

# **Implicit Race Attitudes Predicted Vote in the 2008 U.S. Presidential Election**

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*In the week before the 2008 United States presidential election, 1,057 registered voters reported their choice between the principal contenders (John McCain and Barack Obama) and completed several measures that might predict their candidate preference, including two implicit and two self-report measures of racial preference for European Americans (Whites) relative to African Americans (Blacks) and*

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*measures of symbolic racism and political conservatism. Greater White preference on each of the four race attitude measures predicted intention to vote for McCain, the White candidate. The implicit race attitude measures (Implicit Association Test and Affect Misattribution Procedure) predicted vote choice independently of the self-report race attitude measures, and also independently of political conservatism and symbolic racism. These findings support construct validity of the implicit measures.*

In the 2008 United States presidential election, American voters were presented with a choice between a European American, John McCain, and an African American, Barack Obama. Although much of the public discourse about the two candidates focused on their differences of policy and personality, the race difference between the candidates remained an inescapably noticeable feature of the election. Commentators regularly speculated about the size and direction of effect that candidate race might have on the final outcome. As a consequence, the 2008 election provided an unprecedented opportunity to examine the ability of race attitude measures to predict a very consequential behavior—choice of the American president.

This research sought especially to examine the predictive ability of two recently introduced implicit measures of race attitudes—a brief version of the Implicit Association Test (Brief IAT, Sriram & Greenwald, 2009), and the Affect Misattribution Procedure (AMP—Payne, Cheng, Govorun, & Stewart, 2005). Unlike explicit attitude measures, which assume awareness of the attitudes being assessed, implicit attitude measures do not require awareness and can capture attitudes that may be introspectively inaccessible (Greenwald & Banaji, 1995). In addition to differing in the necessity of awareness, the two types of measures use very different measurement operations. Explicit attitude measures use self-report (e.g., “How warmly do you feel toward Black People?”), whereas implicit attitude measures often use speeded judgment tasks. A particular basis for interest in the IAT came from the recent meta-analytic demonstration that race attitude measures using the IAT predicted behavior more effectively than did parallel explicit (self-report) attitude measures (Greenwald, Poehlman, Uhlmann, & Banaji, 2009).

The study included two additional predictors that were expected to complement implicit and explicit race attitude measures as predictors of vote—symbolic racism (adapted from Henry & Sears, 2002) and political liberalism–conservatism. Both of these measures have been shown to be strong predictors of vote in American election contests between Democrats and Republicans. The present research therefore had the potential to determine whether implicit race attitude measures could predict the 2008 presidential vote independently of these established predictors. The combination of all predictors also allowed the present findings to shed light on two theoretical controversies, one concerning construct validity of attitude measures using the IAT method (Greenwald, McGhee, & Schwartz, 1998), and

the other concerning the contribution of race attitudes to the construct of symbolic racism (see Sears & Henry, 2005). The relevance of the study's data to these controversies is developed in the concluding Discussion.

### Method

Participants were visitors to the Project Implicit web site (<http://implicit.harvard.edu>) during the week before the 2008 presidential election. Analyses were limited to 1,057 (64.9% female; 81.3% White, 6.3% Black, 12.4% other racial categories; 64.9% with BA, BS, or higher educational degrees) who (a) identified themselves as U.S. citizens over age 18 (mean age = 35.1,  $SD = 14.7$ ), (b) reported intention to vote for either Barack Obama (84.2%) or John McCain (15.8%), and (c) properly completed all of the measures described in this report. For 1,125 subjects who met all other criteria, 68 were discarded for responding too rapidly on the IAT (6), responding too slowly on the IAT (52), having an error rate above 35% on the IAT (7), or having scores more than 5  $SD$  from the mean of the AMP (3). The sample was definitely not representative of American voters. The most striking difference is that the sample was considerably more politically liberal than the American population. This was indicated not only by the self-reported candidate preferences but by the mean sample response to a single-item 7-point measure of political ideology:  $-1.28$  on a 7-point scale ranging from  $-3$  (strong liberal) to 3 (strong conservative). The analysis strategy incorporated a weighting adjustment for this liberal bias of the sample.<sup>1</sup>

*Procedure overview.* A short questionnaire administered at the time of volunteering to participate (described in Nosek, 2005) included self-report measures of citizenship, age, sex, race, and liberal-conservative political self-description. At the Project Implicit site, research volunteers are randomly assigned to currently available studies. Those randomly assigned to this study next received two implicit race attitude measures and several self-report measures. Order of the implicit and self-report measures was counterbalanced. All of the self-report measures described below are presented verbatim in the Appendix.

*Implicit race attitude measures.* Implicit attitude is defined as “introspectively unidentified (or inaccurately identified) traces of past experience that mediate favorable or unfavorable feeling, thought, or action toward social objects”

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<sup>1</sup> Very likely because of the sample's limitation to persons who reported intention to vote, the sample also differed some from the population of 954,690 web visitors who completed race attitude IAT measures that were included in the overview report by Nosek, Smyth et al. (2007). For the latter, the corresponding characteristics were 58.1% female; 70.8% White; 9.3% Black; 19.9% other racial categories; mean age: 26.3;  $SD = 11.0$ ; proportion with BA, BS, or higher degrees: 63.6%.

(Greenwald & Banaji, 1995, p. 8). The present measures of implicit race attitudes were the Brief IAT and the AMP.

In each block of trials of the Brief IAT race attitude measure, stimuli for four categories were presented as is typical for the standard race attitude IAT measure that has been used in numerous previously published studies (e.g., Nosek, Greenwald, & Banaji, 2007). The Brief IAT differs from the standard IAT in that instructions make just two of the four categories *focal* in each trial block. Counterbalanced sequences alternated (a) blocks in which the categories *Black people* (represented by faces) and *good* (represented by pleasant-meaning words) were focal with (b) blocks in which *White people* and *good* words were focal. Subjects gave a right-key response for stimuli in either of the two focal categories and a left-key response for “anything else.” For example, when *Black people* and *good* were the focal categories, the face stimuli for *White people* and the *bad* (unpleasant-meaning) words were nonfocal. For the six blocks of trials, the first two had 12 trials each, and the remaining four had 18 trials each. In each block, odd-numbered trials involved the race discrimination task and even-numbered trials involved the valence discrimination task. The Brief IAT’s *D* measure (Greenwald, Nosek, & Banaji, 2003) was scored so that faster performance when *White* and *good* were the focal categories yielded positive scores, indicating implicit preference for White race.

The 72 trials of the AMP measure of race attitude obtained key-press judgments to indicate judgments of *pleasant* or *unpleasant* for each of 72 Chinese ideographs. Each ideograph was presented for 250 ms and was immediately preceded by a very briefly visible (75-ms duration) racially Black or White face (see Payne et al., 2005, for additional procedural detail). Implicit White race preference on the AMP is indicated to the extent that subjects give pleasant judgments more frequently to White-preceded ideographs than to Black-preceded ideographs.

*Self-report measures.* Subjects responded to two thermometer scales (0 = very cold; 10 = very warm), one each for feelings toward racial Black and White, and a 7-point Likert-format measure of preference for White relative to Black (−3 = strongly prefer Black; 0 = like both equally; 3 = strongly prefer White). The difference between the two thermometer scales comprised one self-report race attitude measure and the Likert item provided a second, both scored so that higher scores indicated White preference.

Subjects were also asked to report their voting intention. Only those reporting intent to vote for Obama (scored 0) or McCain (scored 1) were included in analyses.<sup>2</sup> Placed last in the set of self-report measures was a four-item measure of

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<sup>2</sup> Although it is an imperfect measure of voting behavior, voting intention has been accepted for many years as a proxy for actual vote in prominent research settings, including commercial election polling and major national political surveys.

**Table 1.** Raw and Weighted Correlations of Voting Intention with Implicit Race Attitudes, Self-Reported Race Attitudes, and Conservatism

	Mean	SD	1	2	3	4	5	6
1. McCain Vote (0 = Obama; 1 = McCain)	.158 (.500)	.37 (.71)	–					
2. BIAT White Preference (Range: –2, 2)	0.06 (0.13)	0.42 (0.60)	.170 (.231)	–				
3. AMP White Preference (Range: –1, 1)	–0.02 (–0.00)	0.17 (0.26)	.113 (.146)	.218 (.237)	–			
4. White Preference Thermometer Difference (2-Item; Range: –10, 10)	0.35 (0.67)	1.63 (2.39)	.211 (.278)	.362 (.401)	.220 (.261)	–		
5. White Preference Likert (Range: –3, 3)	0.35 (0.45)	0.86 (1.18)	.124 (.176)	.297 (.320)	.208 (.239)	.725 (.741)	–	
6. Symbolic Racism (4-Item; Range: 4,15)	7.58 (8.49)	2.31 (3.56)	.421 (.528)	.254 (.299)	.196 (.264)	.282 (.352)	.205 (.289)	–
7. Conservatism (Range: –3, 3)	–1.28 (–0.19)	1.65 (2.80)	.703 (.804)	.188 (.255)	.088 (.119)	.166 (.204)	.082 (.125)	.502 (.551)

*Note.* BIAT = Brief Implicit Association Test; AMP = Affect Misattribution Procedure. *N* = 1,057. The smallest correlation in the table (*r* = .082) is significant at *p* = .008, two-tailed. Mean, *SD*, and correlation values in parentheses are from analyses in which data for McCain and Obama voters were weighted inversely by their proportion in the sample. These weighted data estimate results to be expected in a population containing equal proportions of McCain and Obama voters.

symbolic racism (Sears & Henry, 2005). Higher scores indicated greater symbolic racism (Cronbach  $\alpha$  = .66). The order of self-report and implicit measures was counterbalanced across subjects.

### Results

Table 1 presents means and intercorrelations of the seven measures. Intention to vote for McCain correlated significantly, and in expected directions, with all six other measures. Table 1 also reports, in parentheses, correlations from an analysis in which data for McCain and Obama voters were weighted as the inverse of their proportions in the sample. These weighted correlations estimated values expected for samples with equal proportions of both types of voters. The uniformly larger values of the weighted correlations indicated that the study sample’s liberal skew led to underestimation of correlations that should be obtained in more balanced samples. In the following descriptions of statistical results, results for standard unweighted regressions are reported first, followed (in parentheses) by results from parallel weighted analyses. Because of the large sample size, all but one of the following statistics met the standard significance level of *p* ≤ .05, two-tailed. The median two-tailed *p* value for the findings to be reported was *p* = 10<sup>–13</sup> (= .0000000000001). To simplify results presentations, only *p* values greater than *p*

$\geq 10^{-5}$  will be reported in the text. For results that have no accompanying  $p$  value, it can be assumed that the two-tailed  $p$  value was  $\leq 10^{-6}$ .

*Prediction of vote by race attitude measures.* Those with greater White preference on the two implicit and two self-report race attitude measures reported greater intention to vote for McCain, as is indicated by positive correlations in Table 1. As a set of four variables entered into unweighted logistic regression, these four race attitude measures predicted 10.0% of variance (Neigelkerke  $R^2$  measure) in voting intention (weighted logistic regression: 21.4%). The two implicit race attitude measures together explained 6.1% of voting intention variance (weighted: 13.0%), and the two self-report race attitude measures together explained 7.9% of vote intention variance (weighted: 17.8%). When entered after the self-report measures, the two implicit measures incrementally explained 2.1% of vote intention variance,  $p = .001$  (weighted: 3.6%). When entered after the implicit measures, the two self-report measures incrementally explained 3.9% of vote intention variance (weighted: 8.5%). Despite shared variance between implicit and explicit attitudes, each type retained independent predictive value for voting intention.

*Predictors of symbolic racism.* The strong prediction of intention to vote for McCain by symbolic racism (see Table 1) can be understood partly in terms of symbolic racism's strong correlation with conservatism,  $r = .50$  (weighted  $r = .55$ ). Conservatism correlated even more strongly with intention to vote for McCain,  $r = .70$  (weighted  $r = .80$ ). Of special interest in the present research— for reasons to be developed in the Discussion—were relations between symbolic racism and the two implicit race attitude measures. Symbolic racism correlated significantly with both the IAT measure,  $r = .25$  (weighted  $r = .30$ ), and the AMP measure,  $r = .20$  (weighted  $r = .26$ ). When tested as predictors of symbolic racism entered hierarchically after conservatism, the two implicit race attitude measures incrementally explained 4.1% (weighted: 5.5%) of variance in symbolic racism. Similarly, the two self-report race attitude measures also incrementally explained 4.1% of variance in symbolic racism (weighted: 6.4%) when entered after conservatism.

*Relation of race attitude measures to conservatism.* The bottom row of Table 1 shows that all four race attitude measures correlated positively with conservatism. The IAT had the strongest of these correlations,  $r = .19$  (weighted  $r = .26$ ). Together, the four race attitude measures explained 5.2% of variance in conservatism (weighted: 8.1%). Hierarchical multiple regressions revealed that conservatism was predicted incrementally by both the two implicit and the two self-report race attitude measures, when each pair was tested after prior entry of the other pair. Incremental prediction was greater by the two implicit measures,

2.1%,  $p = 10^{-5}$  (weighted: 3.8%), than by the pair of self-report measures, 1.4%  $p = .0004$  (weighted: 1.3%,  $p = .0008$ ).

*Multivariate prediction of voting intention.* Conservatism and symbolic racism were the two strongest predictors of voting intention (see Table 1). Tests of incremental prediction of vote intention by the race attitude measures were conducted by entering the race attitude measures in multiple logistic regression analyses after conservatism. In the first of these analyses, the set of four race attitude measures incrementally predicted 2.3% of variance in voting intention,  $p = .0001$  (weighted: 2.0%). The pair of implicit measures incrementally predicted only 0.6% of voting intention variance,  $p = .05$  (weighted: 0.5%), and the pair of self-report measures incrementally predicted 2.2% of voting intention variance,  $p = 10^{-5}$  (weighted: 1.9%).

Entered in multiple logistic regression analyses after symbolic racism, the set of four race attitude measures incrementally predicted 1.8% of variance in voting intention,  $p = .01$  (weighted: 3.2%). Tested in pairs, the two implicit measures incrementally predicted 0.7% of voting intention variance,  $p = .08$  (weighted: 0.9%,  $p = .0003$ ), and the pair of self-report measures incrementally predicted 1.5% of voting intention variance,  $p = .006$  (weighted: 3.0%).

A final analysis of vote intention entered conservatism first, symbolic racism next, and the four race attitude measures last. Symbolic racism was a significant incremental predictor, predicting 2.5% of voting intention (weighted: 1.1%). Added last, the four attitude measures incrementally predicted a further 1.3% of vote intention variance,  $p = .01$  (weighted: 1.5%). Among the four race attitude measures, the thermometer difference measure was the strongest incremental predictor and was also the only one of the four that was individually statistically significant in their simultaneous entry after both symbolic racism and conservatism.

### Discussion<sup>3</sup>

Two implicit race attitude measures (IAT and AMP) and two self-report race attitude measures (thermometer difference and Likert preference) collectively predicted 21.4% of variance ( $p = 10^{-52}$ ) in choosing to vote for John McCain rather than Barack Obama. Those with greater White preference were more likely to vote for the White candidate, McCain. Even in an analysis in which the four race attitude measures were entered as predictors after political conservatism—itsself a very powerful predictor of vote—they still predicted 2.0% ( $p = 10^{-24}$ ) of voting intention variance.

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<sup>3</sup> To keep the text uncluttered, statistics presented in the Discussion are based only on results of weighted analyses. These weighted statistics best approximate findings expected for samples that are balanced in representation of liberal and conservative voters.

### *How Did Implicit and Explicit Race Attitude Measures Compare as Predictors of Voting?*

Both the implicit and explicit (i.e., self-report) race attitude measures successfully predicted voting. When the four race attitude measures were entered simultaneously in predicting vote, two had significant unique effects—a self-report measure (thermometer difference,  $p = 10^{-16}$ ) and an implicit measure (IAT,  $p = 10^{-7}$ ). Of the two implicit race attitude measures used in the research, the IAT measure was consistently more strongly correlated with other measures than was the AMP (see Table 1).

### *Relevance of Findings to Validity of IAT Measures*

The Introduction briefly identified two controversies on which the results of this study can shed light. The first concerns interpretation of the IAT as a measure of behavior-relevant attitudes. Slightly over 70% of Americans who have taken race attitude IAT measures have displayed noticeably stronger associations of White than Black race with positive valence (see Nosek et al., 2007). This is much greater pervasiveness of racial White preference than is revealed by survey studies that use self-report measures (e.g., Schuman, Steeh, Bobo, & Krysan, 1997). This surprising pervasiveness of implicit White preference has prompted some to suggest that, rather than measuring an attitudinal association that indicates a personal race preference, the IAT measures *cultural knowledge* that such preference exists in the larger society (e.g., Arkes & Tetlock, 2004). Olson and Fazio (2004) offered a similar view, describing the IAT as a measure of *extrapersonal associations*.

The present finding of successful prediction of individual behavior by an IAT measure undermines any dismissal of the IAT as measuring cultural knowledge that plays no role in determining individual behavior (a conclusion also strongly supported by Nosek & Hansen, 2008). To supplement the substantial existing evidence that race attitude IAT measures predict individual behavior (reviewed by Greenwald et al., 2009), the present study demonstrated the predictive validity of an IAT race attitude measure in the consequential domain of American Presidential voting. The research also demonstrated validity of another implicit measure, the AMP.

### *Relevance of Findings to Understanding the Symbolic Racism Construct*

The second controversy concerns the relationship of racial attitude measures to political beliefs. Self-reported race attitudes have frequently been found to predict political preferences along the ideological dimension of liberalism–conservatism (see, e.g., the review in Reyna, Henry, Korfmacher, & Tucker, 2006, p. 110). A long-unresolved debate concerns a subset of these correlational findings in which



political conservatism predicts disagreement with policies of government assistance to minorities. One side of this debate holds that conservatives' rejection of assistance to African Americans includes a component of attitudinal race bias (e.g., Sears & Henry, 2005). The opposed view is that conservatives' disagreement with government assistance to African Americans or to other minorities reflects conservative values that favor individualism and equal opportunity (e.g., Sniderman & Tetlock, 1986). In the latter view (labeled *principled conservatism* by Sidanius, Pratto, & Bobo, 1996), (a) government assistance to African Americans is seen as a (reverse) form of discrimination that should be rejected along with other forms of discrimination, and (b) survey questions about assistance to minorities fail to appropriately distinguish between bias-free conservative principles of individualism and equal opportunity on the one hand, and racial antipathy on the other. Implicit race attitude measures can enlighten this controversy because they lack any plausible method basis for confounding race attitudes with measures of reasoned, principled bases for supporting equal opportunity. The present findings therefore bear on this controversy.

The four race attitude measures collectively explained 17.8% of variance in symbolic racism. Even when entered as predictors hierarchically after conservatism, they explained 8.7% of variance in symbolic racism. The corresponding percent-of-variance figures for the two implicit race attitude measures were 12.9% ( $p = 10^{-85}$ ) when entered as a pair by themselves and 5.5% ( $p = 10^{-19}$ ) when entered after conservatism. This substantial contribution of implicit race attitudes to symbolic racism, after partialing conservatism, indicates that race attitudes comprise a nontrivial component of the symbolic racism measure. This conclusion fits well with the description of symbolic racism as "a 'blend' of racial animosity and conservative traditional values such as individualism" (Sears & Henry, 2005, p. 96).<sup>4</sup>

### *Relations of Race Attitudes to Conservatism*

The four race attitude measures, entered together in a simultaneous weighted regression analysis, explained 8.1% of variance in conservatism,  $p = 10^{-18}$ . The corresponding figures for just the two implicit race attitude measures was 6.9%,  $p = 10^{-16}$ . Similar relationships, although typically a bit weaker, have been observed previously, both with self-report and IAT measures of racial attitudes (see Jost, Banaji, & Nosek, 2004; Nosek, Banaji, & Jost, 2009; Nosek et al., 2007). Parallel to the relationships of race attitude measures with symbolic racism, these findings indicate a connection between race attitudes and conservatism.

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<sup>4</sup> Had the present research included Pettigrew and Meertens's (1995) subtle prejudice measure, findings for that measure would likely have been very similar to those obtained for the study's symbolic racism measure. The subtle prejudice construct similarly combines evaluative and socio-political beliefs about outgroups.

### Conclusions

Racial attitudes predicted voting intention independently of symbolic racism and conservatism. That independence amounted to 2.0% of variance ( $p = 10^{-24}$ ), when racial attitudes were entered after conservatism, 3.2% of variance ( $p = 10^{-12}$ ), when entered after symbolic racism, and 1.5% of variance ( $p = 10^{-19}$ ), when entered after the combination of conservatism and symbolic racism. The most plausible interpretation of these findings is that race attitudes played a role in determining vote, independent of political ideology.

Substantial variance in symbolic racism was predicted independently by conservatism (21.2% of variance) and by race attitudes (8.7%). These findings fit well with Sears and Henry's (2005) characterization of symbolic racism as a "blend" of ideological beliefs and racial attitudes.

The most challenging relationship to interpret in the present data was the nontrivial correlation (weighted  $r = .26$ ) between IAT-measured White preference and political conservatism. Neither the present data nor prior data provide sufficient basis to support either the conclusion that White preference causes political conservatism or that conservatism causes White preference. A more cautious conclusion is that one or more third variables act as moderators to strengthen White preference among conservatives and/or to weaken White preference among liberals. One such view is that persons who are predisposed to admire authority or to be comfortable with status inequality are likely both to be politically conservative and to display race preferences (e.g., Jost, Glaser, Kruglanski, & Sulloway, 2003; Pettigrew, Stellmacher, Christ, & Wagner, 2009; Sidanius et al., 1996). This view by no means implies that political conservatives generally display race biases.

This research capitalized on an unprecedented historical moment to increase understanding of Americans' racial attitudes. Implicit and explicit measures of White race preference, assessed in the last week before the 2008 U.S. presidential election, significantly predicted intention to vote for John McCain, and did so independently of political ideology. Although the cross-sectional design of the study afforded no satisfactory basis for inferring a causal effect of racial attitudes on candidate preference, the theory that racial attitudes causally influence vote remains the most plausible interpretation.

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## Appendix

### *Self-Report Measures*

*White Preference Thermometer Difference* (score range: -10 to 10; computed as response to White people minus response to Black people)

Please rate how warm or cold you feel toward the following groups  
(0 = coldest feelings, 5 = neutral, 10 = warmest feelings)

Black people (0 very cold; 1; 2; 3; 4; 5 neutral; 6, 7, 8, 9, 10 very warm)

White people (0 very cold; 1; 2; 3; 4; 5 neutral; 6, 7, 8, 9, 10 very warm)

### *White Preference Likert*

Which statement best describes you?

I strongly prefer White people to Black people. (3)

I moderately prefer White people to Black people. (2)

I slightly prefer White people to Black people. (1)

I like White people and Black people equally. (0)

I slightly prefer Black people to White people. (-1)

I moderately prefer Black people to White people. (-2)

I strongly prefer Black people to White people. (-3)

### *Symbolic Racism* (score range: 4 to 15; item scoring in parentheses)

1. It's really a matter of some people not trying hard enough; if Blacks would only try harder they could be just as well off as Whites.  
*strongly agree (4); somewhat agree (3); somewhat disagree (2); strongly disagree (1)*
2. Generations of slavery and discrimination have created conditions that make it difficult for blacks to work their way out of the lower class.  
*strongly agree (1); somewhat agree (2); somewhat disagree (3); strongly disagree (4).*
3. Over the past few years, blacks have gotten less than they deserve.  
*strongly agree (1); somewhat agree (2); somewhat disagree (3); strongly disagree (4)*
4. Some say that Black leaders have been trying to push too fast. Others feel that they haven't pushed fast enough. What do you think?  
*trying to push too fast (3); going too slowly (1); moving at about the right speed (2)*

### *Conservatism* (score range: -3 to 3; item scoring in parentheses)

Select the response that best describes your political identity:

*Strongly liberal* (−3)  
*Moderately liberal* (−2)  
*Slightly liberal* (−1)  
*Neutral (moderate)* (0)  
*Slightly conservative* (1)  
*Moderately conservative* (2)  
*Strongly conservative* (3)

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