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# Implicit and Explicit Ethnocentrism: Revisiting the Ideologies of Prejudice

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*Two studies investigated relationships among individual differences in implicit and explicit prejudice, right-wing ideology, and rigidity in thinking. The first study examined these relationships focusing on White Americans' prejudice toward Black Americans. The second study provided the first test of implicit ethnocentrism and its relationship to explicit ethnocentrism by studying the relationship between attitudes toward five social groups. Factor analyses found support for both implicit and explicit ethnocentrism. In both studies, mean explicit attitudes toward outgroups were positive, whereas implicit attitudes were negative, suggesting that implicit and explicit prejudices are distinct; however, in both studies, implicit and explicit attitudes were related ( $r = .37, .47$ ). Latent variable modeling indicates a simple structure within this ethnocentric system, with variables organized in order of specificity. These results lead to the conclusion that (a) implicit ethnocentrism exists and (b) it is related to and distinct from explicit ethnocentrism.*

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**Keywords:** *ethnocentrism; ideology; prejudice; implicit attitudes; explicit attitudes*

... but the basic fact is firmly established—prejudice is more than an incident in many lives; it is often lockstitched into the very fabric of personality. . . . To change it, the whole pattern of life would have to be altered.

—Gordon Allport, *The Nature of Prejudice* (1954, p. 408)

Emphatically stated in the writings of Gordon Allport and Henri Tajfel, the modern approach to the study of prejudice and stereotyping radically altered our understanding of the psychological roots of prejudice, ethnocentrism, and intergroup conflict. A central feature of this modern view is the notion that constructs

such as stereotype and prejudice are ordinary—that they are firmly grounded in the ways in which humans commonly perceive, categorize, learn, and remember. This simple observation has guided theory and research on how humans evaluate other humans as members of socially defined categories and in recent years has been accompanied by an interest in the implicit expression of prejudice.

As useful as such an approach has been, the emphasis on single acts of thinking and feeling, conscious and unconscious, has left unexamined critical aspects of the structure and function of this cognitive-affective system. It has, for example, tended to ignore the broader network of ideology that represents one's political and social view of the world and the place of social groups in it. In this research, we integrate what is known about the social cognition of prejudice—specifically that prejudice operates in both explicit (conscious) and implicit

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(unconscious) modes—and the connections between these two forms of prejudice and personality.

To begin such analyses, we pose a few key questions. The idea that explicit prejudices are ethnocentrically organized such that attitude toward one social outgroup is predictive of attitudes toward multiple other social outgroups is not new. Extending such findings, we examine whether implicit prejudices are similarly ethnocentrically organized; that is, are implicit prejudices toward one social outgroup predictive of implicit prejudices toward other social outgroups? If that is the case, this would point to a deeper organizing disposition that is reflected in each individual strand of attitude. Second, if implicit prejudices are ethnocentrically organized, what is the relationship between implicit and explicit ethnocentrism? Third, what is the relationship between attitudes toward social groups and personality dimensions of ideology and rigidity in thinking? Of interest are questions concerning the direct and indirect paths that may connect thinking styles, ideology, and explicit and implicit ethnocentrism.

*Personality and Prejudice: Historical Roots and Contemporary Research*

In 1950, Adorno, Frenkel-Brunswick, Levinson, and Sanford's *The Authoritarian Personality* proposed that prejudice is deeply rooted in personality, arguing that "the central theme of the work is a relatively new concept—the rise of an 'anthropological' species we call the authoritarian type of man" (p. xi). Driven in part by the perceived failure of sociological models to account for the atrocities of the Holocaust, Adorno et al. turned to models that emphasized individual differences in personality, ideology, and cognitive orientation. Their book provided a theory that combined psychodynamic thinking with empirical social science, and despite methodological criticisms (e.g., Brown, 1965; Christie, 1954), subsequent research has provided substantial empirical support for the link between prejudice and personality. Those who express negative attitudes toward one devalued group tend to have negative attitudes toward other devalued groups (e.g., Adorno et al., 1950; Altemeyer, 1988; Downing & Monaco, 1986). Moreover, individual differences in constructs such as cognitive styles (Kruglanski & Webster, 1996; Neuberg & Newson, 1993; Rokeach, 1948) and sociopolitical beliefs (Adorno et al., 1950; Altemeyer, 1988; Katz & Hass, 1988; McFarland, Ageyev, & Abalakina-Paap, 1992; Peterson, Doty, & Winter, 1993) have been consistently shown to be related to prejudices toward a variety of social groups.

Whereas prejudice may be seen as negative evaluation of and hostility toward a social group, ethnocentrism includes the tendency to form and maintain negative evaluations and hostility toward multiple groups that are

not one's own. Evidence for an ethnocentric disposition comes from consistently high correlations between prejudices toward various outgroups (Altemeyer, 1988; Bierly, 1985; Glock, Wuthnow, Piliavin, & Spencer, 1975; Prothro & Jensen, 1950; Prothro & Miles, 1952; Ray & Lovejoy, 1986). For example, Hartley (1946) found strong correlations among self-reported attitudes toward outgroups, including attitudes toward fictitious social groups such as the "Pireneans" and "Wallonians." Such studies have been taken to suggest that individuals high in ethnocentrism will derogate any outgroup regardless of contact and in the absence of group competition.

Demonstrating the ideology-ethnocentrism link is arguably *The Authoritarian Personality's* greatest legacy. Specifically, ethnocentrism was assumed to be part of a broader right-wing ideological orientation that reflected conservative attitudes toward social issues generally. Right-wing (e.g., conservative) ideologies are found to be more closely associated with prejudicial attitudes than are left-wing (e.g., radical/liberal) ideologies (Adorno et al., 1950; Allport, 1954; Altemeyer, 1981, 1988, 1996; Kerlinger, 1984; Rokeach, 1960; Wilson, 1973). For example, right-wing authoritarianism is associated with negative attitudes toward homosexuals (Haddock, Zanna, & Esses, 1993), the homeless (Peterson et al., 1993), foreigners (Altemeyer, 1996), and Black Americans and Jews (for White Christians, see Peffley & Hurwitz, 1998). Similarly, individual differences in beliefs in the Protestant-Work Ethic has been found to be positively related to prejudice toward Black Americans and the elderly, whereas individual differences in liberal, egalitarian values have been found to be negatively related to prejudice toward the same groups (Katz & Hass, 1988; Katz, Wackenhut, & Hass, 1986). The wide array of prejudices related to right-wing ideology suggests that right-wing ideology plays a pivotal role in the expression of ethnocentric attitudes.

Probing deeper into the personality structure underlying ethnocentrism and right-wing ideology, Adorno et al. recognized that those scoring higher on ethnocentrism differed from those less so in their general thinking styles. Specifically, greater ethnocentricity corresponded with more simple, rigid cognitive styles in ordinary everyday thinking. Those who scored high in ethnocentrism were less able to shift problem-solving strategies (Rokeach, 1948) and more likely to reach stable judgments quickly (Block & Block, 1951) compared to those low in ethnocentrism. Avoiding complex thought was proposed as the mechanism to protect the overgeneralizations necessary for right-wing ideological attitudes.

Current models of rigidity, such as Kruglanski's (1989) theory of lay epistemology and Neuberg and

Newson's (1993) need for structure, posit relationships similar to those posited by the Authoritarian Personality model. According to these models, imposing some degree of order and structure on the world to achieve closure is a fundamental human quality, although it is an attribute that varies substantially across individuals. The degree of need for closure or structure has been found to influence social perception in the sense that those who show evidence of rigid thinking (more need for closure or structure) are also more susceptible to primacy effects and the correspondence bias (Webster & Kruglanski, 1994), more likely to derogate deviants (Kruglanski & Webster, 1991), to make more spontaneous trait inferences (Moskowitz, 1993), more likely to form and use group stereotypes (Neuberg & Newson, 1993; Schaller, Boyd, Yohannes, & O'Brien, 1995), more likely to prefer autocratic leadership (Pierro, Mannetti, De Grada, Livi, & Kruglanski, 2003), and more likely to prefer ingroup members to outgroup members (Shah, Kruglanski, & Thompson, 1998).

One of the most intriguing, although largely untested, predictions offered in *The Authoritarian Personality* was that ethnocentrism has its origins in unconscious thought and feeling. The logic was simple: Because prejudice was both irrational and pervasive, it must have unconscious roots. Using the then-dominant psychodynamic model of the unconscious, Adorno et al. postulated that repressed internal conflicts could be projected onto powerless outgroups, resulting in prejudice toward these groups. For the right-wing authoritarian, groups that diverged from narrowly defined cultural norms provided numerous scapegoats for this displaced aggression. Ultimately, this model of unconscious prejudice fell into disfavor because of the psychometric weaknesses of the measures used, the irrelevance of the psychodynamic framework to academic psychology, and an inability to measure proposed unconscious processes directly (Christie, 1991).

#### *Implicit Social Cognition*

Theoretical and methodological developments have created and sustained interest in implicit (unconscious) social cognition, including implicit stereotyping and prejudice (Bargh, 1994; Devine, 1989; Greenwald & Banaji, 1995). Derived from models of the cognitive unconscious, implicit prejudice can now be defined as the automatic cognitive association between a social group and negative evaluation (Fazio, Jackson, Dunton, & Williams, 1995). Using an evaluative priming procedure, Fazio et al. (1995) demonstrated that brief presentations of Black American faces automatically activated negative evaluation, whereas White American faces automatically activated positive evaluation. Fazio et al. (1995) proposed that variability in this automatic activation rep-

resents individual differences in implicit prejudice. Using similar logic, implicit preferences have been found for White over Black Americans (Greenwald, McGhee, & Schwartz, 1998; Kawakami, Dion, & Dovidio, 1998; Wittenbrink, Judd, & Park, 1997), straight over gay (Lemm & Banaji, 2000), Christian over Jewish, young over old, and American over Soviet (Rudman, Greenwald, Mellott, & Schwartz, 1999). These studies also suggest that people may simultaneously have two attitudes about a social group: one that is automatically activated and one that may only activate with conscious deliberation (Greenwald & Banaji, 1995; Wilson, Lindsey, & Schooler, 2000). As such, an automatically activated attitude may be quite distinct from a more deliberative attitude, maybe even having a different valence (see Blair, 2001, for a review).<sup>1</sup>

In spite of numerous reports of negative implicit attitudes toward individual social groups, previous research has not examined the relationships among such individual attitudes. Some indirect evidence for such relationships (which we will refer to as "implicit ethnocentrism") was found by Perdue, Dovidio, Gurtman, and Tyler (1990). They found an automatic association between "us" with good and "them" with bad. Moreover, Greenwald, Pickrell, and Farnham (2002) found that participants on the Implicit Association Test (IAT) showed greater associations between a fictitious group to which participants were assigned and good than another group. If the us/them effect reflects a general process capturing preference for self-related information, a more generalized implicit ethnocentrism, or a mechanism that automatically activates negative evaluation toward all outgroups, can be hypothesized to operate.

#### *Overview of the Present Research*

Taking the established link between explicitly reported prejudice and right-wing ideology as a starting point, we reexamine the role of rigid thinking (conceptualized as a need for nonspecific cognitive closure) and implicit preferences for social groups to test ethnocentrism as it is "lockstitched" into personality. The studies build on the stable groundwork of research on implicit forms of prejudice as it has been repeatedly tested over the past two decades. Especially important in this regard are methods that are available to measure implicit processes as well as statistical methods—specifically, structural equation modeling—that allow tests of the relationships between personality and prejudice, both direct and indirect.

The first study examined relationships among explicit and implicit measures of prejudice toward a single racial group and individual differences in rigid thinking and right-wing ideology. The purpose primarily was to examine the use of new procedures to measure auto-

matic attitudes in relation to selected personality variables. The second study was conceptually more critical in that it investigated ethnocentrism rather than prejudice toward a single group. If implicit ethnocentrism is found, this in itself suggests an important personality organization and disposition of implicit attitudes. Explicit and implicit attitudes were measured toward five pairs of social groups varying in ethnicity/race, class, religion, nationality, and sexual orientation in addition to personality variables to examine the relationship between explicit and implicit ethnocentrism and their associations with personality. A third data collection directly compared mean levels of implicit and explicit prejudice toward social groups.

#### STUDY 1: FROM RIGID THINKING AND RIGHT-WING IDEOLOGY TO EXPLICIT AND IMPLICIT PREJUDICE

##### *Method*

*Participants.* One hundred and sixteen White American undergraduates participated in partial fulfillment of a class requirement. Data from three participants were deleted from analyses because they did not follow instructions or had excessive error rates (greater than 30% errors on the reaction time measure), leaving a final sample size of 113.

*Stimuli for IAT.* Participants made judgments about two types of stimuli, adjectives that were either positive or negative (taken from Wittenbrink et al., 1997), and names that were stereotypically associated with either Black or White Americans.

*Procedure.* Participants completed the following questionnaires to measure the following constructs: (a) Rigidity in Thinking: Personal Need for Structure (Neuberg & Newson, 1993), Need for Closure (Webster & Kruglanski, 1994); (b) Right-Wing Ideology: Right-Wing Authoritarianism (Altemeyer, 1981), Egalitarianism, and Protestant Work Ethic (Katz & Hass, 1988); and (c) Explicit Attitudes Toward Black Americans: Modern Racism (McConahay, 1986) and Anti-Black, Pro-Black (Katz & Hass, 1988). Each question appeared on the computer screen (in white against a black background) and remained until the participant responded using 8-point response scales. To avoid order effects, questionnaires were presented in a random order and items within each questionnaire also were randomized.

To measure participants' automatic associations between racial group (Black and White) and evaluation, participants responded to names that could be classified as White or Black (e.g., Andy, Tyrone) and adjectives that could be classified as positive or negative (e.g., intelligent, violent) evaluation. In a series of 90 trials (referred to as the White + good block<sup>2</sup>), White names and good

adjectives were paired on one key (the "f" key), whereas Black names and bad adjectives were paired on another key (the "j" key). In a second block, participants responded to another series of 90 trials (referred to as the White + bad block) in which White names and bad adjectives were paired and the Black names and good adjectives were paired. Block order (White + good first or White + bad first) was counterbalanced.

Within each block, names and adjectives were presented in random order. To remind participants of the correct key response within each block, the labels WHITE or BLACK and POSITIVE or NEGATIVE were displayed on the left or right side of the screen. The first 20 responses in each block were treated as practice. A tone sounded if a participant pressed an incorrect key during any trial. Latencies were recorded for all trials, correct and incorrect.

##### *Results and Discussion*

*Scoring protocols.* Questionnaires were scored according to published protocols, and descriptive statistics of these measures are presented in Table 1. To correct for potential outliers on the IAT, response latencies less than 300 msec and greater than 3,000 msec and incorrect responses were deleted.<sup>3</sup>

For each participant, mean latencies for White + good trials and White + bad trials were calculated. As expected, response latencies were shorter for trials in the White + good condition than in the White + bad condition, 805 versus 965 msec,  $t(112) = 14.8$ ,  $p < .001$ . The implicit attitude toward White was more positive than of Black. To generate indices of implicit association for each participant, the White + good condition latencies were subtracted from the White + bad condition latencies, such that larger indices represented stronger implicit White preference.

*Confirmatory factor analysis.* To examine the correlations among Rigid Thinking, Right-Wing Ideology, Explicit Race Attitudes, and Implicit Race Attitudes, the indicators of these constructs were subjected to a Confirmatory Factor Analysis (CFA, Joreskog, 1969) that tested a model of ideal simple structure (each indicator only loads on one latent variable) with a fully oblique solution (all latent variables were allowed to correlate). With the exception of Implicit Race Attitude, the proposed factor structure was straightforward and is presented in Table 2. Implicit Race Attitude was measured by a single IAT and, as such, it was necessary to create three random parcels of the 140 individual latencies to create a latent IAT construct (Kishton & Widaman, 1994; Little, Cunningham, Shahar, & Widaman, 2002). The CFA produced an excellent representation of the relationships among the variables,  $\chi^2(63, N = 113) = 83.14$ , Non-Normed Fit Index (NNFI) = 0.94, Comparative Fit Index

**TABLE 1: Means, Standard Deviations, and Reliabilities of Measures**

Scale	M	SD	$\alpha$
Personal need for structure	4.7	1.2	0.87
Preference for predictability	5.3	1.1	0.78
Preference for order	4.7	1.1	0.73
Discomfort with ambiguity	5.3	0.9	0.65
Closed-mindedness	3.7	1.0	0.69
Right-wing authoritarianism	4.7	1.0	0.85
Egalitarianism	6.5	0.8	0.82
Protestant work ethic	5.1	0.9	0.73
Modern racism	3.0	1.2	0.80
Anti-Black scale	3.9	1.2	0.85
Pro-Black scale	4.9	1.2	0.86
IAT parcel 1	157.90	135.50	—
IAT parcel 2	149.52	126.05	—
IAT parcel 3	179.19	123.33	—

NOTE: IAT = Implicit Association Test.

(CFI) = 0.96, root mean square error of approximation (RMSEA) = 0.053 (90% Confidence Interval, CI: 0.008-0.082).<sup>4</sup> The coefficients estimated by this analysis are presented in Table 2.<sup>5</sup>

All of the correlations among the constructs (Rigid Thinking, Right-Wing Ideology, Explicit Race Attitude, Implicit Race Attitude) were significant. Explicit race attitudes were correlated with right-wing ideology,  $r = .77$ . Stronger endorsement of right-wing ideology was associated with greater explicit prejudice toward Blacks. In addition, rigidity in thinking was correlated with right-wing ideology,  $r = .50$ .

Replicating previous work (Cunningham, Preacher, & Banaji, 2001), latent variable analyses improved analyses with the IAT. In contrast to the simple correlations found between implicit and explicit race attitudes in the present sample (mean  $r = .15$ ), the correlation between latent Implicit Race Attitude and latent Explicit Race Attitude was .37. After accounting for random measurement error in this sample, the amount of variance in implicit race attitudes explained by explicit racial attitudes increased from 2% to 13%.

Although existing theories and research have suggested relationships between right-wing ideology and explicit prejudice, the present research is unique in that it found a relationship between right-wing ideology and implicit prejudice. The stronger the endorsement of right-wing ideology, the stronger tendency for automatic associations between Black + bad and White + good,  $r = 0.23$ . Moreover, Rigid Thinking, a construct that captures a generally structured and ordered thinking style but shows no obvious surface connection with anti-Black attitudes, also was correlated with Implicit Race Attitudes,  $r = 0.19$ , linking general aspects of thinking and specific automatic evaluations of a specific social group. Together, the findings that ideology and cognitive styles

were related to specific prejudicial associations suggest that implicit prejudices are not random and separate from personality and may reflect ethnocentric biases rooted, if only in part, in more general patterns of thinking and ideology.

*Structural relationships.* An examination of the correlation matrix of latent variables suggests a simple structure within the data, namely, that the constructs vary on a dimension of generality to specificity (see Figure 1). The strongest correlations among the constructs were between rigidity and ideology ( $r = .50$ ), ideology and explicit prejudice ( $r = .77$ ), and explicit prejudice and implicit prejudice ( $r = .37$ ). Furthermore, correlations among constructs appear to decline as greater specificity differences increase. As an initial test of this structure, we examined a structural model in which all structural relationships were constrained such that direct paths existed only between rigidity and ideology, ideology and explicit prejudice, and explicit and implicit prejudice. Specifying only three paths among four latent constructs represents the most parsimonious model that can exist.<sup>6</sup>

The model provided an excellent representation of the structural relationships,  $\chi^2(68, N = 113) = 86.46$ , NNFI = 0.95, CFI = 0.96, RMSEA = 0.049 (90% CI: 0.00-0.079). Comparing the structural model to the CFA indicated that our parsimonious model fit the data as well as a model in which all paths among latent variables were estimated,  $\chi^2(3) = 3.32, p = ns$ . It is important to note that models that predict from general to specific or from specific to general provide identical fit and path coefficients. As such, we have chosen not to indicate a “causal direction” in Figure 1, suggesting that any potential “causal” relationships are likely bidirectional or, more simply, that our model reflects a linking of components within a dynamic system. Given the exploratory and model building nature of this analysis, we readdressed these relationships in Study 2.

#### STUDY 2: TOWARD A MODEL OF ETHNOCENTRISM

The relationships found in Study 1 were put to a test of a general ethnocentric system in Study 2. If similar personality patterns underlie several implicit prejudices we can postulate the existence of an implicitly ethnocentric disposition. To examine the existence of a general ethnocentrism factor, in Study 2, we measured implicit and explicit evaluations of social groups that differed from the participants in terms of race, ethnicity/religion, nationality, sexual orientation, and class. These five groups were selected because they are known targets of prejudice and yet may differ in sources of stigmatization. For example, although Black Americans and gay people both encounter prejudice, the basis of prejudice and discrimination is quite different. Whereas negative

**TABLE 2: Confirmatory Factor Analysis**

Scale	Construct Loadings			
	Rigidity	Ideology	Explicit	Implicit
Personal need for structure	.83			
Preference for predictability	.90			
Preference for order	.96			
Discomfort with ambiguity	.67			
Closed-mindedness	.46			
Right-wing authoritarianism		.80		
Egalitarianism		-.42		
Protestant work ethic		.54		
Modern racism			.82	
Anti-Black scale			-.62	
Pro-Black scale			.55	
IAT parcel 1				.65
IAT parcel 2				.65
IAT parcel 3				.76
	Latent Correlations			
	Rigidity	Ideology	Explicit	Implicit
Rigidity	1.0			
Ideology	.50	1.0		
Explicit prejudice	.23	.77	1.0	
Implicit prejudice	.19	.23	.37	1.0

NOTE: IAT = Implicit Association Test.

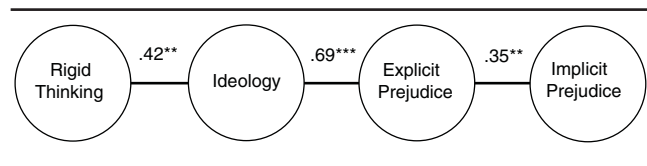
evaluations of Black Americans may stem from beliefs about inferiority and capacity to harm, negative evaluations of gay people may stem from perceptions of immorality and deviance from religious dogma.

In spite of such differences among groups, to the extent that implicit prejudice reflects a shared ethnocentric bias, individual differences in implicit prejudice toward different groups should positively covary. In contrast, if attitudes are the result solely of specific and unique experiences with outgroups, individual differences in attitudes toward various outgroups ought not to be related.

In sum, Study 2 was designed to address several issues about prejudice and ethnocentrism, in both its implicit and explicit form. First, the present study addresses the overall strength of implicit evaluations of multiple social outgroups. Second, the organization of ethnocentric implicit evaluation was investigated to determine the extent to which automatic evaluations of several social groups reveal a single latent factor of implicit ethnocentrism. Third, Study 2 examined the relationship between ethnocentrism, measured implicitly or explicitly, and individual differences in ideology and thinking style.

*Method*

*Participants.* Participants were 206 students who participated for partial course credit. Only White, American, non-Jewish participants were used for subsequent



**Figure 1 Structural relationship: Study 1.**

analyses to ensure that attitudes toward outgroups were being measured.<sup>7</sup> Data from one participant were deleted for not following directions. A final sample of 179 remained for analysis.

*Stimuli for IAT.* As in Study 1, participants made judgments about two types of stimuli, adjectives that were either positive or negative, and words that represented social groups. The adjective stimuli were taken from Anderson’s (1968) list of evaluative adjectives (20 positive, 20 negative). White and Black stimulus names were selected from the original IAT studies and stimuli for each of the four other social groups were generated by the authors.

*Procedure.* Participants completed the following questionnaires to measure each construct: (a) Rigid Thinking: Personal Need for Structure (Neuberg & Newson, 1993), Need for Closure (Webster & Kruglanski, 1994); (b) Right-Wing Ideology: Right-Wing Authoritarianism (Altemeyer, 1981),<sup>8</sup> Protestant Work Ethic (Katz & Hass, 1988), Belief in a Just World (Rubin & Peplau, 1973),

Political Correctness (Theno, Wrightsman, & Maiser, 1994)<sup>9</sup>; and (c) Explicit Ethnocentric Attitudes: Modern Racism (McConahay, 1986), Ethnocentrism, Attitudes Toward Homosexuals (Altemeyer, 1996), Anti-Semitism, Attitudes Toward the Poor (developed for this study). All questionnaire items appeared on the computer screen (in white against a black background) until the participant responded on a 6-point scale at which point the screen cleared and the next question appeared.

Study 2 measured the automatic associations between good-bad evaluation and several social groups: rich/poor, gay/straight, Black/White, U.S./foreign, and Jewish/Christian. After completing the explicit measures, participants were acquainted with the task with 40 trials of single classification of evaluative words after which they completed a full IAT measuring the evaluation of a neutral, nonsocial dimension of birds and trees. After this baseline task, participants completed the five IATs that measured automatic attitudes toward social groups in random order. The procedure for each IAT was the same as in Study 1, with minor changes: Participants responded to 60 trials per block, of which the first 20 were treated as practice; a red "X" appeared to indicate incorrect responses; and participants responded using the "a" and the "5" keys.

#### Results and Discussion

*Scoring protocols.* Questionnaires were scored according to published protocols and descriptive statistics are presented in Table 3. Latency data were prepared as in Study 1. For each for each of the five IATs, participant's mean latencies for ingroup + good trials (pairings of good/ingroup and bad/outgroup) and outgroup + good trials (pairings of good/outgroup and bad/ingroup) were calculated. Individual differences in the strength of implicit attitudes were computed by taking the difference in the speed to respond to opposing pairing (e.g., gay + good—straight + good). For each participant, for each IAT, the mean latency for the ingroup + good condition was subtracted from the mean latency for the outgroup + good condition. Response latencies for all five IATs showed expected patterns with faster responding to White + good than Black + good, straight + good than gay + good, rich + good than poor + good, American + good than foreign + good, Christian + good than Jewish + good, mean  $d = 0.92$  (see Table 3).

*Implicit and explicit ethnocentrism.* To assess questions regarding the ethnocentric organization of prejudice toward specific social groups, a series of CFAs were performed to test the covariance structure of the 10 measures of prejudice. Specifically, these models tested (a) the extent to which explicit measures of prejudice form an explicit ethnocentrism factor and implicit measures of prejudice form an implicit ethnocentrism factor and

**TABLE 3: Means, Standard Deviations, and Reliabilities of Measures**

Scale	M	SD	$\alpha$
Personal need for structure	3.8	0.7	0.86
Preference for predictability	4.3	0.8	0.82
Preference for order	3.9	0.7	0.75
Right-wing authoritarianism	4.0	0.8	0.89
Protestant work ethic	3.9	0.6	0.70
Political correctness	3.6	0.7	0.70
Belief in a just world	3.9	0.5	0.72
Modern racism	2.6	0.8	0.84
Attitudes toward homosexuals	2.6	1.0	0.91
Attitudes toward the poor	3.5	0.7	0.73
Anti-semitism	2.9	0.7	0.77
Ethnocentrism	2.9	0.7	0.91
Black-White IAT	137.49	148.86	—
Gay-straight IAT	112.03	145.68	—
Rich-poor IAT	206.66	199.46	—
Christian-Jewish IAT	108.55	140.44	—
American-foreign IAT	112.43	141.81	—

NOTE: IAT = Implicit Association Test.

(b) the strength of relationship between the explicit and implicit ethnocentrism constructs. The extent to which prejudices toward the five groups form a single factor would imply the existence of ethnocentrism. For each of the models, the five measures of implicit prejudice were modeled as measured indicators of a latent construct labeled Implicit Ethnocentrism and the five measures of explicit prejudice simultaneously formed a latent construct labeled Explicit Ethnocentrism. To examine the relationship between these two constructs, the constructs were correlated. In addition, residual correlations were estimated between each explicit and implicit attitude toward a particular social group. This proposed, oblique (correlated), two-factor model fit the data extremely well,  $\chi^2(29, N = 179) = 17.29$ , NNFI = 1.00, CFI = 1.00, RMSEA = 0.00, and the two factors were significantly correlated,  $r = .47$ ,  $p < .001$  (see Figure 2).

Three conclusions can be drawn from this model. First, implicit prejudices, similar to explicit prejudices, are ethnocentrically organized. This is the first demonstration of a coherent personality pattern that can be labeled implicit ethnocentrism. Second, individuals who scored high in explicit ethnocentrism also, on average, scored high on implicit ethnocentrism. Third, except for a small residual correlation between implicit and explicit attitudes toward gay people, the residual relationships between implicit and explicit attitudes toward any specific social group were nonexistent. That is, it appears that the association between the general latent constructs of implicit and explicit ethnocentrism accounted for relationships between implicit and explicit prejudice toward any specific social group. This

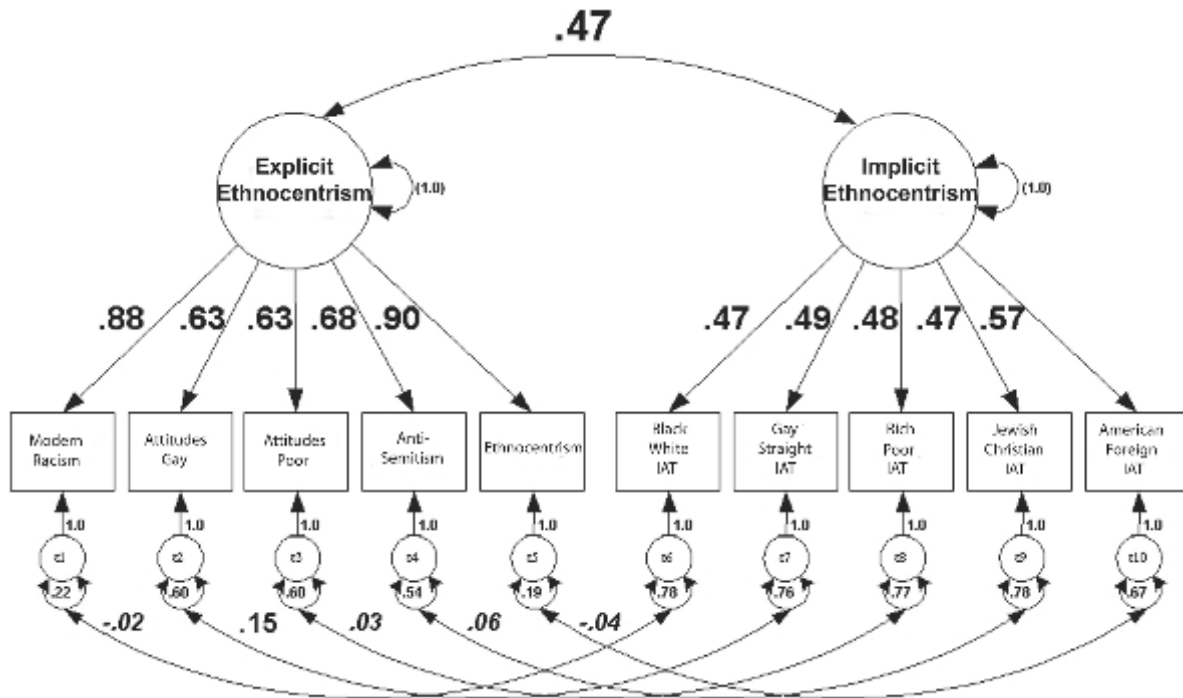


Figure 2 Implicit and explicit ethnocentrism.

affirms that both implicit and explicit prejudices are part of a more general system of preference for one's own group relative to outgroups.

The correlation between implicit and explicit prejudice is inconsistent with previous assumptions that these systems are completely separate. This two-factor correlated model was tested against two other plausible theories regarding the correlation between implicit and explicit attitudes: (a) that implicit and explicit attitude measures tap the same attitude construct (single-factor hypothesis) and (b) that implicit and explicit attitudes are completely dissociated (full dissociation hypothesis). Additional CFAs tested these models by constraining the correlation between implicit and explicit ethnocentrism to either be 1.0 (perfectly correlated, one-factor solution) or 0.0 (an uncorrelated, orthogonal solution). Both of these models introduced a significant amount of error into the model when compared with the oblique two-factor model ( $ps < .001$ ). This finding challenges the notion that explicit and implicit prejudices are unrelated constructs. It also suggests that explicit and implicit prejudices are unique constructs—a single factor solution did not emerge,  $\chi^2_{\text{difference}}(1) = 71.44, p < .001$ .<sup>10</sup>

*Mean level implicit-explicit dissociation.* Previous work has largely supported the notion of a dissociation between implicit and explicit attitudes—among the main conclusions of research on this topic is the

interesting notion that although explicit attitudes are egalitarian in the sense of reflecting no bias, implicit attitudes are negative toward outgroups or disadvantaged groups. Taken together, the results of Studies 1 and 2 suggest a somewhat different relationship between implicit and explicit attitudes. The obvious next step would be to conduct an analysis of the mean levels of implicit and explicit prejudice to test if in addition to the observed correlation the means replicate previously found dissociations. However, the explicit attitude measures collected in Study 2 are not appropriate because they were scales of attitude toward outgroups rather than measures of relative expressed preference for ingroup versus outgroup—the most directly comparable measure to the implicit ones.

Given that the data would not be subjected to correlational analyses, we tested 14 participants who completed all five measures of implicit attitudes administered in Study 2 as well as directly comparable measures of explicit attitudes designed to mirror the relative nature of the IAT. Specifically, participants were presented with two groups (each pairing of ingroup and outgroup) and asked to indicate on a 5-point scale which of two groups they preferred, ranging from *strong preference for ingroup* to *strong preference for outgroup*. A neutral (no preference) option was provided. As can be seen in Figure 3a, implicit attitudes as measured by the IAT show a large preference for the ingroup over the outgroup, replicating the data from Study 2. In contrast, self-



reported relative preferences about social groups showed generally unbiased attitudes (Figure 3b). When separating the data into three categories (no preference or preference for either of the social groups), the modal response for each comparison was that of no preference, except for attitudes toward gay relative to straight (in which participants reported a preference for straight). The remaining responses were nearly equally divided between preferences for ingroups and outgroups.

*Correlational (measurement) model.* A primary focus of Study 2 was the pattern of relationships among rigid thinking, ideology, and explicit and implicit prejudice (ethnocentrism). A CFA mirroring Study 1 was performed to obtain unbiased parameter estimates of the correlations among Implicit Race Attitudes, Explicit Race Attitudes, Right-Wing Ideology, and Rigid Thinking (see Table 4 for hypothesized factor structure and loadings). By replacing prejudice toward a single group (as measured in Study 1) with the multiple social groups (ethnocentrism), the estimated relationships provide a stronger test of the link between cognitive styles and political ideologies with generalized ethnocentrism. Furthermore, a replication of relationships across studies would indicate that the link between prejudice and personality found in Study 1 generalizes to multiple social outgroups. The CFA demonstrated an excellent representation of the relationships among the data,  $\chi^2(106, N = 179) = 140.92$ , NNFI = 0.95, CFI = 0.96, RMSEA = 0.043 (90% CI: 0.021-0.061).

The correlation matrix of latent constructs replicates the substantive findings found in Study 1, that is, as Table 4 shows, each of the correlations among the latent constructs (Rigid Thinking, Right-Wing Ideology, Explicit Ethnocentrism, Implicit Ethnocentrism) was significant with the exception of the correlation between the most indirectly linked constructs—Rigid Thinking and Implicit Prejudice—in the Study 1 structural model, which was marginally significant. Consistent with the structural model found in Study 1, the three strongest relationships were between Rigid Thinking and Right-Wing Ideology,  $r = .30$ ; Right-Wing Ideology and Explicit Ethnocentrism,  $r = .75$ ; and Explicit and Implicit Ethnocentrism,  $r = .47$ . In addition, Right-Wing Ideology was moderately correlated with Implicit Ethnocentrism,  $r = .35$ , suggesting that a general implicit ethnocentric bias is associated with more general personality. Compared with Study 1, the relationship between ideology and implicit prejudice, as well as the relationship between implicit prejudice and explicit prejudice, is stronger, supporting an underlying unity to these attitudes.

*Decomposing the relationships: Predicting from specific to general and general to specific.* An a priori structural model

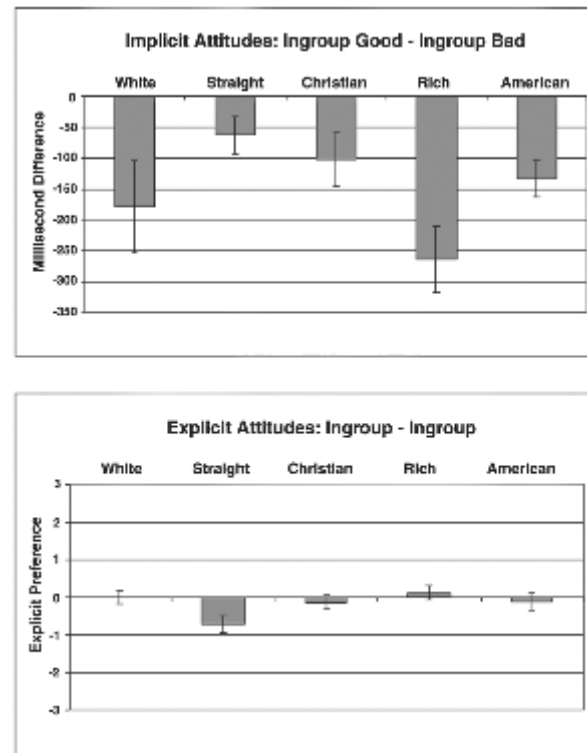


Figure 3 Mean levels of implicit and explicit attitudes.

was tested to confirm the mediational model found in Study 1. Specifically, the model tested the hypothesis that although each of our four constructs was correlated, a simple mediational relationship existed among the constructs such that the constructs are ordered from most specific (implicit prejudices) to most general (rigid thinking styles). This model predicted that the four measured constructs formed a pattern, such that (a) rigidity was linked only with ideology, (b) implicit prejudice was linked only with explicit prejudice, and (c) explicit prejudice was linked with both ideology and implicit prejudice (see Figure 4). The predicted structural model fit the data extremely well,  $\chi^2(109, N = 179) = 140.56$ , NNFI = 0.96, CFI = 0.97, RMSEA = 0.040, 90% CI: 0.016-0.058, with all direct and indirect effects being significant. Moreover, comparing the structural model with the CFA indicated that the structural model did not introduce error into the estimation,  $\chi^2(3) = 0.36$ ,  $p = ns$ , and provided the most parsimonious explanation of the relationships among the constructs.

As in Study 1, we intentionally will not interpret any causal pattern of the flow from rigidity to implicit attitudes or vice versa. First, path coefficients and model statistics are identical whether predicting from general to specific constructs or specific to general constructs.

TABLE 4: Confirmatory Factor Analysis

Scale	Construct Loadings			
	Rigidity	Ideology	Explicit	Implicit
Personal need for structure	.78			
Preference for predictability	.99			
Preference for order	.91			
Right-wing authoritarianism		.91		
Protestant work ethic		.45		
Political correctness		-.63		
Belief in a just world		.23		
Modern racism			.88	
Attitudes toward homosexuals			.65	
Attitudes toward the poor			.65	
Anti-semitism			.68	
Ethnocentrism			.89	
Black-White IAT				.48
Gay-straight IAT				.50
Rich-poor IAT				.48
Christian-Jewish IAT				.47
American-foreign IAT				.57
	Latent Correlations			
	Rigidity	Ideology	Explicit	Implicit
Rigidity	1.0			
Ideology	.23	1.0		
Explicit ethnocentrism	.12	.74	1.0	
Implicit ethnocentrism	.08	.35	.47	1.0

NOTE: IAT = Implicit Association Test.

More critically, in our thinking, such relationships are necessarily bidirectional. As we will discuss in the General Discussion, we view these relationships as links within a dynamic personality system, with adjoining components maintaining and developing one another, that is, both downstream (from rigidity to implicit ethnocentrism) and upstream (from implicit ethnocentrism to rigidity) pathways are not only equally plausible but are simultaneously predicted.

#### GENERAL DISCUSSION

As anticipated and demonstrated throughout the latter half of the 20th century, prejudices toward specific social groups are manifestations of a generalized underlying ethnocentrism. Those who hold negative attitudes toward one disadvantaged group also tend to hold negative attitudes toward other disadvantaged groups. Employing self-report measures of attitudes toward a cluster of social groups that varied along racial, socioeconomic, sexual orientation, religious, and national dimensions, we obtained robust evidence of explicit ethnocentrism. Although the particular cluster of groups used in these studies is unique, this finding replicates previous work (Altemeyer, 1988; Bierly, 1985; Glock et al., 1975; Prothro & Jensen, 1950; Prothro & Miles, 1952; Ray & Lovejoy, 1986). This result provides

further confirmation that although one's knowledge of and interaction with members of different ingroups and outgroups may differ, there is nonetheless a symmetry in the valence and strength of such attitudes. For an ethnocentric individual, culturally disadvantaged outgroups evoke a consistent negative attitude.

Although impressive in its demonstration of systematic relationships among attitudes toward diverse social groups, previous research has been limited to assessments of thoughts and feelings that operate largely within conscious awareness and conscious control. In contrast, studies of implicit attitudes toward social groups have been restricted to analyses of individual groups, leaving open the question of whether implicit attitudes toward social groups follow the same underlying ethnocentric coherence. In the present research, we showed that individual differences in implicit attitudes toward five pairs of social groups were meaningfully related, suggesting an implicit ethnocentric disposition. For example, those who showed stronger implicit associations between White + good also showed stronger associations between rich + good, straight + good, Christian + good, and American + good compared to the contrasting categories of Black, poor, gay, Jewish, and foreign. Replicating such organization at the explicit level and discovering implicit ethnocentrism provides greater

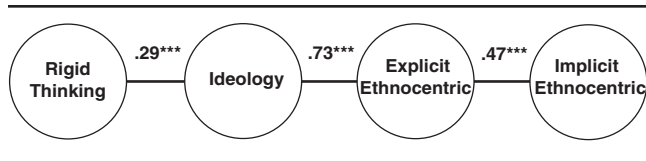


Figure 4 Structural relationship: Study 2.

confidence in the consistency of such attitudes and the presence of ethnocentrism as a personality construct.

#### *The Relationship Between Implicit and Explicit Ethnocentrism*

For as long as implicit (unconscious) and explicit (conscious) modes of thought have been posited as discrete mental entities, the precise nature of their relationship has been of interest. That the two are fundamentally dissociated such that one component may run in opposition to the other can be found in Freud's (1933) classic analysis of unconscious processes and is a central piece of psychodynamic proposals about prejudice and ethnocentrism (Adorno et al., 1950; Bettelheim & Janowitz, 1949). More recently, the separate system view of implicit and explicit mental processes has been examined in research on the cognitive unconscious (Kihlstrom, 1987; Schacter & Tulving, 1994) and in research on implicit social cognition concerning attitudes about social groups (see Devine, 1989; Fazio et al., 1995; Greenwald & Banaji, 1995). A signature of implicit sociocognitive processes is their dissociation from explicit ones, and a great deal of work has repeatedly shown that explicit attitudes have the ability to be evaluatively discrepant from implicit ones.<sup>11</sup> Attitudes toward old age and toward race/ethnic groups are more positive on explicit measures than they are on implicit measures (Cunningham et al., 2001; Greenwald et al., 1998; Nosek, Banaji, & Greenwald, 2002).

Current research suggests that implicit and explicit attitudes may not be as dissociated as once thought. Whereas initial work showed few correlations between implicit and explicit measures (Banaji & Hardin, 1996; Blair & Banaji, 1996; Devine, 1989), more recent studies have found correlations between these types of measures (Cunningham et al., 2001; Gawronski, 2002; Kawakami et al., 1998; Lepore & Brown, 1997; Wittenbrink et al., 1997). Of interest, these correlations can be highly variable depending on the particular attitude being measured (see Nosek et al., 2002), the degree to which the attitude is elaborated (Nosek, 2004), motivation to control prejudiced reactions (Devine, Plant, Amodio, Harmon-Jones, & Vance, 2002; Fazio et al., 1995), or the degree to which societal norms allow for the explicit expression of prejudice toward the group (e.g., skin-

heads; Franco & Maass, 1999). Yet, even when found, these correlations between implicit and explicit measures are often weak (Pearson's  $r$  generally less than .20).

The present study provides evidence for both an association and a dissociation for implicit and explicit attitudes in the domain of ethnocentrism. First, evidence for the dissociation was found in both studies. Participants disagreed with statements of prejudice toward disadvantaged social groups and agreed with statements of egalitarianism. Moreover, in the secondary data collection reported in Study 2, with the exception of attitudes toward gay relative to straight, participants on average reported having no relative preference for either the ingroup or the outgroup. Second, in all three data collections, implicit attitudes toward all outgroups on average are strongly negative compared with ingroups suggesting large discrepancies between implicit and explicit attitudes in overall favorability toward disadvantaged social groups. These results add to the growing consensus that these attitudes can be dramatically opposed to each other in valence.

In both studies, however, confirmatory factor analyses point to the conclusion that conscious and unconscious attitudes toward social groups can be both meaningfully dissociated and substantially related. Evidence for dissociation comes from an inability to model all prejudice measures as a single prejudice or ethnocentrism construct, indicating that implicit and explicit attitude measures have unique components. Of interest, the same analyses that indicate the fundamental dissociation between implicit and explicit systems also point to a substantial overlap between the two systems. In contrast to suggestions that implicit and explicit attitudes are uncorrelated, our analyses indicate that 10% ( $r = .38$ ) of explicit racial prejudice overlaps with implicit racial prejudice. More dramatically, 25% ( $r = .47$ ) of explicit ethnocentrism is shared with implicit ethnocentrism. It is important to note that the simple correlations between these measures in the present study ( $r_s < .20$ ) are similar to those reported in the previous literature, indicating that measurement error may mask meaningful individual differences relationships with implicit attitudes measures.

These analyses suggest that although implicit and explicit attitudes may be dissociated when comparing mean levels and may be discrete systems, a greater permeability between these systems of prejudice may exist than previously thought. Insofar as the two systems have separate spheres of prediction of behavior (see McConnell & Leibold, 2001), the influence of implicit and explicit attitudes could be larger than previously assumed. Although direct evidence is needed, these findings suggest that developing explicit egalitarian attitudes may, over time, influence the valence and intensity

of implicit ones or, conversely, that implicit associations may help shape the content of more conscious, explicit attitudes.

Yet, the correlation found between implicit and explicit measures should not be taken as evidence that implicit and explicit measures reflect the same construct. First, mean levels of attitude were discrepant—whereas IAT scores showed large degrees of implicit preference for ingroups over outgroups, self-report measures were substantially more egalitarian. This dissociation at the mean level suggests that these constructs are distinct, albeit related, constructs. Second, and perhaps more important, the confirmatory factor analyses indicated that implicit and explicit prejudices could not be modeled as a single factor. Thus, it would be a mistake to conclude that because implicit and explicit attitude measures may be more correlated than previously thought, they are conceptually redundant with one another.

*Unpacking the Structural Model:  
Upstream and Downstream Effects*

With the exploratory test of a covariance structural model in Study 1 replicating as an a priori model in Study 2 using somewhat different indicators of the latent constructs, we are more confident about interpreting the findings. Although our models naturally raise questions of causality (e.g., do explicit prejudices cause implicit prejudices and/or vice versa?), we caution against interpretations of unidirectional causality. Although we have established a model that describes linkages within an ethnocentric system, we cannot take a position regarding a causal sequence. Moreover, we suspect that the relationships do not reflect single direction relationships. In our view, it is more likely that this model reflects a dynamic linking of constructs. Such a model posits both upstream (from implicit associations to personality) and downstream (from personality to implicit associations) effects.

The upstream pathway suggests a unique perspective on the development of general ideologies and thought styles. Through a series of mediating factors, simpler implicit associations can affect upstream general processes of conscious thought, measured here as attitude, ideology, and thinking style. As such, the correlations between ideologies and rigid thinking styles with implicit prejudice reflect real, albeit indirect, associations with the connection being conscious attitudes and beliefs. For example, implicit biases about social groups can bias perception, leading to the development of negative explicit attitudes toward social groups. Once developed within a system whose contents are accessible to conscious reflection, these explicit prejudices can develop and maintain ideologies that allow for rational-

izations of attitudes along the full spectrum of evaluation. Furthermore, to maintain ideological systems, a rigid thinking style may develop or be maintained as to not question or fracture the ideological system. In this interpretative framework, although implicit ethnocentrism is not directly predictive of ideology or rigidity, it remains an integral part of the ethnocentric system and perhaps plays a role serving to invisibly create attitudes and then leads to a larger system whose goal is to maintain them.

The statistically equally plausible reverse downstream pathway suggests another sequence. Again, through a series of mediating factors, aspects of thinking styles can affect the implicit evaluation of social groups. Having a rigid thinking style can predispose one to the development of right-wing ideologies—seeing the world in black and white and with minimal complexity may be necessary for the endorsement of right-wing ideologies. Such ideologies, with their positive regard for the status quo, can serve the development of negative attitudes toward outgroups. For example, there may be a motivation to sustain the status quo and to form attitudes that serve to justify the existing social order and dominance structure (Sidanius & Pratto, 1999), even when doing so does not serve long-term self-interest (see Jost, 2001). Furthermore, repeated explicit activation of group prejudices can boost the associations between the social group and evaluation (see Greenwald & Banaji, 1995), thus resulting in more automatically activated, or implicit, prejudices. It is important to note, however, that ideology is likely not a single factor and various motivations and ideological attitudes may be related to different aspects of prejudicial attitudes (see Duckitt, Wagner, du Plessis, & Birum, 2002). Further research should investigate how different forms of ideology differentially are involved in the development and maintenance of ethnocentrism.

In addition to suggesting what relationships exist, the model also suggests relationships that do not exist, or rather, the relationships that cannot be directly causal. For example, a prejudiced person is thought of as a closed-minded person. The need to think with categories and simple structures, coupled with societies' numerous social group stereotypes, is thought to be sufficient to result in a prejudiced disposition. The prejudiced person is so because he or she is closed-minded. These data suggest that the story is more complicated. Rigid thinking, although correlated with both implicit and explicit prejudice, is related to prejudice only through political ideology. This suggests that closed-mindedness is not sufficient to result in prejudiced attitudes but finds its way through the development of a particular ideology that then results in prejudice (see Jost, Glaser, Kruglanski, & Sulloway, 2003, for a similar argu-

ment). It remains to be tested whether rigidity is restricted only to forms of right-wing ideology. In particular, one can envision the existence of the “left-wing authoritarian”—someone who is as rigid in thought as the “right-wing authoritarian” but whose ideology favors a different set of social groups and whose values may be in sharp contrast to those of the right-wing authoritarian. Instead of prejudice toward the disadvantaged, one could imagine prejudice being turned toward the establishment. Among questions for future research are ones concerning the role of rigidity in producing and supporting diverse forms of ideology.

Furthermore, the lack of a direct link between ideology and implicit ethnocentrism suggests that there may exist two independent, dissociated pathways to the (conscious) experience of explicit ethnocentrism. Conscious ideologies that make sense of the social world such as beliefs about fairness and egalitarianism or the constraints of social structures reflect to a great extent the products of deliberate, goal-oriented thought. The effects that such beliefs have on explicit prejudices or ethnocentrism, as shown in this model, are fully dissociated from those influences that may be the result of unconsciously activated associations or memory traces regarding the social groups and activated attitudes. This distinction between ideologies and implicit prejudices or ethnocentrism reinforces conceptions of dissociation between conscious (explicit) and unconscious (implicit) components of prejudice.

### Conclusions

Consistent with the Authoritarian Personality model proposed 50 years ago, prejudice, measured explicitly and implicitly, is part of a more general ethnocentric system. Evaluations of social outgroups are coherent such that there is consistency in the attitudes toward disadvantaged outgroups that have little else in common. We replicated such results with explicit measures and discovered that they also appear on implicit measures of prejudice. In addition, this research suggests that implicit and explicit ethnocentrism are discrete systems that are also systematically related. Those who score high in explicit prejudice are also high in implicit prejudice. Furthermore, ideologies and rigid cognitive styles are associated with prejudice, although when predicting implicit prejudice, these relationships are indirect. Rigid thinking, we found, predicts right-wing ideology directly but specific prejudices (both explicit and implicit) only via ideology. Likewise, ideology predicts explicit prejudices directly but implicit prejudice indirectly. From this new evidence, we conclude that prejudice is indeed, as was Allport’s insight, “lockstitched” into the very fabric of personality.

### NOTES

1. It should be noted there are likely multiple processes that comprise each “form” of attitude (see Brauer, Wasel, & Niedenthal, 2000; Cunningham, Raye, & Johnson, in press).

2. For ease of reference we will refer to the White + good/Black + bad trials as White + good. Likewise, we will refer to the White + bad/Black + good trials as White + bad. The data reported in each case will contain both White and Black trial data.

3. Results using log-transformed data were nearly identical. Because the difference scores based on the raw data were normally distributed, we chose to use the nontransformed data (see Cunningham, Preacher, & Banaji, 2001).

4. Non-Normed Fit Index (NNFI) and Comparative Fit Index (CFI) greater than .90 (Bentler, 1990) and root mean square error of approximation (RMSEA) less than 0.08 (Browne & Cudeck, 1992) suggest acceptable fit.

5. In all reported models, the Need for Closure subscale measuring decisiveness was dropped from the Rigid Thinking construct. This indicator did not load on the Rigidity construct and did not load on any other constructs. Structural models retaining this measure on the rigidity construct were similar, although model fit was reduced. It is possible that decisiveness may be a component of both right-wing and left-wing ideologies and may simply predict extremity in ideological views.

6. When using structural equation modeling, it is common to present alternative models for statistical and conceptual comparison. We have not done so here. The models presented here do not significantly differ from a model in which the relationships among all latent variables are estimated. As such, no other model with this degree of parsimony can fit the data as well. Further information regarding other models can be obtained from the authors.

7. Demographic information regarding sexual orientation was not collected because it was felt that this violation of privacy was not justified for this project.

8. The 1981 scale was used for comparison with the results of Study 1.

9. Only a subset of original items was used.

10. It is possible that the implicit ethnocentrism factor was found because of shared measurement error. We find this explanation to be unlikely for two reasons. First, our control bird-trees Implicit Association Test (IAT) did not load on this factor. Moreover, if this factor was systematic measurement error alone, this method factor would not likely generate a correlation between implicit and explicit ethnocentrism.

11. We do not suggest that implicit and explicit attitudes are necessary opposed in valence, rather that they can be, and often are, for attitudes toward disadvantaged social groups in populations that consciously endorse egalitarian goals. For other attitudes, such as attitudes toward political candidates, it is possible to find both agreement in overall valence of attitude and very strong correspondence between implicit and explicit attitudes (see Nosek, Banaji, & Greenwald, 2002).

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