

Personality and Social Psychology Bulletin

<http://psp.sagepub.com/>

Social Power and Attitude Strength Over the Life Course
Asia A. Eaton, Penny S. Visser, Jon A. Krosnick and Sowmya Anand
Pers Soc Psychol Bull 2009 35: 1646
DOI: 10.1177/0146167209349114

The online version of this article can be found at:
<http://psp.sagepub.com/content/35/12/1646>

Published by:



<http://www.sagepublications.com>

On behalf of:



[Society for Personality and Social Psychology](#)

Additional services and information for *Personality and Social Psychology Bulletin* can be found at:

Email Alerts: <http://psp.sagepub.com/cgi/alerts>

Subscriptions: <http://psp.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations: <http://psp.sagepub.com/content/35/12/1646.refs.html>

Social Power and Attitude Strength Over the Life Course

Asia A. Eaton
Penny S. Visser
University of Chicago

Jon A. Krosnick
Stanford University

Sowmya Anand
University of Illinois at Chicago

Past findings indicate that middle-aged adults in the United States tend to be more resistant to attitude change than younger and older adults, but little is known about why this is so. The authors propose that midlife adults' disproportionate occupation of high-power social roles (which call for resoluteness) may partly explain their heightened resistance to persuasion. Using nationally representative data sets, the article first documents that in various domains the possession of social power peaks in midlife. It next documents that middle-aged adults place a high value on resoluteness, which suggests that they have internalized powerful role norms. Next, it shows that directly activating the concept of social power increases the perceived value of resoluteness. Finally, it demonstrates that the possession of powerful social roles partially mediates the relationship between age and resistance to persuasion. This work is the first to uncover a mechanism responsible for changes in attitude strength over the adult life course.

Keywords: *social roles; adult development; attitude strength; attitudes; persuasion; social influence; power*

Most people are familiar with the old adage “you can’t teach an old dog new tricks.” With practice and time, one’s character, skills, and attitudes are believed to stabilize and solidify. As life progresses, we assume, many of the channels for learning that stood wide open in the throes of youth are bolted shut by an accumulated base of knowledge, well-earned confidence, and perhaps even disillusionment. According to this view, the wisdom presumably attained with age manifests itself as a circumscribed set of crystallized

opinions and well-practiced behaviors sculpted by triumphs and adversity over the life course.

Until recently, social scientists largely shared this view of aging, and available research appeared to support the notion that openness to change is high among young adults but declines precipitously with age (e.g., Converse & Markus, 1979; Glenn, 1974). Some scholars pointed out, however, that all of the previous investigations of the relation between age and openness to persuasion shared design features that rendered their results ambiguous, and they devised new methods for assessing the relation between age and persuadability that avoid these ambiguities (e.g., Visser & Krosnick, 1998).

Consistent with earlier findings, this new generation of research has documented relatively high levels of persuadability in young adulthood and sharp declines in persuadability through the middle adult years (e.g., Levitan & Visser, 2008; Visser & Krosnick, 1998; Visser & Mirabile, 2004). Unlike earlier findings, however, these studies have documented increases in persuadability from middle adulthood through the late adult years. This curvilinear pattern of openness to attitude change provides support for what Sears (1981) referred to as the “life-stages” hypothesis and has been replicated with many large, representative samples of adults.

Authors’ Note: Some of the research in the article was supported by National Science Foundation Grant BCS-0242194. Jon Krosnick is a University Fellow at Resources for the Future. Please address correspondence to Asia A. Eaton, University of Chicago, 5848 S. University Ave., Chicago, IL 60637; e-mail: asia@uchicago.edu.

PSPB, Vol. 35 No. 12, December 2009 1646-1660
DOI: 10.1177/0146167209349114

© 2009 by the Society for Personality and Social Psychology, Inc.

EXPLANATIONS FOR THE LIFE-STAGES MODEL

The extent to which an attitude is durable and impactful is captured by the term *attitude strength* (for a review, see Petty & Krosnick, 1995). Resistance to attitude change, such as that displayed by middle-aged adults relative to adults of other ages, is one indicator of possessing strong attitudes. Strong attitudes also share the features of being temporally stable and exerting a significant impact on individuals' thoughts and behaviors. There are, however, many distinct routes by which attitudes come to possess these qualities and a variety of ways in which these qualities manifest themselves.

Although there is now greater clarity about the shape of the relationship between age and persuadability, questions remain about the reasons for this rise and fall in persuadability or attitude strength. Clearly, chronological age itself is not a sufficient account for fluctuations in attitude strength over the life course. But if not age per se, what is it about the middle adult years that renders people resistant to persuasion? To date, no clear answers have been offered.

Given the complexity of the aging process, there are myriad potential contributors to the relationship between age and openness to persuasion. After all, age is a proxy for innumerable transformations that unfold at every level of organization across the life cycle, including biological, cognitive, psychological, and social factors and processes. For example, it is well established that age is related to changes in intellectual and cognitive functioning (e.g., Craik & McDowd, 1987; Horn & Cattell, 1967). Age is also associated with systematic changes in personality traits (e.g., Roberts & Walton, 2004; Wood & Roberts, 2006a) and personal goals (e.g., Clark & Lachman, 1994). One or more of these factors may help to account for the rise and fall in attitude strength over the life course.

Intertwined with these individual-level changes are age-related changes in one's social surroundings and experiences. For example, the structure and composition of the social networks in which people are embedded change with age (e.g., Marsden, 1987), as do interpersonal goals (e.g., Carstensen, 1993; Carstensen & Charles, 1998; Charles & Carstensen, 1999), the frequency of social contact (e.g., Burt, 1990; Shanas, 1968), and the expectations that others have for one's personality (e.g., Wood & Roberts, 2006b). A growing body of evidence suggests that social factors of this sort can determine, in part, the strength and durability of people's attitudes (for a review see Eaton, Majka, & Visser, 2008), raising the possibility that shifting social contexts may contribute to the relationship between age and persuadability.

In this article we explore one such factor that may help to explain attitude strength over the life course. We propose that the social roles that individuals predictably

adopt, occupy, and shed at specific stages in adult development may affect the strength with which they hold their attitudes. Specifically, we hypothesize that midlife in the United States is a time when individuals are most likely to occupy powerful social roles in the workplace and in the community. Furthermore, based on recent research demonstrating prescriptive and descriptive norms for power holders to be resolute (Eaton & Visser, 2006, 2008), we hypothesize that the occupation of powerful roles is one of the mechanisms responsible for the curvilinear relationship between age and resistance to persuasion.

SOCIAL ROLES ACROSS THE LIFE COURSE

Social roles are sets of connected behaviors, rights, obligations, and characteristics expected from and appropriate for a person based on his or her social position (Katz & Kahn, 1978). Like the parts that actors play in a stage production, social roles offer instructions for how to behave in interactions with others across a variety of public and private domains (Goffman, 1959).

Some social roles, such as student, mother, and retiree, are prescribed for specific points in the life span based on a society's system of social time. Indeed, role gain, loss, and transition are such integral parts of aging in society that some scholars have explicitly defined aging as "the accumulation of experience through participation in a succession of social roles" (Riley, Johnson, & Foner, 1972, p. 10).

Powerful Social Roles in Midlife

Some scholars have further claimed that midlife in the United States is largely understood as the accumulation of high-power social roles (e.g., Shweder, 1998)—roles that confer control over valued resources and the ability to allocate rewards and punishments (Galinsky, Gruenfeld, & Magee, 2003). In fact, middle age has been explicitly called "the power period" in adult development (Antonucci & Akiyama, 1997, p. 148), a time when people are charged with asserting themselves through leadership positions (Havighurst, 1953) and "getting the world's work done" (Henry, 1965, pp. 56-57). Midlife researcher Neugarten (1968) concluded that those in midlife "recognize that they constitute the powerful age-group vis-à-vis other age groups; that they are the norm-bearers and the decision-makers; and they live in a society which, while it may be oriented towards youth, is controlled by the middle-aged" (p. 93).

However, despite this widespread agreement about the nature of midlife in the United States, there is scant empirical evidence demonstrating that middle adulthood is marked by the possession of high-power social roles. The first goal of this article is to test this claim.

POWERFUL SOCIAL ROLES AND PERSUASION

The second goal of this research is to determine whether the concentration of social power in the hands of the middle-aged may partially account for the high level of resoluteness observed in this age group. A large literature supports the tenability of this speculation, demonstrating that individuals in positions of social power are praised and in other ways rewarded for being unwavering in their attitudes and behaviors.

Research on organizational behavior, for example, has documented the importance of consistency in supervisors' behavior toward subordinates across situations and individuals (e.g., Leventhal, 1980). Administrators who are consistent in their actions are seen as better leaders than those who explore alternative courses of action when initial efforts fail to produce positive results (e.g., Staw & Ross, 1980). Supervisors described as inconsistent in decision making are considered less fair, and they engender greater uncertainty among their subordinates and greater interest in replacing the supervisor with one who is more consistent (e.g., De Cremer, 2003).

Reinforcing these findings, direct examinations of the expectations of power holders confirms that people in positions of power are expected to be resolute (Eaton & Visser, 2006). In studies involving both college samples and samples of normal adult volunteers, participants have articulated both descriptive and prescriptive stereotypes linking power and resoluteness. It is seen as both more common and more desirable for people in high-power positions to be less yielding and less easily persuaded than their less powerful counterparts (Eaton & Visser, 2006, 2008).

A great deal of evidence suggests that role expectations of this sort become integrated into people's self-concepts, serving as personal standards and anchoring their sense of who they are (e.g., Cialdini, Kallgren, & Reno, 1991; McCall & Simmons, 1978; Stryker, 1987). This internalization can be role-congruent self-descriptions (e.g., Spence & Buckner, 2000), personality traits (e.g., Feingold, 1994), and attitudes (e.g., Lieberman, 1956; Shapiro & Mahajan, 1986). When individuals move from subordinate to supervisor roles, for example, they alter their outlook accordingly by adopting promanagement attitudes (Lieberman, 1956). Thus, because those in power are expected to be resolute, it follows that those in power would have more positive attitudes toward resoluteness than would those not in power.

Importantly, the consequences of these internalized role norms are far reaching, extending well beyond the particular social context in which roles are enacted. There is evidence, for example, that factors associated with an individual's occupational role (e.g., his or her position in the organizational hierarchy and how closely he or she is supervised) fundamentally alter his or her

personality, goals, and general orientation to the world, shaping his or her thoughts and behaviors in all realms of life (e.g., Kohn & Schooler, 1983).

Experimental evidence reinforces the notion that the expectations of those in high-power social roles become internalized. In one study, for example, participants randomly assigned to play the roles of managers and subordinates in a workplace simulation came to see themselves in role-appropriate ways (Eaton & Visser, 2007). Managers were more likely than subordinates were to endorse having definite opinions rather than remaining neutral on most issues, and managers were more likely to prefer to be considered stubborn than wishy-washy. Managers also rated themselves as significantly more dominant and more resolute than did subordinates.

Experimental evidence also shows that exposing individuals to social power causes them to act in accordance with the dictates of high-power roles. For example, power has been shown to increase confidence in one's initial views, reducing the apparent need to carefully scrutinize new information and thereby minimizing the impact of that information on individuals' attitudes (Briñol, Petty, Valle, Rucker, & Becerra, 2007). Power has also been shown to reduce vulnerability to attitude change by biasing the way people process persuasive messages in favor of the norm for power holders to be resolute. That is, even when people do carefully process the content of a persuasive message, power leads them to process the information with a bias toward resisting persuasion (Eaton & Visser, 2008).

Taken together, a substantial body of evidence suggests that the strength of people's attitudes depends in part on where they stand in power relations to others. People in positions of power are expected to hold firmly to their views, and when people take on positions of power they endorse and adopt the traits and attributes that are called for by the role.

OVERVIEW OF THIS INVESTIGATION

In a series of studies, we tested whether social power may explain the curvilinear relationship between age and persuadability. In correlational and experimental studies using primarily representative samples of adults, we uncovered convergent evidence for the compound hypothesis that the possession of power peaks in midlife and that those in midlife may be more resistant to attitude change than other adults partly as a function of embracing the high-power role norm to be resolute.

We began by examining the extent to which the occupation of powerful work roles in the United States peaks in midlife (Studies 1 and 2). We then tested whether midlife adults value resoluteness, one of the demands of high-power roles, more than younger and older adults

do (Study 3). If midlife adults endorse resoluteness more than adults of other ages, it suggests that they have internalized their high-power roles and role norms.

Next, we tested whether social power causes individuals of all ages to increasingly value resoluteness (Study 4). Because we expected midlife adults to value resoluteness as a function of their possession of powerful roles, we also expected that manipulating social power in non-middle-aged adults should produce increases in the endorsement of being resolute versus persuadable.

Finally, using data from a large, nationally representative sample of adults, we directly tested the hypothesis that the curvilinear relation between age and persuadability is partially mediated by the possession of social power (Study 5). In summary, we expected midlife adults to possess relatively high levels of social power (Studies 1 and 2), we expected midlife adults and those exposed to social power to value resoluteness consistent with the demands of powerful social roles (Studies 3 and 4), and we expected midlife adults to be more resistant to attitude change than younger and older adults for the reason that they possess more social power than adults of other ages (Study 5).

STUDY 1

Workplaces are usually stratified hierarchically according to who has power over whom, and a person's level of social power is typically formally defined. Therefore, employment data provide one way to gauge the relationship between age and the occupation of powerful social roles. The first data set we used was the 1991 General Social Survey (Davis, Smith, & Marsden, 2007). Participants in this nationally representative survey were asked a large battery of questions on the nature of their jobs.

Method

Participants

The National Opinion Research Center conducted in-person interviews in participants' homes. The sample included 1,517 noninstitutionalized, English-speaking people 18 years of age or older living within the continental United States. We focused on the 912 participants (460 males, 452 females) who were currently working part-time, full-time, or who had jobs but were temporarily not working.

Measures

Job features. Participants answered questions about the degree of power they held over others. For example,

participants were asked, "As an official part of your main job, do you supervise the work of other employees or tell other employees what work to do?" and "Do you recommend promotions or disciplinary actions as part of your supervisory responsibilities?" We combined 14 binary items into a single aggregate measure of occupational power (Cronbach's $\alpha = .78$).

Demographic characteristics. Age was measured continuously and coded to range from 0 (age 18) to 1 (age 89, the age of the oldest participant in the sample). Sex (coded 0 for males and 1 for females) and race (coded 0 for White participants and 1 for non-White participants) were also measured.

Results

An ordinary least squares regression was conducted using age, sex, and race to predict our composite variable of occupational power. Males had significantly higher levels of occupational power than females did, $\beta = -1.49$, $t(908) = 6.72$, $p < .001$, and White participants had significantly higher levels of occupational power than did non-White participants, $\beta = -1.01$, $t(908) = 3.28$, $p = .001$. Controlling for participant sex and race, a significant positive linear relationship between age and occupational power appeared, $\beta = 2.59$, $t(908) = 3.96$, $p < .001$; as age increased occupational power also increased.

To test the nonlinear association between age and power, we re-estimated the regression equation adding a term reflecting the quadratic effect of age on social power. This analysis revealed both a positive linear relationship and a negative quadratic relationship between age and occupational power, $\beta = 12.36$, $t(907) = 5.50$, $p < .001$, and $\beta = -13.89$, $t(907) = 4.54$, $p < .001$, respectively.¹ Figure 1 illustrates the level of occupational power predicted by the best fitting regression equation, including the linear and quadratic effects of age as predictors along with the control variables of sex and race. Power increased from early adulthood through the middle adult years and then decreased from middle adulthood through the late adult years. Figure 2 shows the total amount of occupational power possessed by individuals by age.

STUDY 2

The second data set we used to test the hypothesis that midlife adults disproportionately occupy high-power roles in the workplace was the 2002 American Community Survey conducted by the U.S. Census Bureau. This annual, nationally representative survey is designed to look at housing and population characteristics.

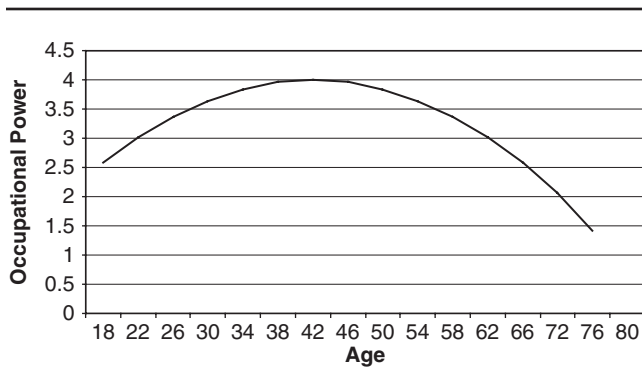


Figure 1 Model predicting 14-item index of occupational power, by age, from the 1991 General Social Survey.

Method

Participants

The U.S. Census Bureau collected information on a total of 1,074,628 noninstitutionalized, English-speaking people of all ages living within the continental United States. Participants completed the survey through mail, computer-assisted telephone interviewing, or personal visits. We restricted our analyses to participants aged 18 and older, giving us a final sample of 809,627 participants (47.1% males, 52.9% females).

Measures

Job features. The occupations of participants who were employed during the past year were classified using a set of 992 occupation codes (U.S. Dept. of Commerce, Bureau of the Census, 2002). One code described the worker's rank in the workplace. Some of the categories identified managerial positions such as "marketing and sales manager," "engineering manager," and "funeral director." We used these codes to differentiate individuals who occupied managerial positions (7.3%, $n = 59,461$) from those who did not.

Demographic characteristics. Age was measured continuously and coded to range from 0 (age 18) to 1 (age 94, the age of the oldest participant in the sample). Sex (coded 0 for males and 1 for females) and race (coded 0 for White participants and 1 for non-White participants) were also measured.

Results

In a logistic regression analysis using participant age, sex, and race to predict the likelihood of being a manager, both sex and race were significant predictors of

whether a participant was classified as a manager at work. Males were more likely to be classified as managers than were females ($\beta = -0.51$, $SE < 0.01$; Wald test = 3288.53, $df = 1$, $p < .001$), and White participants were more likely than were non-White participants to be classified as managers ($\beta = -0.50$, $SE < 0.05$; Wald test = 1411.09, $df = 1$, $p < .001$). Controlling for sex and race, a significant positive linear association emerged for age ($\beta = 1.33$, $SE < 0.05$; Wald test = 3389.41, $df = 1$, $p < .001$), indicating that as age increased the likelihood of being classified as a manager at work increased.

When the quadratic effect of age was added to this equation, the positive linear relation remained significant ($\beta = 6.02$, $SE = 0.09$; Wald test = 4186.43, $df = 1$, $p < .001$) and a significant, negative quadratic effect emerged ($\beta = -6.27$, $SE = 0.12$; Wald test = 2700.20, $df = 1$, $p < .001$). As Figure 3 illustrates, this result indicates that the proportion of individuals from the American Community Survey who were managers in their workplace increased from young to middle adulthood and then decreased from middle to older adulthood.²

Discussion

Across two nationally representative data sets, we found that midlife adults were more likely than adults of other ages to occupy high-power positions in the workplace. In the workplace, powerful social roles tend to be adopted and abandoned in an age-graded pattern that complements the rise and fall in susceptibility to attitude change over the life course.

Supplemental analyses using additional data sets reinforce these findings. For example, in the 2001 U.S. Congregational Life Survey, we found that midlife adults were the most likely to serve on governing boards in their places of worship (Association of Religion Data Archives, 2001). And in the 1990 American Citizen Participation Study, midlife adults were found to occupy the highest number of positions on local government boards or councils (Verba, Lehman Schlozman, Brady, & Nie, 1990). The relationship between power and age, then, seems sufficiently broad and robust that it may account for the broad and robust relationship between age and persuadability.

STUDY 3

In this next study, we examined how people in midlife view being resistant versus persuadable. Previous research has shown that people in powerful social roles are expected to be resistant to attitude change (Eaton & Visser, 2006, 2008). It is also known that people typically adopt and

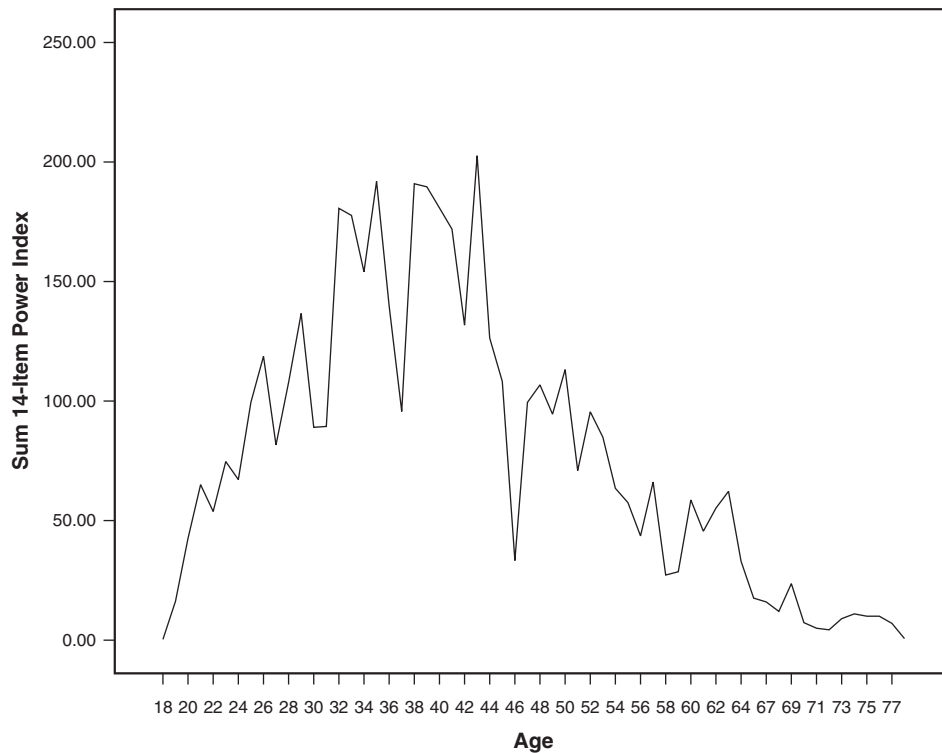


Figure 2 Total amount of occupational power (based on a 14-item index) held by individuals, by age, in the 1991 General Social Survey.

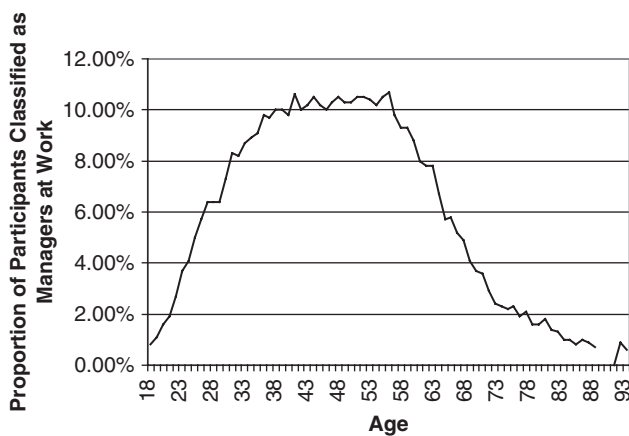


Figure 3 Actual proportion of individuals, by age, who were classified as managers at work in the 2002 American Community Survey.

internalize the traits, attributes, attitudes, and behaviors that are expected of their social roles (e.g., Lieberman, 1956). Therefore, because of their abundant occupation of high-power social roles, midlife adults may be especially likely to endorse the value of holding definitive opinions as opposed to taking a flexible stance toward

issues. We tested the hypothesis that midlife adults value resoluteness more so than adults of other ages using data from the 1998 Pilot Study for the American National Election Study (Sapiro, Rosenstone, & the National Election Studies, 1998).

Method

Participants

The 1998 American National Election Pilot Study used random-digit dialing to identify a random sample of adults living in the states of California, Illinois, and Georgia. In the fall of 1998, 1,203 participants were interviewed by telephone. Some questions were posed to subsets of the sample, including the question of interest here: 553 (244 males, 309 females) reported the degree to which they value resoluteness.

Measures

Participant responses to the following question were examined: "Some people say that it is important to have definite opinions about lots of things, whereas other people think that it is better to remain neutral on most issues. What about you? Do you think that it is better to have

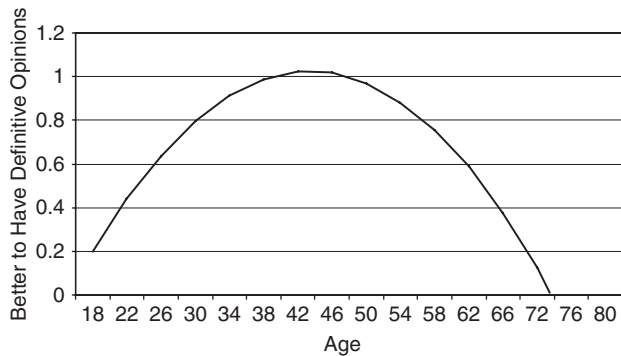


Figure 4 Model predicting the probability of saying it's better to "have definite opinions" by age from the 1998 American National Election Survey pilot study.

definite opinions about lots of things or to remain neutral on most issues?" Responses were coded 0 for individuals who preferred to remain neutral on most issues and 1 for individuals who preferred to hold definite opinions.

Demographic characteristics. Participant age was measured continuously and coded to range from 0 (age 18) to 1 (age 93, the age of the oldest participant in the sample). Sex was coded 0 for males and 1 for females.³

Results

Participant sex did not significantly predict the likelihood of endorsing having definite opinions, nor was the linear relation between age and such endorsement significant. When the quadratic effect of age was added to the equation, however, a significant positive linear effect of age emerged ($\beta = 3.67$, $SE = 1.35$; Wald test = 7.36, $df = 1$, $p < .01$) as well as the predicted negative quadratic effect ($\beta = -4.05$, $SE = 1.68$; Wald test = 5.80, $df = 1$, $p < .05$). Thus, as age increased from young to middle adulthood, individuals were more likely to endorse the value of having definite opinions, but such endorsements became less likely as age increased from middle adulthood to older age (see Figure 4).

STUDY 4

As we have shown, social power tends to be held disproportionately by people in midlife, and those in midlife appear also to place a greater premium on holding definite attitudes on most issues than on remaining relatively uncommitted. To determine whether power may produce a preference for resolute versus flexible attitudes, we conducted an experiment in which the

concept of social power was cognitively activated for some participants. We hypothesized that compared to a control group individuals primed with the concept of power would show a greater preference for definite attitudes than for noncommittal attitudes.

Method

Participants

Participants were 49 students at the University of Chicago participating in exchange for candy.

Materials and Procedure

A good deal of previous research has used exposure to semantic associates of the concept of power to manipulate the experience of power in participants (e.g., Chen, Lee-Chai, & Bargh, 2001) based on the rationale that the concept of power is represented in memory and can be activated by environmental cues. Indeed, priming procedures have been used to replicate the effects of more elaborate, superficially realistic manipulations of power (e.g., having participants write about personal experience in powerful roles), attesting to the validity of this manipulation (e.g., Chen, Ybarra, & Kiefer, 2004). Based on this research, we used a semantic priming technique from past research in which participants were presented with an ostensible vocabulary task (Rasinski, Visser, Zagatsky, & Rickett, 2005). Participants were told that on the pages that followed, they would be presented with a series of target words, each of which would be followed by three words with similar meaning. For each target word, participants' task was to indicate which of the three words that followed was most similar.

In the experimental condition, participants were presented with 10 target words, 5 of which were related to social power, such as "dominate" and "boss" (see the appendix for exact word lists), along with 3 synonyms for each word. Participants in the control condition were presented with 10 target words that were unrelated to social power along with 3 synonyms for each word. All participants then responded to the same question used in Study 3 to assess preferences for holding definite opinions versus remaining neutral about most issues.

Results

The proportion of participants who endorsed holding definite opinions rather than remaining neutral on most issues was higher among participants primed with power (62.5%) than among those in the control condition (24%). A chi-squared test indicated that this difference was significant, $\chi^2(1, N = 49) = 7.41$, $p < .01$.

Discussion

As hypothesized, activating the concept of social power changed individuals' conceptions of resoluteness, causing them to place greater value on holding definite opinions as opposed to staying out of the fray. Indeed, priming our undergraduate participants with the concept of power caused them to express views that resembled those of our middle-aged adults in Study 3.

STUDY 5

All of our findings up to this point are consistent with the notion that the occupation of powerful social roles may be at least partially responsible for midlife adults' resoluteness. In our final study, we directly tested whether the curvilinear relation between age and persuadability is in fact mediated by the possession of powerful social roles.

Method

Participants

A nationally representative sample of 1,738 adults (876 women, 862 men) was surveyed using an Internet panel administered by Knowledge Networks. Participants were initially recruited using random-digit dialing drawing on both listed and unlisted telephone numbers. Participants who did not already have it were provided with Internet access to enable them to participate in the panel. Data were collected in two waves separated by approximately 1 month; attitudes and attitude change were measured during Wave 1 and data on the possession of powerful roles in the workplace were gathered during Wave 2. A total of 1,624 participants (819 women, 805 men) completed both waves of data collection.

Measures and Procedure

Initial Attitude

All participants were asked if they favored or opposed the death penalty for people convicted of murder using a 7-point fully labeled bipolar scale. Participants who scored at or above the midpoint of 4, indicating that they were initially neutral toward or supportive of the death penalty ($N = 1,449$), were shown a persuasive message arguing against capital punishment. This ensured that the persuasive message was counterattitudinal for all participants.

Persuasive Message

Arguments against capital punishment were collected from a number of editorials and political action sites,

such as that of the American Civil Liberties Union. A persuasive message was composed based on these arguments. The message was then pretested to ensure that it was sufficiently cogent to produce attitude change.

Attitude Change

After participants read the counterattitudinal persuasive message, their attitudes were reassessed using the same 7-point scale. Both the initial attitudes and the postmessage attitudes were recoded to range from 0 to 1, where higher scores represented greater support for capital punishment. Attitude change was calculated by subtracting the premessage attitudes from the postmessage attitudes. Thus, higher values reflect greater attitude change in the direction advocated in the persuasive message.

Measure of Social Power in the Workplace

In the second wave, participants who reported doing paid work within the past month ($N = 963$) were asked about the amount of social power they held in the workplace. Specifically, they were asked how much of their work time they spend supervising other employees (with five response options ranging from *none of it* to *all of it*). Those who reported that they spend all or most of their time supervising others were coded as occupying positions of power and those who reported that they spent less time than this supervising others were coded as occupying lower power positions.

Demographic Characteristics

Age was measured continuously and coded to range from 0 (age 18) to 1 (age 93, the age of the oldest participant in the sample). Sex (coded 0 for males and 1 for females) and race (coded 0 or White participants and 1 for non-White participants) were also measured.

Results

Age and Attitude Change

We began by assessing the relationship between age and attitude change. To do so, we used OLS regression to predict attitude change using age as a predictor, including sex and race as control variables. Participant sex was a significant predictor of attitude change, with females exhibiting more attitude change than males, $\beta = -0.04$, $t(1431) = 3.45$, $p = .001$, whereas participant race was unrelated to attitude change, $\beta = 0.02$, $t(1431) = 1.48$, *ns*. In this equation, age was not a significant predictor of attitude change, $\beta = 0.02$, $t(1431) = 0.80$, *ns*.

Consistent with past findings, however, when the quadratic effect of age was included in this equation, both the linear and the quadratic effects emerged as

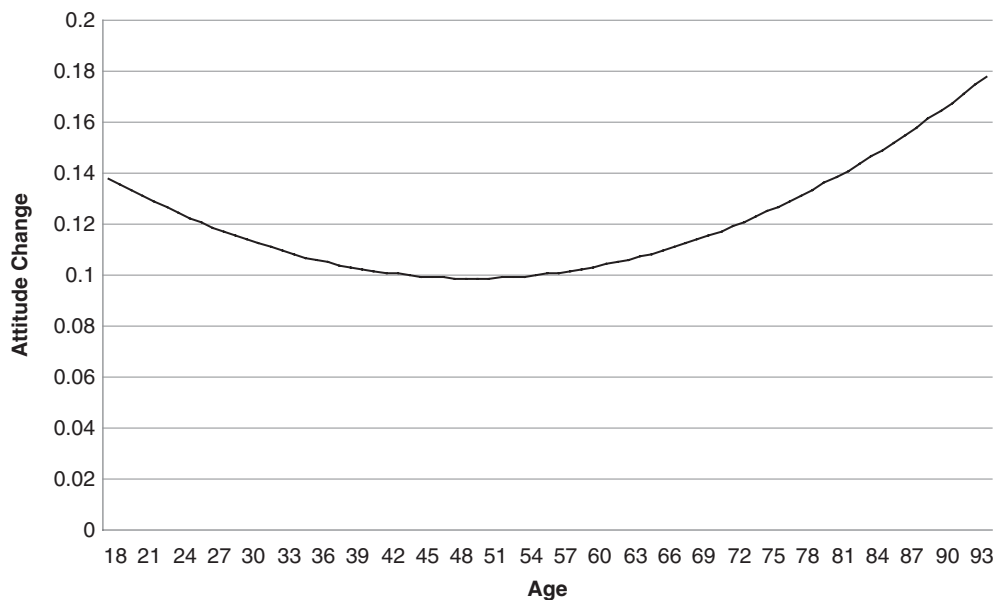


Figure 5 Model predicting attitude change toward the death penalty message by participant age.

significant predictors of attitude change, $\beta = -0.19$, $t(1430) = 2.18$, $p < .03$, and $\beta = 0.23$, $t(1430) = 2.50$, $p = .01$. As Figure 5 illustrates, attitude change decreased and then increased with age.

Surprisingly, however, additional analyses suggested that the relationship between age and attitude change may have differed for men and women. When terms reflecting the interaction between gender and both the linear and quadratic effects of age were added to the equation, the interaction between gender and the linear effect of age emerged as a marginally significant predictor of attitude change, $\beta = -0.29$, $t(1429) = 1.72$, $p < .09$.

Indeed, when the relationship between age and attitude change was assessed separately for men and women, striking differences emerged. Among men, the curvilinear relation between age and attitude change evident in the full sample emerged more strongly: Both the linear and the quadratic effects of age were highly significant, $\beta = -0.33$, $t(734) = 2.79$, $p = .005$, and $\beta = 0.36$, $t(734) = 2.78$, $p = .006$. Among women, however, no relationship emerged between age and attitude change, $\beta = -0.04$, $t(691) = 0.33$, ns , and $\beta = 0.10$, $t(691) = 0.76$, ns , for the linear and nonlinear relations, respectively. We return to this unexpected effect below.

Power as a Mediator of the Relationship Between Age and Attitude Change

Because the curvilinear relationship between age and attitude change emerged only among men in this sample, we limited our examination of mediation to this subset

of participants. We used the analyses required for testing mediational hypotheses outlined by Baron and Kenny (1986), beginning with assessing the relation between age and workplace power. To do so, we used logistic regression to predict whether participants occupied positions of power in the workplace, with race included as a control variable. The linear effect of age was a significant predictor of power ($\beta = -1.95$, $SE = 0.57$; Wald test = 11.81, $df = 1$, $p < .005$), with the likelihood of having power at work increasing with participant age. When the quadratic effect of age was included in this equation, however, both the linear ($\beta = 7.43$, $SE = 2.67$; Wald test = 7.72, $df = 1$, $p < .01$) and the quadratic effects ($\beta = -12.44$, $SE = 3.55$; Wald test = 12.29, $df = 1$, $p < .001$) emerged as significant predictors of power. As Figure 6 illustrates, the probability of occupying a position of power increased from young adulthood through the middle adult years and then decreased from middle adulthood through the late adult years.

To test the notion that the possession of social power may mediate the relationship between age and attitude change, we used OLS regression to re-estimate the linear and quadratic effect of age on attitude change, this time including workplace power in the equation. Consistent with mediation, power was a significant predictor of attitude change, $\beta = -0.05$, $t(681) = 2.09$, $p < .05$, and the magnitude of the regression coefficients for the linear and quadratic effects of age decreased. Sobel (1982) tests demonstrated that the mediated relation was significant for the quadratic effect, $z = 2.04$, $p < .05$, and marginally significant for the linear effect, $z = 1.85$, $p = .06$.

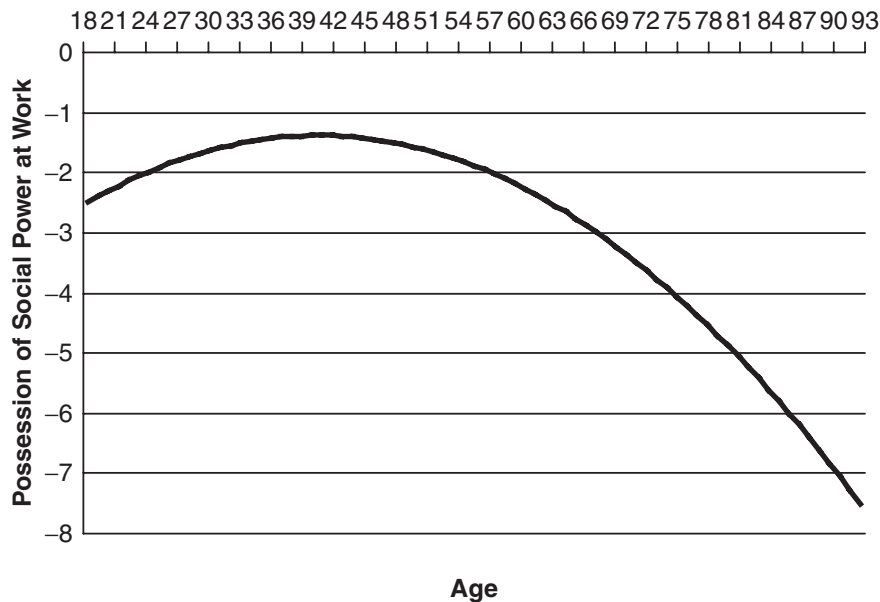


Figure 6 Model predicting possession of power at work by participant age.

Gender, Power, and Persuasion

In a set of supplementary analyses, we further explored the unexpected finding that women did not exhibit the expected curvilinear relation between age and attitude change. We began by testing whether age was related to social power for women as it was for men. If workplace power did not vary with age for the women in our sample, this could explain the failure to find age-related shifts in attitude strength. In fact, however, logistic regression revealed a marginally positive linear ($\beta = 5.22$, $SE = 3.03$; Wald test = 2.83, $df = 1$, $p = .09$) and a significant negative quadratic relationship ($\beta = -10.07$, $SE = 4.17$; Wald test = 5.84, $df = 1$, $p < .05$) between age and workplace power for female participants. Thus, the possession of power at work did peak in midlife for this sample of women.

We next tested whether power in the workplace produced greater resoluteness for women, as it did for men. In an OLS regression, power was used to predict women's levels of attitude change toward the death penalty. Surprisingly, the possession of power at work was not a significant predictor of attitude change for women, $\beta = -0.04$, $t(641) = 1.13$, *ns*.

Discussion

These results corroborate and clarify the findings from our previous studies, providing the most direct evidence yet in support of the notion that the rise and fall in persuadability over the life course is partially due to the tendency for social power in the workplace to be

concentrated in the hands of those in midlife. Although there is much variance in the relationship between age and attitude change left to be explained, we find this result impressive for two reasons. First, social power is only one variable that may account for the relationship between openness to attitude change and age. Age is a proxy for countless social, biological, and psychological changes that unfold at every level of organization across the life cycle. Age is related to changes in one's social network, cognitive functioning, goal pursuit, and self-efficacy, just to name a few. All of these variables are potential mechanisms by which aging leads to changes in susceptibility to persuasion, making the significance of the mediation by power that we found for males noteworthy.

Second, the measure of social power in this study was limited to power in a single domain (the workplace) and used only a single item to assess power in this domain. Given that there are so many domains in which to possess powerful roles, and given that power in any domain can be represented and measured a number of ways, we find it impressive that the single item measure of work power in Study 5 showed significant mediation. As we address in the general discussion, these findings have important implications for researchers' understanding of aging as well as attitudes.

Surprisingly, only men exhibited the expected curvilinear relation between age and attitude change. It is not clear why this finding emerged in this study. Although past investigations have included gender as a demographic control variable, none have assessed gender differences in the relationship between age and persuadability.

Thus, it is difficult to know if the failure to obtain the expected relationship between age and attitude strength in female participants here is an anomaly or a meaningful finding. The gender differences observed in this investigation may be due to peculiarities of this particular sample or this particular issue or persuasive message, or they may reflect genuine differences. Clearly, further investigation of the relationship between gender, power, and persuasion is needed. We return to this issue in the general discussion.

GENERAL DISCUSSION

In 1966, *Time Magazine* ran a cover story about “the command generation.” It began with a bold claim (“Command Generation,” 1966):

The U.S. has a ruling class. It is cloaked in a conspiracy of silence. It is a generation that dares not, or prefers not, to speak its name—middle age. Yet it is that one-fifth of the nation between the ages of 40 and 60 (42,800,000) who occupy the seats of power, foot the bills, and make the decisions that profoundly affect how the other four-fifths live. (para. 1)

This view certainly resonates with characterizations of the adult life span offered by development researchers, who tout the middle adult years as a unique period in which power and influence tend to be concentrated—a time in which individuals are “no longer driven, but now the drivers” (Neugarten & Datan, 1974, p. 598).

The results reported here, drawn from a host of nationally representative survey data sets, provide some of the first and most comprehensive empirical support for these claims. Midlife adults in the United States do indeed outnumber younger and older adults in positions of power. This is true in the workplace, where middle-aged adults disproportionately occupy supervisory roles and serve in official managerial positions. It is also true in the community, where midlife adults are especially likely to be leaders in places of worship and on local boards and councils.

When middle-aged adults step into these positions of power, they appear to take on the traits and attributes expected of them. As we have seen, middle-aged adults are more likely than younger or older adults are to endorse holding definite opinions (as opposed to remaining relatively uncommitted on most issues). And consistent with the notion that this pattern is driven by midlife adults’ internalization of powerful role norms, we found that activating the concept of power in a young adult sample increased the perceived value of holding firm attitudes.

Finally, and most definitively, we provided direct evidence that the occupation of high-power social roles does in fact partially mediate the curvilinear relationship

between age and persuadability. Heightened resistance to attitude change during middle adulthood appears to be driven in part by the fact that those in midlife disproportionately hold positions of power in the workplace. Together, these studies provide the first clear answer to the question of why attitude strength varies with age.

Implications for the Study of Attitudes

Social psychologists have long acknowledged that attitudes are not formed or maintained in a social vacuum. To the contrary, people hold their attitudes within a rich social context, and researchers have made great strides toward documenting the various ways in which the social context affects those attitudes. The current research opens the door to a host of new hypotheses about attitude strength, adding to a growing body of knowledge on how social and contextual variables affect the strength and durability of attitudes (for a review see Eaton et al., 2008).

In particular, this work directs our attention to the impact of social roles on the strength of attitudes. This new insight has potential relevance for any variety of social roles that are occupied for any length of time. Some roles are held for decades, whereas others are more fleeting. Even in the course of a single day, individuals often move into and out of distinct social roles, shifting from a mother getting young children off to school in the morning to an executive making consequential decisions in the afternoon. To the extent that these social roles call for different levels of resoluteness, such role shifts may produce variation in openness to attitude change over a short time. Indeed, the strength and durability of individuals’ attitudes may be quite fluid, fluctuating in response to changes in the salience of social roles. We look forward to future research exploring this intriguing possibility.

Internalizing and acting on the norm for resistance to attitude change should, over time, cause individual-level features of the attitude (e.g., accessibility, importance, etc.) to change as well.

This research also suggests that in addition to role norms other sorts of norms (e.g., cultural norms, local norms) may influence the strength of attitudes. Some communities may prize resoluteness whereas others prioritize openness, and these expectations are likely to manifest themselves in the attributes endorsed and exhibited by community members. Future work examining the relationship between cultural norms and attitude processes is likely to contribute additional new insights to the basic social psychological literature on attitudes.

Implications for the Study of Aging

The implications of this research extend well beyond attitudes and attitude strength, however. By identifying

one of the mechanisms responsible for the relationship between age and persuadability, this research opens the door to a host of new theories about the psychological and social experience of adult development in the United States. The finding that powerful social roles in the workplace and community are highly age graded may help to explain myriad other changes across the life course.

For example, it is known that middle-aged individuals put more emphasis on confidence, assertiveness, and self-knowledge than do adults of other ages—qualities that promote initiating action and actively pursuing fulfillment rather than adapting oneself to the current state of the world (Ryff, 1989). Because social power is known to increase propensity toward action (Galinsky et al., 2003), the possession of power may underlie the increased value that middle-aged adults place on these traits and orientations.

Similarly, conscientiousness, one of five superordinate traits in the Big Five model of personality that includes being self-disciplined and deliberate (Costa & McCrae, 1985), reaches a maximum in midlife (Markus & Lachman, 1996). This systematic increase in conscientiousness may be partly because midlife adults have a high level of responsibility over valued resources and over others' outcomes via their powerful social roles.

Last, the systematic possession of powerful social roles over the adult life course may help explain why older adults feel a decreased sense of personal control compared to midlife adults (e.g., Mirowsky & Ross, 1989), especially in the domains of work and finances (Lachman & Weaver, 1998). Because feelings of control have been linked to structural power and dependency (Mirowsky & Ross, 1983), the decline in personal control from midlife to old age may be, in part, because of a decline in those social roles that give one structural power, status, and prestige.

In closing, however, it is important to note that midlife adults may not possess power in domains we have not examined in this article. For example, midlifers may not occupy the most power in the political arena, where the average age of senators is 61.7 years (Congressional Research Service Report for Congress, 2008). Alternatively, younger adults may hold the upper hand in industries such as entertainment and athletics, where youth is prized and associated with success. Future research should examine additional domains to determine the limits of the midlifer's command in modern society.

Limitations and Future Directions

Gender Differences

Surprisingly, we found that power was unrelated to persuadability among females. This raises interesting questions about gender and the enactment of powerful

social roles. Indeed, some scholars have suggested that because the dictates of high-power roles conflict with the dictates of the female sex role, female power holders are faced with the difficult choice of having to defy the norms for one role in favor of meeting the requirements of the other (for a review see Heilman, 2001). In this situation, women may strategically forgo conforming to some high-power role norms in favor of behaving like women "ought to," or they may create or engage in leadership behaviors and goals that are not stereotypically masculine.

Recent research supports this contention, showing that men and women often enact powerful social roles in distinct ways (e.g., Eagly & Johannesen-Schmidt, 2001; Eagly & Johnson, 1990). For example, a review of leadership studies found that women leaders tend to be more democratic, encouraging participation, whereas male leaders tend to be more autocratic, directing performance (Eagly & Johnson, 1990). Chen and Welland (2002) have additionally demonstrated that because of gender differences in self-construals men and women pursue different social goals when they find themselves in positions of power.

Another potential reason why females in Study 5 did not show the expected relationship between power and persuadability may be a result of the pattern of communal role occupation that women have over the life course. Although both men and women were shown to possess more work power in midlife than in younger and older adults, midlife may also be a time when women occupy a higher number of care-giving, communal positions than do adults of other ages. For example, married women perform the lion's share of housework (an unpaid, low-status job), devoting approximately twice as much time to housework as married men in the United States do (Bianchi, Milkie, Sayer, & Robinson, 2000). Women (even working women) also have primary responsibility within their families for caring for the children (e.g., Friedman & Marshall, 2004). These care-giving, domestic roles carry with them norms and expectations that contradict those associated with social power (e.g., Eagly, 1987). Therefore, women in midlife may be dealing with competing demands to be nurturing and deferential in their care-giving roles and resolute and steadfast in their high-power roles. The competition between these demands may make women's openness to persuasion highly contextually contingent and role dependent, or it may cause them to adopt a persistently moderate level of attitudinal malleability.

Low-Power Social Roles and Attitude Strength

Our focus has been on the expectations and demands of high-power social roles, but we suspect that a complementary set of expectations exists regarding low-power social roles. These expectations presumably originate in

the attributes and behaviors that are functional for the enactment of that role. In particular, whereas those in high-power positions give instructions, make demands, and lead the pack, those in low-power positions take instructions, fulfill demands, and follow the leader. We expect, therefore, that being in a low-power position facilitates malleability and openness to influence. Others have made similar arguments (e.g., Keltner, Gruenfeld, & Anderson, 2003).

Boundary Conditions

It is unlikely that attitudinal rigidity is expected from and desirable for every type of power holder in every context or situation. Instead, we suspect that there are several limits on the general norm for power holders to be firm in their attitudes. For example, it may sometimes be seen as desirable for a power holder to alter his or her attitude in light of compelling new evidence. Alternately, there may be a particular subset of powerful roles for which openness to attitude change is expected and seen as largely advantageous. The director of a research project, for example, may be expected to frequently change his or her opinions based on empirical evidence. More research is needed to determine the conditions under which the general norm of resoluteness among power holders is overridden.

Manipulation of Social Power

In Study 4 of this article, our experimental manipulation of power involved semantic priming rather than placing people in actual positions of power. This raises the possibility that the particular words used in each of the conditions may have activated additional constructs other than power alone. The correspondence between our experimental and correlational findings provides some corroboration for our experimental manipulation but future work involving manipulations of the actual possession of power seem worthwhile.

Conclusion

Our findings offer an initial answer to the question of why attitude strength tends to peak in the middle adult years, but in so doing they also raise a host of exciting new questions. In particular, these findings invite us to contemplate the myriad other social factors that, like the occupation of powerful social roles, vary systematically with age and may further contribute to the rise and fall in attitude strength. Doing so will almost certainly refine our understanding of the aging process and enrich our appreciation of the multifaceted, context-sensitive nature of attitude strength more generally.

APPENDIX STUDY 4 PRIMING WORDS

Words related to social power used exclusively in the power-priming condition are as follows: powerful, in charge, potent, strong, authority, boss, expert, commander, dominate, control, rule, overpower, influence, manipulate, compel, impact, status, prestige, rank, and prominence.

Words used exclusively in the control condition are as follows: create, invent, develop, produce, journey, trip, expedition, voyage, fragile, delicate, intricate, dainty, adventurous, daredevil, explorer, reckless, tutorial, lesson, explanation, and instruction.

Words unrelated to social power used in both conditions are as follows: common, routine, frequent, average, happy, gleeful, pleased, glad, blend, combine, mix, and merge.

NOTES

1. When adding age to the regression equation, a cubic effect failed to emerge ($\beta = 21.63$, $SE = 13.91$), $t(5, 912) = 1.55$, $p = .12$, indicating that the linear and quadratic effects fully capture the relationship between age and occupational power.

2. Given the size of the data set, the analyses had sufficient statistical power to detect other perturbations to the curve reflected in significant cubic and quartic effects of age. However, a simple visual inspection of the data (Figure 3) confirmed the curvilinear association between age and managerial status.

3. The 1998 American National Election Pilot Study did not include a clear measure of participant race, so we were unable to control for race in our analyses.

REFERENCES

- Antonucci, T. C., & Akiyama, H. (1997). Concern with others at midlife: Care, comfort, or compromise? In M. E. Lachman & J. B. James (Eds.), *Multiple paths of midlife development* (pp. 147-169). Chicago: University of Chicago Press.
- Association of Religion Data Archives. (2001). *U.S. congregational life survey, 2001, random attenders*. Retrieved April 28, 2006, from <http://www.thearda.com/Archive/Files/Descriptions/USCLSRA.asp>
- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, *51*, 1173-1182.
- Bianchi, S. M., Milkie, M. A., Sayer, L. C., & Robinson, J. P. (2000). Is anyone doing the housework? U.S. trends and gender differentials in domestic labor. *Social Forces*, *79*(1), 191-228.
- Briñol, P., Petty, R. E., Valle, C., Rucker, D. D., & Becerra, A. (2007). The effects of message recipients' power before and after persuasion: A self-validation analysis. *Journal of Personality and Social Psychology*, *93*, 1040-1053.
- Burt, R. S. (1990). Kinds of relations in American discussion networks. In C. Calhoun, M. W. Meyer, & W. R. Scott (Eds.), *Structure of power and constraint: Papers in honor of Peter M. Blau* (pp. 45-67). New York: Cambridge University Press.
- Carstensen, L. L. (1993). Motivation for social contact across the life span: A theory of socioemotional selectivity. In J. E. Jacobs (Ed.), *Developmental perspectives on motivation* (Vol. 40, pp. 205-254). Lincoln: University of Nebraska Press.
- Carstensen, L. L., & Charles, S. T. (1998). Emotion in the second half of life. *Current Directions in Psychological Science*, *7*(5), 144-149.

- Charles, S. T., & Carstensen, L. L. (1999). The role of time in the setting of social goals across the life span. In T. M. Hess & F. Blanchard-Fields (Eds.), *Social cognition and aging* (pp. 319-342). San Diego, CA: Academic Press.
- Chen, S., Lee-Chai, A. Y., & Bargh, J. A. (2001). Relationship orientation as a moderator of the effects of social power. *Journal of Personality and Social Psychology, 80*, 173-187.
- Chen, S., & Welland, J. (2002). Examining the effects of power as a function of self-construals and gender. *Self and Identity, 1*, 251-269.
- Chen, S., Ybarra, O., & Kiefer, A. K. (2004). Power and impression formation: The effects of power on the desire for morality and competence information. *Social Cognition, 22*, 391-421.
- Cialdini, R. B., Kallgren, C. A., & Reno, R. R. (1991). A focus theory of normative conduct: A theoretical refinement and reevaluation of the role of norms in human behavior. In M. P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 24, pp. 201-234). New York: Academic Press.
- Clark, M. D., & Lachman, M. E. (1994, August). *Goals and perceived control: Age differences and domain effects*. Poster presented at the meeting of the American Psychological Association, Los Angeles.
- Command generation. (1966, July). *Time*.
- Congressional Research Service Report for Congress. (2008). *Membership of the 110th Congress: A profile*. Retrieved March 1, 2009, from <http://www.senate.gov/reference/resources/pdf/RS22555.pdf>
- Converse, P. E., & Markus, G. B. (1979). Plus ça change . . . : The new CPS election panel study. *American Political Science Review, 73*, 32-49.
- Costa, P. T., Jr., & McCrae, R. R. (1985). *The NEO personality inventory manual*. Odessa, FL: Psychological Assessment Resources.
- Craik, F. I., & McDowd, J. M. (1987). Age differences in recall and recognition. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 13*, 474-479.
- Davis, J. A., Smith, T. W., & Marsden, P. V. (2007). *General social surveys, 1972-2006* [Cumulative File; Computer File]. ICPSR04697-v2. Chicago, IL: National Opinion Research Center; Storrs, CT: Roper Center for Public Opinion Research, University of Connecticut; Ann Arbor, MI: Interuniversity Consortium for Political and Social Research.
- De Cremer, D. (2003). Why inconsistent leadership is regarded as procedurally unfair: The importance of social self-esteem concerns. *European Journal of Social Psychology, 33*, 535-550.
- Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Hillsdale, NJ: Lawrence Erlbaum.
- Eagly, A. H., & Johannesen-Schmidt, M. C. (2001). The leadership styles of women and men. *Journal of Social Issues, 57*, 781-797.
- Eagly, A. H., & Johnson, B. T. (1990). Gender and leadership style: A meta-analysis. *Psychological Bulletin, 108*, 233-256.
- Eaton, A. A., Majka, E. A., & Visser, P. S. (2008). Emerging perspectives on the structure and function of attitude strength. *European Review of Social Psychology, 19*, 165-201.
- Eaton, A. A., & Visser, P. S. (2006, May). *The effects of social power on susceptibility to attitude change*. Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago.
- Eaton, A. A., & Visser, P. S. (2007). *High power social roles and openness to attitude change*. Unpublished raw data, University of Chicago.
- Eaton, A. A., & Visser, P. S. (2008, May). *How high-power role norms affect resistance to persuasion: A biased-processing account*. Paper presented at the annual meeting of the Midwestern Psychological Association, Chicago, IL.
- Feingold, A. (1994). Gender differences in personality: A meta-analysis. *Psychological Bulletin, 116*, 429-456.
- Friedman, E. G., & Marshall, J. D. (2004). *Issues of gender* (A Longman Topics Reader). New York: Pearson Education.
- Galinsky, A. D., Gruenfeld, D., & Magee, J. (2003). From power to action. *Journal of Personality and Social Psychology, 85*, 453-466.
- Glenn, N. O. (1974). Aging and conservatism. *Annals of the American Academy of Political and Social Science, 415*, 176-186.
- Goffman, E. (1959). *The presentation of self in everyday life*. Oxford, UK: Doubleday.
- Havighurst, R. J. (1953). *Human development and education*. New York: David McKay.
- Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *Journal of Social Issues, 57*, 657-674.
- Henry, W. E. (1965). Engagement and disengagement: Toward a theory of adult development. In M. P. Lawton & T. A. Salthouse (Eds.), *Essential papers on the psychology of aging* (pp. 56-67). New York: New York University Press.
- Horn, J. L., & Cattell, R. B. (1967). Age differences in fluid and crystallized intelligence. *Acta Psychologica, 26*(2), 107-129.
- Katz, D., & Kahn, R. L. (1978). *The social psychology of organizations* (2nd ed.). New York: Wiley.
- Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review, 110*, 265-284.
- Kohn, M. L., & Schooler, C. (1983). *Work and personality: An inquiry into the impact of social stratification*. Norwood, NJ: Ablex.
- Lachman, M. E., & Weaver, S. L. (1998). Sociodemographic variations in the sense of control by domain: Findings from the MacArthur Studies of Midlife. *Psychology and Aging, 13*, 553-562.
- Leventhal, G. S. (1980). What should be done with equity theory? New approaches to the fairness in social relationships. In K. J. Gergen, M. S. Greenberg, & R. H. Willis (Eds.), *Social exchange theory* (pp. 27-55). New York: Plenum.
- Levitant, L. C., & Visser, P. S. (2008). The impact of the social context on resistance to persuasion: Effortful versus effortless responses to counter-attitudinal information. *Journal of Experimental Social Psychology, 44*, 640-649.
- Lieberman, S. (1956). The effects of changes in roles on the attitudes of role occupants. *Human Relations, 9*, 385-402.
- Markus, H. R., & Lachman, M. E. (1996, September). *Attributes and traits: Collective and individual approaches*. Paper presented at the MIDMAC meeting, Cambridge, MA.
- Marsden, P. V. (1987). Core discussion networks of Americans. *American Sociological Review, 52*(1), 122-131.
- McCall, G., & Simmons, J. (1978). *Identities and interactions*. New York: Free Press.
- Mirowsky, J., & Ross, C. E. (1983). The multidimensionality of psychopathology in a community sample. *American Journal of Community Psychology, 11*, 573-591.
- Mirowsky, J., & Ross, C. E. (1989). *Social causes of psychological distress (social institutions and social change)*. Hawthorne, NY: Aldine de Gruyter.
- Neugarten, B. L. (1968). The awareness of middle age. In B. L. Neugarten (Ed.), *Middle age and aging* (pp. 93-98). Chicago: University of Chicago Press.
- Neugarten, B. L., & Danon, N. (1974). The middle years. In S. Arieti (Ed.), *The foundations of psychiatry* (Vol. 1, pp. 592-608). New York: Basic Books.
- Petty, R. E., & Krosnick, J. A. (Eds.). (1995). *Attitude strength: Antecedents and consequences*. Hillsdale, NJ: Lawrence Erlbaum.
- Rasinski, K. A., Visser, P. S., Zagatsky, M., & Rickett, E. (2005). Using implicit goal priming to improve the quality of self-report data. *Journal of Experimental Social Psychology, 41*, 321-327.
- Riley, M. W., Johnson, M. E., & Foner, A. (Eds.). (1972). *Aging and society, Volume 3: A sociology of age stratification*. New York: Russell Sage.
- Roberts, B. W., & Walton, K. (2004). *Patterns of mean-level change in personality traits across the life course: A meta-analysis of longitudinal studies*. Champaign: University of Illinois Press.
- Ryff, C. D. (1989). In the eye of the beholder: Views of psychological well-being among middle-aged and older adults. *Psychology & Aging, 4*, 195-210.
- Sapiro, V., Rosenstone, S. J., & the National Election Studies. (1998). American national election study: 1998 pilot study (2nd ICPSR ver) [Computer File]. Ann Arbor: University of Michigan, Center for Political Studies, Interuniversity Consortium for Political and Social Research.

- Sears, D. O. (1981). Life stage effects on attitude change, especially among the elderly. In S. B. Kiesler, J. N. Morgan, & V. K. Oppenheimer (Eds.), *Aging: Social change* (pp. 183-204). New York: Academic Press.
- Shanas, E. (1968). Loneliness, isolation and desolation in old age. In E. Shanas, P. Townsend, & D. Wedderburn (Eds.), *Old people in three industrial societies* (pp. 271-276). New York: Atherton.
- Shapiro, R., & Mahajan, H. (1986). Gender differences in policy preferences: A summary of trends from the 1960s to the 1980s. *Public Opinion Quarterly*, 50(1), 42-61.
- Shweder, R. A. (1998). Welcome to middle age! (and other cultural fictions). In R. A. Shweder (Ed.), *Studies on successful midlife development* (pp. xxii-xv). Chicago: University of Chicago Press.
- Sobel, M. E., (1982). Asymptotic confidence intervals for indirect effects in structural equation models. In S. Leinhardt (Ed.), *Sociological methodology 1982* (pp. 290-312). Washington, DC: American Sociological Association.
- Spence, J., T., & Buckner, C. (2000). Instrumental and expressive traits, trait stereotypes and sexist attitudes. What do they signify? *Psychology of Women Quarterly*, 24, 44-62.
- Staw, B. M., & Ross, J. (1980). Commitment in an experimenting society, an experiment on the attribution of leadership from administrative scenarios. *Journal of Applied Psychology*, 65, 249-260.
- Stryker, S. (1987). Identity theory: Developments and extensions. In K. Yardley & T. Honess (Eds.), *Self and identity: Psychosocial perspectives* (pp. 89-103). Chichester, UK: Wiley.
- U.S. Dept. of Commerce, Bureau of the Census. (2002). American community survey, 2002 [Computer File]. Washington, DC: U.S. Dept. of Commerce, Bureau of the Census; Ann Arbor, MI: Interuniversity Consortium for Political and Social Research.
- Verba, S., Lehman Schlozman, K., Brady, H. E., & Nie, N. (1990). American citizen participation study, 1990 [Computer file]. Chicago: University of Chicago, National Opinion Research Center (NORC); Ann Arbor, MI: Interuniversity Consortium for Political and Social Research.
- Visser, P. S., & Krosnick, J. A. (1998). Development of attitude strength over the life cycle: Surge and decline. *Journal of Personality and Social Psychology*, 75, 1389-1410.
- Visser, P. S., & Mirabile, R. R. (2004). Attitudes in the social context: The impact of social network composition on individual-level attitude strength. *Journal of Personality and Social Psychology*, 87, 779-795.
- Wood, D., & Roberts, B. W. (2006a). Cross-sectional and longitudinal tests of the personality and role identity structural model (prism). *Journal of Personality*, 74, 779-809.
- Wood, D., & Roberts, B. W. (2006b). The effect of age and role information on expectations for big five personality traits. *Personality and Social Psychology Bulletin*, 32, 1482-1496.

Received November 11, 2008

Revision Accepted May 25, 2009