9) = 7.66, p < .001$. (The means differ only trivially when we exclude retarded people used for the Illinois sample.) This cluster scored significantly the highest on warmth, $p < .001$. The groups fit the earlier long surveys.

Finally, welfare recipients ended up alone in a low–low position, scoring lowest on both dimensions (competence $M = 1.86$, warmth $M = 2.42$), significantly different from each other, $t(4) = 12.06, p < .001$, and from the other clusters, $p < .05$. Because we picked groups at the extremes of their clusters, no middling cluster appears. And because in-groups were not explicitly included, no high–high quadrant appears.

Next, we compared competence and warmth, group by group (Table 12); they differed significantly for all groups examined. In all six groups, in each of five samples, rich people, feminists, and Black professionals showed significantly more competence than warmth, whereas housewives, elderly (in Illinois, retarded) people, and welfare recipients showed significantly more warmth than competence. With a shorter questionnaire, across 6 decades in average ages and five U.S. locations, respondents agreed on cultural stereotypes that some kinds of out-groups specialize in competence over warmth, whereas others specialize in warmth over competence, and only welfare recipients fit the pure derogation model.

Status Predicts Perceived Competence, and Competition Predicts Perceived Warmth

Finally, we examined the social structural correlates of perceived competence and warmth. The correlation between perceived status and perceived competence averaged a group-level $r(4) = .97, p < .01$, and an individual-level $r(228) = .87, p < .001$, comparable to the Study 1 and Study 2 samples. The correlation between perceived competition and perceived warmth averaged $r(4) = -.69, p < .15$, at the group level and $r(228) = -.36$,
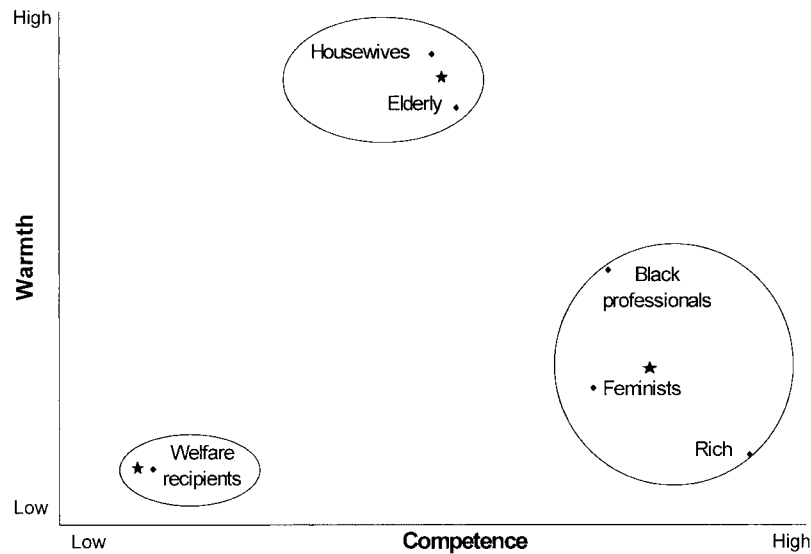
Figure 4. Four-cluster solution, Study 3, short survey, five samples combined, no in-groups.

$p < .001$, at the individual level, again comparable to or even better than the Study 1 and Study 2 samples. Whereas the group-level analyses are of roughly the same magnitude as the long survey samples, the individual-level analyses are stronger than Study 1 and comparable to Study 2, perhaps because, as in Study 2, participants were not so overloaded, given only 72 questions to answer instead of Study 1's 598. In any case, the structural correlates of the traits performed as hypothesized in these new samples, at both levels of analysis. Moreover, the off-diagonal correlations, as predicted, do hover around zero (status–warmth, group $r = -.07$, individual $r = .02$; competition–competence, group $r = .00$, individual $r = -.12$).

Table 12
Groups' Competence and Warmth Scores Across Five Samples, Study 3

Group and cluster	Competence		Warmth	Difference
Rich people	4.34	>	2.48	1.86
Feminists	3.69	>	2.75	0.94
Black professionals	3.83	>	3.37	0.46
Cluster	3.93_a	>	2.83_b	1.10
Elderly people[a]	2.74	<	4.06	−1.32
Housewives	3.06	<	3.94	−0.88
Cluster	2.94_b	<	4.00_a	−1.06
Welfare recipients	1.86_c	<	2.42_c	−0.56

Note. Matched pair *t* tests reveal significant competence − warmth differences for all groups and clusters, $p < .05$, as indicated by < or >. Within columns, cluster means with different subscripts differ, by independent sample *t*s, at $p < .05$.
[a] This row of statistics includes the Illinois sample, in which the group *retarded people* replaced *elderly people*; with retarded people omitted, the competence mean equals 3.02, the warmth mean equals 4.15, the difference is −1.13, and the difference is still significant.

Discussion

The results of five more varied samples corroborate Studies 1 and 2, suggesting that the original respondent samples did not create any obvious bias. The hypotheses about Competence × Warmth, mixed stereotypes, and social structure correlates were supported.

Study 4, Prejudiced Emotions: Affective Reactions to Distinct Stereotype Content

Our stereotype content model proposes, and the first three studies support the idea, that many stereotypes are mixed, portraying groups as high competence but low warmth or low competence but high warmth. Strictly speaking, stereotypes are cognitive, and mixed stereotypes do not speak to the affective or evaluative response. Study 4 addresses the mixed emotional responses we hypothesize to differentiate the main group clusters.

Previous work specifies affective reactions to different out-groups but not a theory of their origins (Dijker, 1987). Previous work also suggests that people view the in-group as overlapping the self (E. R. Smith, 1993); just as appraisal of threats and benefits to the self provoke emotion, so do appraisals regarding the in-group's well-being. If all this is so, then emotional reactions to out-groups should vary by their structural relations to others in society. We hypothesize four types of affective reactions to the four primary combinations on the basis of perceived competence and warmth (Glick & Fiske, 2001a; see Table 1). Consider first the two mixed cells.

We hypothesize that paternalistic prejudice targets low-status, noncompetitive groups (e.g., elderly, disabled) that are seen as incompetent but warm; they should elicit pity and sympathy. Pity is directed toward people with negative outcomes who cannot control the cause (Weiner, 1985; Weiner, Graham, & Chandler, 1982; Weiner, Perry, & Magnusson, 1988). In an interpersonal theory of social comparison-based emotions, Richard Smith (2000)

described downward assimilative emotions as including sympathy and pity. If we translate his theory to our group level of analysis, a lower status group elicits downward comparison (by definition), and, in our terms, a noncompeting group allows assimilation to one's own group. This form of response is paternalistic when directed at out-groups, because it combines assumed superiority with potential care taking. Groups that are low status and incompetent are seen as badly off but not able to control their outcomes and so not responsible. Moreover, if they are warm, their intent is positive. Groups deserve pity and sympathy for uncontrollable negative outcomes that occur despite their best intentions.

High-status, competitive groups that are seen as competent but not warm should elicit envy and jealousy (along with a grudging admiration for their perceived skills), a response we call *envious prejudice*. High status represents a positive outcome, and competence implies control over it, so these groups are seen as responsible for their position. The lack of warmth imputed to these groups corresponds to perceived competition and hostile intent. When people's own controllable, positive outcomes deprive others, those others feel envy. That is, when one person lacks another's superior outcome but wishes the other lacked it, envy results (Parrott & Smith, 1993). Upward contrastive (i.e., competitive) social comparisons elicit envy and resentment along with subjective feelings of injustice and inferiority (R. H. Smith, 1991, 2000; see also E. R. Smith, 1993). In intergroup perceptions, one might expect that higher status, competent groups would also elicit anger, which they may, but anger could also be directed downward, toward groups that are perceived to be parasitic on one's own higher position, so envy seems more diagnostic than does resentment.

The third combination, low-status, free-loading groups that are perceived as neither competent nor warm, receive what we have termed *contemptuous prejudice*, encompassing anger, contempt, disgust, hate, and resentment. Anger is directed toward those with negative outcomes that they could have avoided; blame results from perceiving individually controllable causes (Weiner, 1985; Weiner et al., 1982; Weiner et al., 1988; Zucker & Weiner, 1993). Again, however, more specific reactions than anger are relevant; contempt, disgust, and resentment involve moral overtones of injustice, indignation, and bitterness toward illegitimate behavior. In this case, groups that are perceived to have interests that detract from others create competition in a zero-sum sense. Groups that use up societal resources compete with other societal priorities, though they are not viewed as successful per se. Contempt and disgust are directed downward in contrastive comparisons (R. H. Smith, 2000; also see E. R. Smith, 1993). If we translate to the group level, the low-status, incompetent groups that are perceived not to be warm may be perceived to have hostile, exploitative intent that impacts others in society, also provoking resentment and hatred.

Finally, some groups elicit unmixed positive regard: pride, admiration, and respect. Pride is directed toward those with positive outcomes (e.g., high status) when that reflects well on the self. In-groups and reference groups with whom one identifies both are extensions of the self (see E. R. Smith, 1993, on in-groups). Pride results from self-relevant, positive, controllable outcomes (Weiner, 1985). People feel positive about the successes of close others as long as the domain is not reserved for the self (Tesser, 1988). Admiration is directed toward those with positive outcomes when

that does not detract from the self. Upward, assimilative social comparisons elicit admiration and inspiration (R. H. Smith, 2000). At the group level, pride and admiration should target successful in-groups and close allies as well as the cultural default, those groups that might be considered collective reference groups (e.g., the middle class).

In short, we hypothesize that pity, envy, contempt, and admiration (and related emotions) differentiate the four combinations of perceived warmth and competence.

Method

Participants

Fifty-five University of Massachusetts undergraduates (50 women, 5 men; mean age = 19.8), recruited from lower level psychology courses, completed the questionnaire for extra credit. Once again, the majority of participants (43) identified themselves as White.

Questionnaire and Procedure

Using a 5-point Likert scale (1 = *not at all*, 5 = *extremely*), participants rated the same 24 social groups rated in Study 2 on 24 emotions items: "As viewed by society, does this group make your group feel: disappointed, fearful, sympathetic, envious, uneasy, proud, angry, disgusted, respectful, pitying, hateful, frustrated, jealous, admiring, resentful, inspired, contemptuous, compassionate, tense, ashamed, comfortable, fond, anxious, secure?" As in Study 2, to prevent participant fatigue, we split the list of groups in half and reversed the order of presentation for each list, which yielded four versions of the questionnaire. Participants were randomly assigned to complete one of the four versions. They read the same instructions and completed the questionnaire under the same conditions as in Study 1 and Study 2.

Results

Again, using the same technique employed in Studies 1 and 2, 24 factor analyses (1 per group) examining 24 items yielded five–eight factors with eigenvalues greater than 1.0. Across groups, four factors emerged consistently: Admiration (admiring, fond, inspired, proud, respectful; $\alpha = .86$), Contempt (angry, ashamed, contemptuous, disgusted, frustrated, hateful, resentful, uneasy; $\alpha = .93$), Envy (envious, jealous; $\alpha = .89$), and Pity (pity, sympathetic; $\alpha = .82$). The remaining items were dropped because they did not load consistently on any given factor across groups.

We predicted (see Table 1) that high competence, low warmth groups would elicit envious prejudice; low competence, high warmth groups would elicit pitying, paternalistic prejudice; low competence, low warmth groups would elicit contemptuous prejudice; and in-groups would be admired.

Comparing Prejudices Within Clusters

Emotions scores differed significantly within all clusters, which were drawn from Study 2 (Table 13). As predicted, participants strongly endorsed emotions reflecting admiration ($M = 2.72$) for the in-groups cluster (students, Whites, middle class, women, and Christians), with much less envy ($M = 1.57$), contempt ($M = 1.43$), and pity ($M = 1.42$), $F(3, 16) = 24.45$, $p < .001$.

The high competence and low warmth cluster (rich people, men, Jews, Asians, professionals, and educated people) elicited both

Table 13
Emotions Expressed for Key Clusters, Study 4

Cluster	Admiration	Envy	Pity	Contempt
In-groups (students, Whites, middle class, women, Christians)	**2.72**	1.57	1.42	1.43
Competent, not warm (rich people, men, Jews, Asians, professionals, educated people)	**2.82**	**2.58**	1.37	1.76
Warm, not competent (disabled people, elderly people, retarded people)	2.29	1.03	**3.66**	1.70
Not competent, not warm (poor people, welfare recipients, homeless people)	1.36	1.03	3.39	**2.50**
Middle (gay men, Hispanics, blue-collar workers, Blacks, Native Americans, Muslims, young people)	2.06	1.26	1.96	1.82

Note. Numbers in boldface indicate emotions predicted to be high for particular clusters. Between-clusters contrasts examining each emotion separately (i.e., by column) show significant differences between the main cluster predicted to score high on that emotion and the average of the other four clusters (contrast ps = .015–.0001). Within-cluster contrasts examining each cluster separately (i.e., by row) show significant differences between the main emotion predicted to be high for that cluster and the average of the other three emotions. In addition, admiration for the high-competence, low-warmth cluster was predicted but not tested separately because it was not completely orthogonal to the envy predictions. Also, the unpredicted result of pity toward the low–low cell was not tested.

envy (M = 2.58) and admiration (M = 2.82) but not much contempt (M = 1.76) or pity (M = 1.37), $F(3, 20)$ = 6.79, $p < .01$.

For the high warmth and low competence cluster (disabled people, elderly people, and retarded people), participants endorsed paternalistic prejudice: pity (M = 3.66), but much less admiration (M = 2.29), contempt (M = 1.70), and envy (M = 1.03), $F(3, 8)$ = 41.79, $p < .001$.

Emotions toward the low competence and low warmth cluster (poor people, welfare recipients, and homeless people) unexpectedly reflected both pity (M = 3.39) and contempt (M = 2.50) and little admiration (M = 1.36) or envy (M = 1.03), $F(3, 8)$ = 47.12, $p < .001$. This cluster's contempt ratings, though lower than its pity ratings, were the highest for that emotion (see below).

Emotion ratings for the middle cluster (gay men, blue-collar workers, Native Americans, Blacks, young people, Muslims, and Hispanics) were nondescript, as follows: admiration (M = 2.06), pity (M = 1.96), contempt (M = 1.82), and envy (M = 1.26); because of the low envy ratings, they differed significantly, $F(3, 24)$ = 9.61, $p < .001$.

Comparing Clusters Within Prejudices

The highest admiration ratings went to the in-group and the competent but not warm out-groups (see Table 13). We had predicted that the high-competence out-groups would receive some grudging (i.e., envious) acknowledgment of their achievements. Admiration for high-competence out-groups, however, co-existed with envy, suggesting a volatile mix of emotions that could create hostility when groups feel threatened (Glick, in press). Moreover, all groups except the low–low groups received some admiration, which may constitute a positive baseline.

The highest envy ratings went to the high-competence out-groups, and no other group came close to eliciting comparable envy. Pity went to the warm, not competent out-groups, as predicted, but also to the low–low groups, reflecting less uniform antipathy than predicted. Contempt was reserved for the low–low group, and no other groups came close.

In summary, our hypotheses specified 20 predictions for emotions (four emotions on five clusters). The 5 predictions of particular emotions as targeting particular clusters indeed emerged as predicted; of the remaining 15 predicted to be low, 14 emerged as predicted. The sole anomaly (pity for the poor) is not surprising, in hindsight.

Discussion

These data support the hypothesis that emotions differentiate among the four main quadrants. Each cluster elicited a unique pattern of emotions, hypothesized to be characteristic of the prejudice directed toward that kind of out-group. In addition, the affect directed toward the high competence but low warmth groups and the low competence but high warmth groups suggests a mix of emotions (rather than the pure contempt usually assumed to be characteristic of prejudices).

Both envy items (i.e., envious, jealous) reflect the belief that another possesses some object that the self desires but lacks; this, then, acknowledges the out-groups' possession of good qualities and also that the out-group is responsible for the in-group's distress. In short, envy and jealousy are inherently mixed emotions. In a similar way, pity and sympathy directed toward warm but incompetent out-groups suggest a mixture of subjectively good feelings and acknowledgement of the out-groups' inferior position. Again, pity is inherently a mixed emotion.

Study 4 thus supports the validity of the four main clusters, as distinguished by emotion responses, evidence that converges with the earlier cluster results as well as the social structural predictors.

General Discussion

These data, from nine survey samples, support our hypotheses regarding stereotype content. Conducted on a variety of samples with a variety of group selection methods, the cluster analyses in Studies 1–3 found evidence for the *dimensional hypothesis* that perceived competence and warmth differentiate out-group stereotypes. These studies also support the *mixed stereotypes hypothesis* that many out-groups are viewed as competent but not warm or not competent but warm. They also found *social structural correlates* of perceived competence and warmth. That is, perceived social status predicted perceived competence, whereas perceived competition predicted perceived lack of warmth. Finally, Study 4 addresses the *emotional concomitants* of different stereotype contents, showing that pity, envy, contempt, and admiration differentiated the four combinations of perceived warmth and competence.

These data go beyond previous discussions (including our own) of stereotype contents and prejudiced affects. They uniquely show

the full combination of the Competence × Warmth dimensions, emphasize mixed but functionally consistent stereotypes, and display the full range of mixed emotions. These data simultaneously address pity, contempt, pride, and envy at the group level, and they document both trait attributions and social structural variables at once.

Nevertheless, several issues arise. Regarding meaning of responses, were participants reporting the culture's, their group's, or their own personal stereotypes and prejudices? The questionnaire at the outset emphasized the project's interest in American society and at the top of each page instructed participants to answer "as viewed by society." However, as the questionnaire went on, participants may have forgotten these instructions and begun to respond as individuals or group members, particularly on the competition items, which used the term "people like me." In retrospect, we might have phrased those items differently.

However, several clues argue against the possibility that participants responded primarily either as group members or as individuals rather than reporting on society's cultural stereotypes and prejudices. Students and nonstudents did not differ radically in their responses, and, in Study 3, variations in age and region did not produce radically different responses. Moreover, if members of different gender and ethnic groups might be expected on average to hold different personal or group stereotypes, their responses should differ. Our reanalysis of the largest data sets (Study 1 student and nonstudent samples, plus Study 2) suggests otherwise. In each of these three samples, we could compare responses of White women (the largest group), White men, and minorities of both genders (minority samples were not large enough to break down by gender). We conducted 280 F tests on four kinds of ratings (competence, warmth, status, and competition) across the 23–24 groups per sample. Of these comparisons, only 8% revealed differences by gender and ethnicity of participants.[11] Compared with the 92% that showed no difference by gender or ethnicity, this suggests that participants answered as requested, according to consensual societal stereotypes.

In a related vein, we have hedged about whether membership in the high–high cell consists of the in-group of raters or the culture's main reference group. We suspect something of a mix. In the study that explicitly included potential in-groups or societal reference groups, the ones in the unambivalently well-regarded cluster were probably both cultural reference groups and in-groups for most of our participants in that sample: Christian, middle class, and White. However, the presence of students and women in that cluster suggests some in-group favoritism, though the F tests revealed no group differences in the placement of those two groups. This seems a task for further research. Preliminary data collected in other countries suggest that participants are quite capable of reporting how their group is viewed negatively by the culture at large. On balance, we suspect that the high–high cluster is reserved mostly for societal reference groups.

The data leave another puzzling cluster as well. The groups that persistently landed in the middle of the competence–warmth space (gay men, Arabs and Muslims, blue-collar workers, Native Americans, migrant workers) may indeed elicit the nondescript stereotypes suggested by this location. However, consider the case of Black people, who inhabited the middle cluster when labeled at this abstract level yet, at the subgroup level, split neatly into competent but not warm Black professionals and incompetent but

warm poor Blacks. Stereotypes of gay men might, for example, subdivide into threatening militants, imagined predators, harmless buffoons, and respected aesthetic professionals. American stereotypes of Muslims might divide among American citizens, harmless Arab nationals, and terrorists. Our data for these middle groups do not distinguish between unformed stereotypes and averages over opposite subgroups. Nor do they address the possibility that massive and contradictory individual differences may have resulted in a lack of consensus. We did examine the variances of ratings for these middling groups and found no pattern of higher variances, which might have indicated idiosyncratic responses or aggregation over disparate subtypes. At this point, the answer is not clear.

Turning to rating dimensions, we note that the competence dimension consistently differentiated the groups more than the warmth dimension did. Perhaps this is not surprising, given that it has more readily manifested public signs (e.g., academic performance) than the warmth dimension allows (e.g., no consensual indicators of a group's intent). Moreover, if intent (i.e., warmth) and capability to enact it (i.e., competence) are central, competence matters first because it may be seen as more stable than warmth. And intentions matter only for those capable of enacting them.

Nevertheless, across samples, effect sizes comparing the two mixed clusters on warmth averaged large by Cohen's (1992) standards (group-level $d = 1.28$; individual-level $d = 0.83$). And effect sizes comparing the low–low cluster with the low competence–high warmth cluster averaged even larger (respectively, 2.24 and 1.35). Thus, the warmth dimension did consistently distinguish among groups. Across studies, 76.4% of the warmth comparisons were significant. More specifically, a critic might argue that the high competence, low warmth group was not consistently low on warmth. However, it was significantly lower than the high warmth groups in nine of nine tests and equivalent to the other low warmth cluster four of eight times. Thus, the warmth dimension remains important, although it admittedly distinguished less than the competence dimension did. Because competence varied more than warmth, the warmth differences suffer by comparison. Nevertheless, the warmth effects are sizable, significant, and reliable.

Regarding predictors, we were surprised, in initial pilot studies, that cooperation, as we measured it, did not predict warmth. Instead, a lack of competition predicted warmth. Attempts to find survey items reflecting mutual cooperation failed. In our view, most out-groups are not viewed as cooperating equally with the in-group, so cooperation is inherently asymmetrical, with one group depending on the other more than vice versa. As our pilot studies found, two depend-on-us and depend-on-them cooperation variables were associated with competence and status but not with warmth. Equal-status cooperation might occur only for the in-group and its closest allies, a phenomenon we measured by perceptions of the competent and warm in-groups; the Alexander et al.

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[11] Although they were close to the level expected by chance, we examined the few significant differences and found weak evidence for two patterns. For 10 ratings of particular characteristics of particular groups (3.6%), White men tended to be more negative than did White women and minorities of either gender. For another 7 (2.5%), minorities rated low-status groups as less competitive that Whites did.

(1999) and Phalet and Poppe (1997) studies also support that prediction. However, an unpublished study conducted after our data were collected (Eckes, 2001), for which new measures of cooperation were developed, found evidence that cooperation predicts perceived warmth, so the possibility of perceived cooperation remains viable and merits further attention.

In any case, status and competition did reliably differentiate groups' competence and warmth. The relationship between status and competence was stronger than that between competition and (lack of) warmth. Perhaps stable group hierarchies determine intergroup stereotypes and prejudices more than the potentially changeable competitions do.

Although we have argued for the competence and warmth dimensions (on the basis of their theoretical functions in interpersonal and intergroup detection of goals, their prevalence in past research on both person perception and group stereotypes, and their effects on emotions toward groups), this is not to say that these are the only possible dimensions in stereotypes. For example, sheer activity level is a dimension suggested by the small groups' task, social, and dominance dimensions (Bales, 1970) or by the semantic differential dimensions of evaluation, potency, and activity (Osgood, Suci, & Tannenbaum, 1957).

Our data do suggest that stereotypes of out-groups carry two central dimensions and that the corresponding prejudices frequently show mixed reactions, not univalent antipathy. We have avoided labeling paternalistic and envious stereotypes as ambivalent because that term typically assumes cognitive conflict and warring emotions. The predominant prejudices (envy and pity) for these two mixed clusters, however, are inherently mixed emotions. Pity combines sympathy with superiority. Envy combines admiration with resentment. Nevertheless, neither form of prejudice necessitates a state of psychological conflict (presumably typical of ambivalence). In each case, positive perceptions and feelings are consistent with negative aspects: One would not envy a group that has no desirable attributes, and one would not typically pity a group considered superior to one's own. Thus, the more positive aspects entirely fit the more negative prejudices.

Social psychologists have tended to assume that prejudice involves simultaneous dislike and disrespect for an out-group. Our data suggest, however, that out-group prejudice often focuses on dislike or disrespect but not both. High-status out-groups may elicit an envious mixture of admiration (rather than disrespect) plus intense dislike motivated by a sense of threat (for dangerous competitors). Thus, a person's belief that Asian Americans, Jews, and businesswomen are competent (perhaps even hypercompetent) may only add fuel to the fire of prejudice. Anti-Semites, for instance, often believe outrageous conspiracy theories of Jewish economic and social influence. In this case, positive stereotypes of an out-group's competence (along with correspondingly negative stereotypes of the group's lack of warmth and ill intentions) drive a particularly dangerous form of prejudice that all too often results in extreme forms of violence (Glick, in press; Glick & Fiske, 2001b). Agreeing that "Jews are extraordinarily clever" is at least as likely to indicate dangerously anti-Semitic prejudice as the lack of it (Wilson, 1996). Although these emotions are mixed and even multivalent, they are not cognitively inconsistent or unstable (as is usually assumed about ambivalent emotions). Envious resentment entirely fits with (and is even motivated by) admiration for certain attributes.

Likewise, the mixed components of paternalism are psychologically consistent. Members of subordinated groups are often rewarded for showing the low competence and high warmth that make them nonthreatening. (Think of sexist admonitions to women not to appear too smart or ageist admonitions to older people not to work too hard.) Positive stereotypes of low-status groups' warmth may come at the cost of these groups' being perceived as incompetent and safely subordinated (i.e., as posing no competitive threat). Again, the subjectively positive aspects of these stereotypes and prejudices are perfectly consistent with the negative aspects. Whereas envious prejudices evoke feelings of threat, defensiveness, and resentment, paternalistic prejudices elicit patronizing forms of affection and pity. Both envious and paternalistic prejudice are psychologically consistent mixed feelings.

Moving to hypothesized predictors, we note that correlational results linking status–competence and competition–warmth are encouraging for our model. However, the links are only correlational. One could reasonably argue that social structural variables precede the perceived traits of groups and so logically should be prior and therefore potentially causal. But one could argue the opposite, that the groups' actual or perceived traits give them their place in society. We do not deny this possibility, but we focus on perceptions.

Conclusion

The stereotype content model posits qualitative differences in stereotypes and prejudices toward different groups, simultaneously providing a conceptual framework that explains why and when these differences occur. For example, our model suggests that anti-Semitism and racism (Allport's, 1954, most frequent examples) follow distinct psychological dynamics, explaining differences in how these groups have been treated historically. Earlier Europeans viewed Africans as a low-status group that they could safely domesticate and exploit because of their own superior technological power. In the contrasting social conditions of a radical loss of status and power, many Germans viewed the Jews as a hyperpotent enemy that had to be destroyed. In other cases, the model suggests underlying psychological similarities between prejudices (e.g., paternalistic forms of both racism and sexism, equivalently envious anti-Asian and anti-Semitic prejudice) that might otherwise go unrecognized.

By linking intergroup attitudes to status and interdependence, the model suggests how prejudice is likely to be affected by changing social circumstances that alter groups' relative status and interdependence (e.g., an increasing economic gap between rich and poor ought to exacerbate envious prejudices toward successful minorities). And, although the current research purposely restricted participants to reporting on shared societal stereotypes, distinguishing the psychological dynamics of prejudice directed upward (envy) versus downward (paternalism, contempt) suggests how a person's own (or his or her group's) social status may affect prejudice. Members of disadvantaged minorities or unsuccessful members of dominant groups (e.g., poor Whites) may be more likely to exhibit envious prejudice. In contrast, successful members of high-status groups may be more prone to paternalistic and contemptuous prejudices toward other, less successful groups in their society.

The mixed stereotypes we have described may be the product of historical and social accidents, but we have shown that—at the level of the two crucial dimensions of competence and warmth— they are predictable from variables that have long been of interest to prejudice theorists. Other theorists have argued that relative status leads to predictable forms of group differentiation (Jost & Banaji, 1994; Tajfel, 1981). Similarly, competition has a history in prejudice work, from Sherif's (1966) manipulation of group interdependence to the contact hypothesis (Allport, 1954) and more recent attempts at prejudice reduction (e.g., Dovidio, Gaertner, & Validzic, 1998; Dovidio, Kawakami, & Gaertner, 2000; Gonzalez & Brown, 1999). The idea that these social structural variables determine the quality of relations with out-groups is not new, but our approach shows how status and competition together create different forms of prejudice. Although it is impossible to predict the paths of individual snowflakes in a blizzard, we may at least be able to understand why and in what direction the wind will blow.

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