The Crystallization of Contemporary Racial Prejudice across the Lifespan

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The conventional wisdom is that racial prejudice remains largely stable through adulthood. However, very little is known about the development of contemporary racial attitudes like symbolic racism. The growing crystallization of symbolic racism through the lifespan is tested using two data sets that measure the stability, consistency, and predictive validity of symbolic racism in samples ranging in age from young adults to the elderly. The results provide evidence that the crystallization of symbolic racism generally takes on a curvilinear trajectory across the lifespan, showing that it is already largely crystallized by voting age, that it continues to crystallize still further through adulthood and that it begins to decline in coherence in late adulthood. The results generally provide evidence confirming early speculations of symbolic racism theorists concerning the crystallization of symbolic racism across the lifespan and are discussed in terms of different theoretical perspectives on the relationship between aging and attitudes more generally.

KEY WORDS: Symbolic racism, Attitude stability, Attitude consistency, Aging

Sociocultural approaches to racial prejudice usually conceive of it as remaining more or less unchanged through the lifespan. Children who show signs of prejudice in grade school are thought to be destined to remain among the more racially prejudiced when they reach adulthood, and to remain so through life, absent later powerful interventions (Allport, 1954; Sears & Levy, 2003). Yet there has been little direct evidence that contemporary versions of prejudice truly persist through later life. The main point of this paper is to address this issue in the lifespan developmental literature.
First, what is meant by “contemporary” racial prejudice? Early research on racial prejudice focused on what is now often described as “old-fashioned” or “Jim Crow” racism, involving beliefs about blacks’ inherent racial inferiority and preferences for segregated and discriminatory treatment of them. However, much of today’s research has shifted to the study of contemporary racial prejudices. The focus here is on “symbolic racism” (Sears & Henry, 2005), though other closely related concepts have been developed, including “racial resentment” (Kinder & Sanders, 1996), “modern racism” (McConahay, 1986), and “subtle prejudice” (Pettigrew & Meertens, 1995). In research conducted over the past third of a century, symbolic racism repeatedly has been demonstrated to be one of the most powerful racial attitudes in contemporary American political life (Sears & Henry, 2005; Sears, van Laar, Carrillo, & Kosterman, 1997).

Where does symbolic racism come from? The original theory suggested that it was grounded in a blend of negative affect directed against blacks plus conservative values. Subsequent empirical research supports that view (Sears & Henry, 2003). But what is the developmental trajectory of these components and their blending into the single symbolic racism construct? The original theory speculated that it originates through socialization in early adolescence, and then largely persists through later life (McConahay & Hough, 1976; Sears, 1988; Sears & McConahay, 1973). However, until now there has been little empirical evidence either substantiating or disproving these claims about its trajectory through the lifespan.

Instead of examining the frequency or direction of the expression of racism, this paper uses as a criterion for the development of racial prejudice its crystallization, which is defined here as the extent to which an attitude is psychologically well-formed and meaningful to an individual. It is operationalized here by the consistency, stability, and predictive power of racial prejudice, specifically symbolic racism (see also Sears & Henry, 2009; Sears & Valentino, 1997). The following questions are addressed: What is the trajectory of the crystallization of contemporary racial attitudes throughout the lifespan? Do these attitudes plateau once adulthood is reached, with early experience having left its enduring imprint? Do they continue to develop indefinitely during the adult years due to cumulating experience with life? Or do they follow some other trajectory, such as a late-life decline as the elderly begin to disengage from the passions of earlier life?

Acquisition and Persistence of the Components of Symbolic Racism: Antiblack Affect and Conservatism

The developmental origins of the symbolic racism belief system have not been studied extensively, but its underlying components of negative racial feelings and conservative values have. Basic racial prejudices and stereotypes appear early in childhood. For example, negative attitudes toward other ethnic minorities, particularly blacks, often have been detected in young children (Aboud, 1988; Harding,
Proshansky, Kutner, & Chein, 1969; Katz, 1976; Sears & Levy, 2003). These early-acquired traditional racial prejudices are thought to persist through the lifespan (Allport, 1954; Sears, 1983; Sears & Levy, 2003). The most direct tests of the persistence of adult racial attitudes come from longitudinal studies testing an individual’s attitudes over time. These studies have shown strong test-retest stability of various racial attitudes, at least over a few years’ time (Converse & Markus, 1979; Kinder & Sanders, 1996). Stability is typically greater for those with some college experience and for those in middle adulthood (Sears, 1981). Other research has shown that racial tolerance in adulthood is influenced more strongly by the respondent’s pre-adult environment (measured by, for example, region and size of place reared, and parental education and occupation) than by their young-adult or later adult environments (Miller & Sears, 1986).

Equally important for the development of symbolic racism is the acquisition of conservative values, morals, and ideology. These also are acquired in childhood through socialization processes (Achen, 2002; Sears & Valentino, 1997) and can have persistent influences later in life (Bandura, 1977; Eisenberg & Fabes, 1998; Eisenberg et al., 2002). Evidence on persistence also shows that early-acquired party identifications seem to strongly influence adult political choices (Campbell, Converse, Miller, & Stokes, 1960). Party identification, at least, remains quite stable throughout the lifespan and indeed is among the most stable of all attitudes measured in longitudinal public opinion surveys (Alwin, Cohen, & Newcomb, 1991; Converse & Markus, 1979; Green, Palmquist, & Schickler, 2002; Sears & Funk, 1999). However, party identification does not remain static through adulthood. It seems to strengthen with age, at least in stable political environments (Converse, 1969, 1976).

Taken together, the evidence regarding both antiblack affect and conservative values, presumably the most important underlying components of symbolic racism, suggests that both are acquired early in the lifespan and show considerable persistence over time as the individual ages. However, the attitudes contained in contemporary racial prejudices like the symbolic racism belief system are potentially more complex because they blend these two rather different components together (Sears & Henry, 2003). The link between symbolic racism and raw, negative feelings toward blacks might be connected earlier in the lifespan because of the relatively early acquisition of emotionally based racial attitudes. However, the link between symbolic racism and ideological conservatism would be expected later, given what is known about the somewhat sketchy understanding of political ideology even in fully developed American adults (e.g., Converse, 1964; Kinder, 1998). By voting age of adulthood (18 in the United States), when ideological issues of conservatism are behaviorally relevant for the first time, does symbolic racism start to be linked to conservatism? The prediction is yes, but that the relationship between symbolic racism and conservatism will continue to coalesce throughout the lifespan. However, there exist no data to substantiate that claim.
The Crystallization of Symbolic Racism

The implication of the theory of early-acquired symbolic racism is that it already approaches adult levels of crystallization when adolescents enter adulthood. The crystallization of early-acquired prejudices rarely has been assessed directly in previous studies. The long-term trajectory of crystallization occasionally has been assessed with the stability of an attitude over many years, such as of the Bennington alumnae’s political orientations over their adult lives (Alwin, Cohen, & Newcomb, 1991) or across a broader variety of attitudes, as in the Michigan Socialization Study (e.g., Jennings & Markus, 1984; Stoker & Jennings, 2008). Intensity, too, has been studied as a surrogate for crystallization, as in the tendency to adopt a stronger party identification with age (Alwin, Cohen, & Newcomb, 1991; Converse, 1976; Miller & Shanks, 1996).

Crystallization has attracted considerable research in experimental social psychology, although using the label “attitude strength” rather than crystallization. The most extensive work has examined a wide number of measures and manipulations of such presumed indicators of a latent attitude-strength construct as extremity, certainty, and importance, with strength manifested in greater durability and impact (Krosnick & Petty, 1995; Wegener, Downing, Krosnick, & Petty, 1995). Perhaps the main conclusion of that effort is that there exist “a remarkable number of concrete measures that obviously bear on attitude strength without reflecting it more than partially,” but that these researchers “are generally content to leave it as an ideal latent construct” (Converse, 1995, p. xv; also see Eagly & Chaiken, 1998).

To avoid problems derived from this partial indeterminacy of any single measure of crystallization, multiple indicators are used here and are predicted to yield similar results, as in past longitudinal research when crystallization has been conceptually defined in terms of four dimensions: internal consistency, stability over time, associations with other central attitudes and values, and power in influencing other attitudes and behaviors (e.g., Sears, Haley, & Henry, 2009; Sears & Henry, 2009; Sears & Valentino, 1997). Applied to the case of symbolic racism, crystallization would be operationally defined in terms of its (1) internal consistency, based on the similarity of responding to different symbolic racism items at any single point in time; (2) stability, reflected in test-retest relationships of symbolic racism measures over two points in time; (3) associations with its component attitudes, based on the strength of the relationships between symbolic racism and measures of antiblack affect and conservative values; and (4) predictive power, based on the strength of the relationships between symbolic racism and the racial political attitudes it presumably influences.

Using this conceptualization of crystallization, the main objective is to track the trajectory of the crystallization of symbolic racism through adulthood. Symbolic racism has been shown to maintain high levels of stability over short periods of time through adulthood in general population samples (Kinder & Sanders,
1996). But the interest here is in long-term persistence, because that will indicate whether or not adult attitudes are anachronistic residues of pre-adult socialization. What about the persistence of these early-crystallized racial attitudes? The most persuasive evidence of long-term persistence would come from longitudinal studies showing continuity within individuals across the entire lifespan; however, that kind of evidence is not currently available for symbolic racism, though it has been used to advantage for other political attitudes (Alwin, Cohen, & Newcomb, 1991; Jennings & Markus, 1984; Stoker & Jennings, 2008; Sears & Funk, 1999).

An alternative approach would be to test for the trajectory of the crystallization of prejudice through the lifespan using cross-sectional studies. If, for example, symbolic racism has nearly achieved adult levels of crystallization in late adolescence, say by voting age, and then shows few further increases through the lifespan, there would be a reasonable case for the proposition that symbolic racism is acquired early in life and then persists through the rest of the lifespan. The test here compares levels of crystallization of symbolic racism at cross sections of the life cycle as a surrogate for persistence.

Models of Development into Late Adulthood

Previous research would lead one to expect any of several trajectories across the adult lifespan (Alwin, Cohen, & Newcomb, 1991; Sears, 1975; Sears & Levy, 2003). One extreme possibility has been described as a “persistence” model, depicting an attitude as acquired in highly crystallized form prior to adulthood, and remaining more or less unchanged through life. The clearest documentation of long-term persistence comes from the Bennington study (Alwin, Cohen, & Newcomb, 1991), whose participants showed very high stability of their political orientations through long stretches of their adulthood. Similar findings of long-term persistence of partisanship are reported from the Terman Gifted Children study (Sears & Funk, 1999). At the opposite extreme is the “lifelong openness” model, depicting attitudes as relatively uncrystallized and equally vulnerable to change at all points in the life cycle. Classic cases include Converse’s (1970) idea of nonattitudes and Zaller and Feldman’s (1992) idea of the ubiquity of ambivalent, rather than crystallized, “real” attitudes. However, previous evidence of the stability of prejudice over time in two- or four-year panel studies makes it unlikely that the lifelong openness model is a good fit for symbolic racism (Kinder & Sanders, 1996; Sears, Haley, & Henry, 2009; Sears & Henry, 2009).

Alternatively there are less extreme, more nuanced models. One is an “increasing persistence” model, halfway between persistence and lifelong openness. An attitude might be relatively uncristallized at the end of adolescence, but then increase steadily throughout the life cycle. Converse (1976) and Miller and Shanks (1996) found that trajectory for party identification in the last half of the twentieth century. One psychological basis for such steady increases might be increased learning through experience and practice (Sears, 1983).
Another more nuanced model is the “impressionable years” model (Sears, 1975, 1983; Sears & Levy, 2003). Perhaps the development of symbolic racism continues through early adulthood, but reaches an asymptote as individuals enter mature adulthood. Jennings and Markus (1984) found this pattern to hold for the stability of party identification. This model would also allow for cohort (that is, generational) effects, such as the possibility that symbolic racism is more crystallized among those who were young when contemporary racial prejudices began to replace old-fashioned (or Jim Crow) racism in the 1960s. Analogously, Converse (1969) suggested that young voters are the most influenced by changes in party systems or suffrage laws.

Yet another nuanced model might be called a “later-life decline” model, in which crystallization follows an inverted-U function across the lifespan. There is some reason to expect reduced crystallization in later life, from developmental research on aging and on other attitudes. For example, some research has found that stability coefficients for racial prejudice dropped substantially in late adulthood in panel studies conducted during the 1950s and 1970s, even controlling for the lower educational level of older adults in those eras (Sears, 1981, p. 196). Other studies have shown that late adulthood is associated with increased susceptibility to attitude change as well as declines in attitude importance and certainty (Krosnick & Alwin, 1989; Tyler & Schuller, 1991). Because of the complexity of symbolic racism, with its sources both in negative racial attitudes and political values, a concomitant decline in the crystallization of symbolic racism in later adulthood is plausible.

**Accounting for Cohort and History Effects**

Aging effects in lifespan analyses often can be confounded with factors having little to do with the aging process, such as cohort and history effects (Mason, Mason, Winsborough, & Poole, 1973). Any study that involves analyses of aging across the lifespan should take into account these other influences. Above, the case is made for different types of aging effects on the crystallization of symbolic racism. However, one important feature of symbolic racism is that its widespread appearance in public opinion through its replacement of old-fashioned racism was an event specific to a particular historical era. Consequently, differences across age groups may be partially due to historical events that differentially influenced the racial attitudes of different generations. For example, the civil rights era arguably was the biggest influence on the shift from old-fashioned to symbolic racism in public opinion. That era is still part of the memory of adults above the age of 60 today. Many already were mature adults before that crucial period, and their own racial attitudes already may have been formed largely before that transition. Their symbolic racism beliefs therefore may be less crystallized than those of younger generations who grew up when the beliefs associated with symbolic racism were a more common form of everyday discourse. Older partici-
pants then might have less crystallized beliefs about symbolic racism, not because of the effects of aging but due to the lasting effects of historical circumstances. Fortunately, such confounds can be managed (e.g., Firebaugh & Davis, 1988). Here, aging and cohort (i.e., history) effects are detectable by comparing two different data sets of studies conducted about a decade apart, the American National Election Studies (ANES) panels that took place during 1990–92 and 1992–94, and the 2000 ANES survey. If cohort differences partially explain age differences, there should be a shift in the age at which crystallization changes that matches the shift in the time of the studies.

**Method**

**Participants**

The data were drawn from nationwide representative samples of adults interviewed in the American National Election Studies (ANES). Consistent with the previous literature on racial attitudes (e.g., Sears et al., 1997; Sniderman & Piazza, 1993), only white participants were analyzed. Because the 1990–92 ANES panel had items identical to the 1992–94 panel, the datasets were combined to create the first sample (total \( N = 1224 \)). The second sample was the 2000 survey (\( N = 861 \)). Participants were contacted by face-to-face interviews in the 1990s panel and by both face-to-face and random-digit dial telephone interviews for the 2000 survey. For more information about the sampling procedures for the ANES, see National Election Studies (2006).

For the 1990s panel studies, only the first-wave data were used for all analyses, except for the test-retest analysis of symbolic racism that used both waves.

**Measures**

The key variable of interest was participant age, measured by subtracting the year of the survey from the respondents’ given birth year. In the 1990s panel, age ranged from 18 to 89, with an average age of 44.8 (\( SD = 17.4 \)). The range in the 2000 survey was from 18 to 96 with an average age of 47.6 (\( SD = 17.7 \)).

In all surveys, the *symbolic racism* scale was composed of the following four items measured on a 5-point Likert scale anchored at “strongly agree” and “strongly disagree”: (1) “Irish, Italians, Jewish and many other minorities overcame prejudice and worked their way up. Blacks should do the same without any special favors.” (2) “Over the past few years, blacks have gotten less than they deserve” (reverse coded). (3) “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.” (4) “Generations of slavery and discrimination have created conditions that make it difficult for blacks to work their way out of the lower class” (reverse coded). The items were averaged with a possible range of 1 through 5, with higher numbers
indicating more symbolic racism. The scale showed acceptable reliability in the first wave (alpha = .75) and second wave (alpha = .75) of the 1990s panel studies, and in the 2000 survey (alpha = .74).¹

Participants responded to a series of thermometers that asked them to rate their feelings toward a variety of people and groups, on a scale from 0 to 100 where 0 indicates very unfavorable feelings and 100 means very favorable feelings. Negative black affect was measured with a single item about feelings toward blacks and was reverse coded by subtracting the participants’ scores from 100 so that higher numbers indicated greater negative black affect (still along a range from 0 to 100). Two 7-point scales were generated from branching items measuring political conservatism, including measures of ideology (ranging from “extremely liberal” to “extremely conservative”) and of party identification (ranging from “strong Democrat” to “strong Republican”). These items correlated reliably in the 1990s panel (wave 1, r = .42, p < .001) and the 2000 survey (r = .50, p < .001), and so were combined in both data sets with a possible range of 1 through 7, with higher numbers indicating more conservatism.

Three items were combined into a scale of explicit racial policy attitudes, which are attitudes toward policies that are explicitly targeted for blacks. The first item combined two branching items asking if blacks should be given preference in hiring and promotion because of past discrimination, or if such preference is wrong because it gives blacks advantages they have not earned. Responses included 1 = “favor strongly,” 2 = “favor not strongly,” 3 = “oppose not strongly,” and 4 = “oppose strongly.” A second item asked about the responsibility of the government in Washington for improving the social and economic position of blacks. Respondents indicated whether, at one end of a 7-point scale, the “government should help blacks” or, at the other end, “blacks should help themselves.” (In the 2000 ANES, the item was slightly modified by combining three branching items resulting in a 5-point scale anchored at “the government should help blacks, to a great extent,” and “blacks should help themselves, to a great extent.”) The third item was, in the 1990s ANES, an item that assessed opinions about the government’s involvement in school desegregation, measured on a dichotomous scale with the choices “see to it that white and black children go to the same schools” versus “stay out of this area as it is not the government’s business.” In the 2000 ANES, this item was replaced with a measure of support for affirmative action, a combination of two branching items addressing whether companies that have discriminated against blacks should or should not have an affirmative action program, on a 4-point scale. Because of the differing number of response options for these items, they were first standardized (i.e., changed into z scores) before being combined into a scale. The averaged items thus have a scale that falls

¹ These items were developed as a scale of “racial resentment” (Kinder & Sanders, 1996), before the development of the Symbolic Racism 2000 Scale (Henry & Sears, 2002). There is little conceptual difference between the two constructs.
along a z distribution. The combined policy items’ reliability was indicated by alpha = .60 in the 1990s panel (wave 1) and alpha = .59 in the 2000 survey.2

Lastly was a measure of nonexplicit racial policy, which refers to the racialization of ostensibly nonracial issues such as the death penalty, which often is related to blacks in white Americans’ minds but not explicitly stated as such (Mendelberg, 2001). This measure combined two branching items about the death penalty for persons convicted of murder, yielding a four-point item anchored at 4 = “favor strongly” and 1 = “oppose strongly.”

Results

Analytic Strategy

The overall analytic strategy is to show the trajectory of crystallization of symbolic racism across the lifespan. This analysis involved OLS regressions that managed missing data through the listwise deletion procedure within each regression analysis.

In the first analysis, age was used to predict the consistency of symbolic racism using simple, bivariate regressions, similar to other analyses in the previous literature that have examined the relationship between age and a single variable of attitude crystallization like the importance or certainty of an attitude (e.g., Visser & Krosnick, 1998). However, the rest of the analyses here were more complex, with age predicting not a single variable but instead the slope of the relationship between two variables: symbolic racism and some other theoretically related variable such as conservatism, negative black affect, or policy attitudes. The slopes of these relationships were expected to rise and fall as a function of the crystallization of symbolic racism, which was expected to change across the lifespan in a predictable fashion.

Consequently, for these predictions (specifically for Figures 2 through 6) more complicated analyses were required, namely tests of interactions in multiple regression. Age was expected to interact with conservatism, negative black affect, etc., in predicting symbolic racism attitudes. For example, in using age to predict the relationship between conservatism and symbolic racism, the centered age variable was multiplied by the centered conservatism variable (following the procedures outlined by Aiken & West, 1991) to predict symbolic racism attitudes. In this example, the results would normally result in a three-dimensional

2 The reliabilities for these explicit policy attitude scales are not ideal. Nevertheless, when the items are analyzed separately, the pattern of results are the same as when they are scaled, with one exception in the 2000 ANES: The item measuring affirmative action attitudes showed a significant negative linear age × policy interaction instead of the negative quadratic age^2 × policy interaction. This pattern would suggest a consistently weakening relationship between the affirmative action attitudes and symbolic racism attitudes across the lifespan. Despite this difference, the item was kept in the 2000 scale to maintain its comparability to the 3-item format used in the 1990s data set, with a comparable reliability (removing the item in the 2000 data set reduces the scale reliability from .59 to .49).
representation of age on the x-axis, conservatism on the y-axis, and symbolic racism on the z-axis, to show how the slope between conservatism and symbolic racism changes over the lifespan. However, to simplify the presentation, two-dimensional representations of the results are shown in Figures 2–6, with, in this example, the slope of the relationship between symbolic racism and conservatism collapsed into the y-axis. Consequently, the y-axis in Figures 2–6 represents the simple slope of these relationships that corresponds to an age group, and not a mean data point. Although these graphs are shown visually in two-dimensional space, the functions of the lines were computed using the interaction equations.

Moreover, the hypotheses entailed the prediction that crystallization would first increase as one moves from young adulthood to middle age, and then decrease from middle age to old age, which implies a curvilinear relationship between age and crystallization. Consequently, both linear and quadratic functions were included in the regression equations. For the first analysis (Figure 1), which was the bivariate relationship between age and symbolic racism consistency, the equation was simple: $y = b_0 + b_1(\text{age}) + b_2(\text{age}^2)$. For the interaction analyses (Figures 2 through 6), the equation was more complicated. For example, the equation of age predicting the relationship between conservatism and symbolic racism was the following: $y = b_0 + b_1(\text{age}) + b_2(\text{conservatism}) + b_3(\text{age} \times \text{conservatism}) + b_4(\text{age}^2) + b_5(\text{age}^2 \times \text{conservatism})$. This procedure was the same across Figures 2 through 6, with conservatism being replaced by other variables in their respective figures.

To determine the point on the lines where one could make an inference that crystallization is significantly rising or falling, two types of statistical tests were run. The first involved 95% confidence intervals around the peaks of the curves (where they were statistically significant). A second test involved computing the statistical significance of the simple slopes at each point of the age trajectory, to determine if the slope was different from zero. The computation of confidence intervals and simple slopes at different age points on the curves followed the procedures and equations outlined in Aiken and West (1991, see especially p. 64, part 4b). Both confidence intervals and simple slope tests were included to mark less and more conservative tests, respectively, of the age point at which increases and declines in crystallization can be observed. Finally, because of the substantially improved precision that is afforded to bivariate analyses without interaction terms, a loess smoothing technique was applied for the analysis in Figure 1 to examine the subtleties of the trajectory of the curve. Loess smoothing was not applied to the interaction terms due to the substantial decrease in precision given by the relatively wide 95% confidence intervals as shown in Figures 2–6.

The results are graphed in Figures 1 through 6, next to their accompanying statistical information that corresponds to the $b$ slopes of the regression equation. For Figures 2 through 6, generally only the interaction effects are interpreted, not main effects (except where noted), because only the interaction effects are of theoretical interest here. Nevertheless, for the interested reader, data for the main
effects are provided in the data summary tables. Finally, the figures extend longer for the 2000 survey because of the wider age range in that survey.

Consistency and Stability of Symbolic Racism across the Lifespan

Figure 1 shows the relationship between age and the indicator of symbolic racism consistency, which was created from the average absolute difference of the four symbolic racism items from that participant’s mean symbolic racism score (following the procedure used in Sears & Valentino, 1997). The smaller the average distance of the items from the participant’s mean, the more consistent that participant’s scoring on symbolic racism. To keep continuity with the other graphs, this number was recoded so that higher numbers indicated greater consistency by subtracting the participants’ scores from 2. A participant with perfect consistency in responding to the symbolic racism items (say, having a score of “5” on all recoded symbolic racism items) would receive a consistency score of 2. A participant with perfect inconsistency in responding (alternating between a score of “5” and “1” for the recoded symbolic racism items) would receive a consistency score of 0.

The graph shows nearly identical results between both data sets, both having statistically significant curvilinear relationships of age predicting the consistency of symbolic racism. The peak of the curve, or the point in the lifespan where the data indicated the greatest consistency in responding, was the same in both data sets, at age 39. As described above, because the curves had good precision with very narrow 95% confidence intervals (given a $SE$ of <.002) that overlapped with only a very narrow age range (36–43 in both samples), the trajectory of the curve is presented using a loess curve smoothing method to examine some of the more

![Figure 1. Age Predicting the Consistency of Symbolic Racism.](image-url)

Note: *$p < .05$, **$p < .01$. To reveal more of the subtleties of the trajectory of the curvilinear relationships, the graphs of the lines are smoothed using normal kernelling with a kernelling density of 1.0 (see Cohen, Cohen, West, & Aiken, 2003, pp. 105–108).
subtle changes in the curve trajectory. This procedure revealed an extended plateau of crystallization into the participants’ 50s that was followed by a decline in crystallization. Although there appeared to be an especially sharp decline in consistency in late adulthood in the 2000 NES, the consistency scores were statistically different from zero at all points across the lifespan in both samples.

Figure 2 shows the relationship between age and the simple slope of the relationship between symbolic racism at wave 1 and the identical symbolic racism scale at wave 2 measured two years later, in the 1990s panel study only (the 2000 survey did not measure symbolic racism at two time points). This curve was represented by the statistically significant $\text{Age}^2 \times \text{Symbolic Racism Wave 1}$ interaction item (predicting symbolic racism at wave 2). The peak of this curve was at age 40, with a 95% confidence interval including all ages through age 73. The simple slope of the test-retest reliability of symbolic racism was no longer statistically different from zero at age 89.

The Relationship of Symbolic Racism with Its Origins, across the Lifespan

Next were the changes in the simple slopes of the relationship between symbolic racism and its theoretical origins in antiblack affect and conservatism, across the lifespan. Figure 3 shows the relationship between age and the simple slope of the relationship between symbolic racism and negative black affect only for the 1990s data set, and only for the linear interaction. The quadratic interaction was not statistically significant in the 1990s, and no interaction was significant in the 2000 data set. Nevertheless, results from both data sets are instructive. The 1990s linear interaction shows that the relationship between antiblack affect and symbolic racism gradually declines over the lifespan, at least in that sample. By
age 85, the slope of the relationship between symbolic racism and antiblack affect was no longer statistically significant from 0. In the 2000 survey, the relationship between symbolic racism and negative black affect did not change throughout the lifespan, but remained consistently meaningful from young adulthood through old age given by the significant main effect of affect predicting symbolic racism overall ($B = .013, SE = .002, p < .001$).

Figure 4 shows the relationship between age and the simple slope of the relationship between symbolic racism and conservatism only for the 1990s data set, as represented by the statistically significant $Age^2 \times Conservatism$ interaction predicting symbolic racism. The peak of the 1990s curve was at age 45, with a 95% confidence interval including the ages 28 through 63. The curve showed that the simple slope of the relationship between symbolic racism and conservatism was no

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**Table 1**

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**Figure 3.** Age Predicting Constraint of Symbolic Racism with Its Origins: Negative Black Affect. Note: *$p = .05$, **$p < .01$, ***$p < .001$. The graph shows age predicting the simple slope of the relationship between symbolic racism and negative black affect, given by the significance test of Age $\times$ Black Affect. The line is not graphed for the 2000 ANES, nor for the curvilinear interaction in the 1990s ANES series, because the patterns were not statistically significant.

**Figure 4.** Age Predicting Constraint of Symbolic Racism with Its Origins: Conservatism. Note: *$p < .05$, ***$p < .001$. The graph shows age predicting the simple slope of the relationship between symbolic racism and conservatism, given by the significance test of $Age^2 \times Conservatism$. A line is not graphed for the 2000 ANES because none of the interaction patterns were statistically significant. The 95% confidence interval is shown around the peak of the curve, extended to the points in the curve it contains.
longer statistically significant at two points: at ages 18 and 19 on the rise up to the peak, and at age 74 and older. No interaction patterns were statistically significant in the 2000 data set, indicating that the relationship between symbolic racism and conservatism did not change throughout the lifespan. Rather, the relationship remained consistently meaningful from young adulthood through old age given by the significant main effect of conservatism predicting symbolic racism ($B = .197$, $SE = .027$, $p < .001$).

The Predictive Power of Symbolic Racism across the Lifespan

Figure 5 graphs the relationship between age and the simple slope of the relationship between symbolic racism and explicit policy attitudes, which shows a nearly identical trajectory across the two data sets. Both the 1990s and 2000 data sets had statistically significant $Age^2 \times Policy$ interactions predicting symbolic racism. The peaks of their curves were at ages 43 and 42, respectively, with 95% confidence intervals around those peaks including the ages 30–57 in the 1990s panel, and 26–58 in the 2000 survey. The simple slope of the relationship between symbolic racism and explicit policy attitudes was no longer statistically significant after age 81 in the 1990s panel and after age 82 in the 2000 survey.

Figure 6 graphs the relationship between age and the simple slope of the relationship between symbolic racism and death penalty attitudes (the measure representing nonexplicit policy attitudes). The two data sets here, too, showed nearly identical trajectories. Both the 1990s and 2000 data sets had statistically significant $Age^2 \times Death\ Penalty$ attitude interactions predicting symbolic racism. The peaks of their curves were at ages 40 and 48, respectively, with 95% confidence intervals around those peaks including the ages 22–57 in the 1990s panel,
and 29–67 in the 2000 survey. The simple slope of the relationship between symbolic racism and implicit policy attitudes was no longer statistically significant after age 73 in the 1990s panel and after age 79 in the 2000 survey.

**Discussion**

The trajectory of racial prejudice through the life course has received little research attention, which is surprising because of the potential harmful consequences of these attitudes and the desirability of better understanding how malleable they may be at different life stages. The present set of studies is a beginning effort to understand the trajectory through the lifespan of a particularly cognitively sophisticated and politically entwined form of contemporary racial prejudice, symbolic racism. The focus here is on its development across the lifespan as a psychologically and politically meaningful attitude. The meaningfulness of an attitude has been operationalized in terms of its crystallization, consistent with earlier studies (e.g., Converse, 1976; Sears & Valentino, 1997). To our knowledge the findings here provide the first available evidence about the development of contemporary prejudice through the adult lifespan.

**The Crystallization of Symbolic Racism through Middle Adulthood**

The conceptualization of crystallization used here revealed several patterns. First, symbolic racism already is well crystallized when Americans reach voting age and the higher education system, and stops crystallizing by middle adulthood. These findings replicate across several of the indicators of crystallization: internal consistency, stability, and power over the explicit and implicit racial policy preferences. These indicators would seem to be the cognitively least demanding
criteria for crystallization. Internal consistency demands only that a young person recognize the internal logic of the symbolic racism belief system: If discrimination has dwindled, blacks’ social disadvantage must be due to their own failures, and they should neither complain nor be given special breaks. Stability simply requires responding the same way to the same items over time. Power over racial policy attitudes simply requires recognizing the common racial content between them and symbolic racism. Making these sorts of attitudinal connections may not be especially cognitively difficult, which may be important for understanding their relatively early crystallization.

Although the link between symbolic racism and negative racial affect is established early and remains fairly strong throughout the lifespan, this relationship does not change over the lifespan in the curvilinear fashion as it does for the other constructs. Instead, it either maintains its strength throughout the lifespan (2000 survey) or declines through adulthood (1990s panel). Perhaps this decline, where it exists, is a consequence of the growing understanding of the links between symbolic racism and more broadly conservative attitudes, replacing a youthful assumption that symbolic racism concerns only race. But importantly, these data suggest that any recognition of the relationship between symbolic racism and negative black affect is already present in early adulthood. Basic antiblack affect is the most primitive, fundamental, and earliest source of symbolic racism and does not seem to require elaboration as the individual becomes more mature and sophisticated.

Of special theoretical interest is the curvilinear relationship between age and the simple slopes of conservatism predicting symbolic racism shown in the 1990s panel data. These data need to be interpreted cautiously because they were not replicated in the 2000 survey. Nevertheless, the 1990s data reveal a later-life rise in crystallization compared to the other constructs; indeed, at ages 18 and 19 the simple slopes were statistically indistinguishable from zero. These findings are consistent with the idea that political ideology, unlike primitive racial affect, may be an especially diffuse and perhaps cognitively difficult construct for much of the adult population (Converse, 1964). Understanding its relationship to racial attitudes like symbolic racism may require longer experience with the political system, experience that apparently is not necessary for linking symbolic racism to antiblack affect.

The patterns of the crystallization of symbolic racism with conservatism compared to the other measures of crystallization provide further evidence that symbolic racism is not just a nonracial proxy for conservatism, an argument posed by what has been called the “principled conservatism” position (Sniderman & Piazza, 1993; Sniderman & Tetlock, 1986). The coherence of symbolic racism seems to strengthen without assistance from conservatism, which may show a delay in its attachment to the symbolic racism belief system relative to the other markers of crystallization. Of course, conservative ideology is still crucial to the power of the symbolic racism system among adults; however, symbolic racism clearly has an important negative racial component to it, and clearly cannot be
described simply as nonracial conservatism (cf. Sears & Henry, 2005; Sears et al., 1997).

Overall, the general increases in crystallization through early adulthood are consistent with the broader literature on political attitudes, such that greater exposure to and familiarity with the political system through adulthood increases the coherence of attitudes related to politics (Converse, 1976).

*Later-Life Declines in Crystallization*

Finally, there were quite consistent downturns in crystallization late in the lifespan. The existence of a decline is consistent with previous data concerning the crystallization of attitudes across the lifespan in general (Visser & Krosnick, 1998) and other measures of racial attitudes in particular (Sears, 1981). The exact point of the decline of the crystallization, however, is a matter of interpretation, as different indicators would lead to different conclusions. Using the 95% confidence intervals around the peaks of the curve would suggest that a downturn in crystallization occurs at a somewhat earlier point in life than previous research would suggest, between the ages of 58–73. This age range corresponds with the trajectory of the loess curves shown in Figure 1, with a noticeable decline in symbolic racism appearing in the later 50s in both samples. However, using the point in the curve where the slopes are no longer significantly different from zero would show a much later downturn, in the 70s and 80s (where it happens at all), which would be more consistent with some research on the crystallization of attitudes in later life (Sears, 1981). Additionally, the location of these points is influenced by the scores of participants of all age groups. Consequently, the specific points on the curve described throughout this text cannot be attributed to the properties of a specific age group per se, but to the overall features of the full set of data points.

Despite these cautions, one conclusion concerning the shape of these curves seems relatively certain: generally, crystallization of symbolic racism increases from early adulthood, peaks in middle adulthood, and declines in old age, which is consistent with the previous literature on similar attitude trajectories across the lifespan. However, the precise locations where crystallization levels off from early adulthood, or where it declines again in late life, may be “in the eye of the beholder,” so to speak.

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3 Similar interpretation challenges emerge in determining the exact point in the life stage at which the curve significantly levels off after the rises in young adulthood. Using the 95% confidence interval indicator would suggest that attitudes are still importantly crystallizing through the 20s. On the other hand, using the indicator of the significance of the crystallization scores and slopes from zero would suggest that early adults already have importantly crystallized symbolic racism attitudes, with the sole exception of the 18- and 19-year-olds who did not have significant slopes in the relationship between conservatism and symbolic racism in the 1990s panel.
Late-Life Decline: Cohort Effects?

The observed decline in crystallization can potentially reflect aging or life stage effects, but they also can be the product of a cohort (that is, generational) effect. This possibility would be a concern for the 1990s panel because the middle year of data collection was 1992, and many older respondents would have reached adulthood by the late 1960s. Before then, most of the controversy over race had focused on the formal two-caste system reflected in old-fashioned or Jim Crow racism, not the post-civil-rights ideas contained in contemporary forms of racial prejudice. It would be understandable if those older respondents who had acquired their basic racial attitudes before the watershed era of the late 1960s were already somewhat “set in their ways,” perhaps too old to reconceptualize racial controversies in the terms of new forms of racism. Perhaps their early (i.e., premodern) racial attitudes had already become fairly well crystallized. If so, this apparent “decline” that begins after middle age might just reflect more diffuse beliefs about symbolic racism in older cohorts, given that it would have been introduced into the broader political discourse after they had formed their fundamental racial attitudes, prior to early adulthood.

Checking this possibility involved the analysis of the 2000 survey data, collected about a decade after the early-1990s panels. By that time the older respondents were drawn from cohorts that had spent considerably more of their lives in the post-civil-rights era in which political cleavages over race increasingly revolved around the newer racisms. However, there were no consistent shifts in the patterns of data to match the shift in time, and in Figures 1 and 5 the curves were nearly identical. These results do not reflect the cohort effect that might have been expected.

Other Explanations for Late-Life Decline

Even after taking into consideration possible cohort effects, symbolic racism is less crystallized in later adulthood by almost all indicators. This finding is consistent with research on other attitudes and cognitive functioning later in life, but it leaves us with the more general psychological question of why declines in crystallization in old age occur. Some explanations can be ruled out. Educational levels are substantially negatively correlated with age but previous research has found such declines in crystallization even when controlling for education (e.g., Sears, 1981). Such declines are also inconsistent with the learning-based model developed for party identification, whereby voters strengthen their underlying party identifications by practicing their partisanship across time (Converse, 1976; Sears, 1983). That model would have predicted a continuing increase in the crystallization of symbolic racism (as a highly salient political attitude) across the lifespan instead. This later-life downturn also seems contrary to Terror Management Theory (Pyszczynski, Solomon, & Greenberg, 2003), which would predict
that older participants, for whom thoughts and images of death are presumably the most salient, would show greater crystallization instead of a decline of their core attitudes as a form of worldview protection.

Instead there may be other explanations. Modern cognitive psychology has found declines in fluid cognitive abilities with old age (Arenberg, 1982; Craik, 1994). That decline might interfere with the comprehension and integration of the more complicated and political language of modern and symbolic racism. Another possibility is that older adults may be entering a developmental stage of greater reflection, thoughtfulness, and openness (Erikson, 1950; Tyler & Schuller, 1991), which could lead to greater diffusion of symbolic racism as older adults question their belief systems more carefully. Still another possibility is that attitude crystallization declines as older people gradually disengage from the passions and commitments of their younger days (Cumming & Henry, 1961; Neugarten, 1977). However, these possibilities are only speculative. The data from the surveys of political attitudes presented here are not well-suited to isolating the precise psychological processes involved in the decline in crystallization observed among these older adults.

In conclusion, a more complete picture of the early acquisition and later development of contemporary racial prejudice across the lifespan is presented here. Overall, the results provide evidence in support of the original developmental speculations contained in the broader theory of symbolic racism. Despite the complexity of these attitudes, they seem to crystallize early, with crystallization typically continuing through adulthood. By most indicators crystallization also declines in later adulthood. Further research will be required to determine the precise reasons for the late-life decline of such a politically important and impactful construct.

ACKNOWLEDGMENTS

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