

Revisiting the Measurement of Group Schemas in Political Science

Kirill Zhirkov

Nicholas A. Valentino

University of Michigan

[Draft. Please don't cite or circulate]

Abstract

While schema theory motivated the original measures of automatic cognitive associations between constructs in memory, researchers soon modified these to tap a different construct: implicit attitudes about social groups that elude standard self-reports. As the so-called implicit attitude revolution gained steam, the original measurement goal got much less attention, especially in political science. We believe the schema concept---automatic cognitive associations between features of an attitude object---continues to hold great value for political psychology. We offer a retrofit of the popular implicit association test (IAT), one more efficient than many lexical tasks, to tap these associations in surveys. The new technique captures the degree to which citizens link ideas about ostensibly group-neutral policies to particular social categories. We use this measurement strategy to explore the psychological mechanisms underlying group-centrism in politics, an effort that was largely abandoned due to difficulties in measurement. Results from four studies offer practical suggestions about the application of implicit measures for capturing the automatic ways people link groups to important political objects. We conclude by discussing the broader promise of implicit measurement of group schemas, not just implicit affect, for political psychology.

In his groundbreaking work, *The Nature of Belief Systems in Mass Publics*, Converse (1964) raised a number of foundational puzzles for political psychologists. The central finding, defying the conventional wisdom at the time, was that very few people think of politics in ideologically coherent ways. This result has held up nicely over the last fifty years (Kinder and Kalmoe 2017): instead of ideology, most citizens seem to rely on social identities as shortcuts for constructing political judgments. In other words, policy opinions are group-centric, i.e. driven strongly by attitudes towards social groups seen to benefit or hurt (Nelson and Kinder 1996). Group-centrism implies that policies benefiting “deserving” groups---effectively, the ones a respondent likes---receive greater support. Converse’s work, followed by many others, suggests that effortful thought about how policies and parties map onto the interests of the individual citizen was not a realistic model for explaining mass politics. Instead, political thinking seems to be quick, group-centric, affective, and highly symbolic (Sears 1993).

So, we begin with the assumption that group identities and affect are central to political cognition, combined with the idea that people do not usually think very hard about politics. The limitations of humans’ processing of social information have been recognized for over a half-century (Simon 1957). These constraints are often conceptualized in the form of stereotypes---strong and persistent connections linking social groups to other categories, attributes, and/or behaviors (Schneider 2004). Stereotypes may help simplify complex social interactions and facilitate political coalition building, but they also can exacerbate discrimination and undermine citizens’ ability to make choices that maximize benefits and minimize costs (Page 2007). Furthermore, stereotyping has a decidedly affective dimension---people feel strongly about specific groups, and those attitudes contribute to the severity of problems stereotypes create. All these insights have led to large advances in understanding mass political dynamics.

Unfortunately, they may also have led scholars away from consequential variation in non-affective political cognition---the simple but important linkages people make about what goes with what in the political world.

In order to more fully understand the origins and dynamics of group centrism in politics, we revisit some basic insights about social cognition that emerged in social psychology almost four decades ago in the form of the schema theory (Fiske and Linville 1980; Taylor and Crocker 1981). At the time, political scientists suspected that the schema concept could help explain the persistence and real-life impact of automatic cognitive associations between social groups and political objects. The schematic model was introduced to political science in the 1980s (Conover and Feldman 1984), but was never exhaustively tested---primarily, we think, due measurement challenges. Public opinion surveys present serious challenges for measuring automatic mental connections directly. Instead, the existence of schemas was often inferred by associations between group attitudes and political objects. We explain this in more detail below.

In this chapter, we propose a novel measurement strategy that addresses a core weakness of existing approaches: the inability to assess the strength of associations between social groups and political attitude objects at the individual level. Our method is based on objective time response technique and uses the architecture of the implicit association test (IAT; Greenwald, McGhee, and Schwartz 1998). We thus revisit the original goal of implicit tasks: measuring associations between concepts in memory independent of their emotional or affective content. Using this measurement strategy, we run four studies testing the schematic approach.

The chapter is organized as follows. We first recapitulate the basic tenets of the schematic approach to social cognition and, specifically, its application to the realm of politics. Then, we briefly outline the history of implicit measurement, emphasizing its original focus on

non-affective associations in memory, and introduce our original instrument. We next present results from four studies, in which we apply the measurement strategy across political attitude domains and national contexts. In conclusion, we formulate some practical suggestions for researchers interested in using the proposed measures in their own work.

The Schematic Model of Human Cognition

Schema theory posits that human brains maintain associative networks linking related concepts in memory (Anderson 1983). Each specific concept in memory is conceived of as a node, with linkages between nodes varying in strength depending on how frequently or recently the two concepts had been paired in previous experience. A schema is thus a network of nodes (concepts) in memory connected with edges (cognitive associations).

Consider the following example. Humans tend to associate birds with singing, so that hearing birdsong causes a person to automatically imagine the bird, even if one is not seen. The association is likely automatic, i.e. the image appears without conscious effort. Greater experience with birds leads to more developed associations. For instance, experienced birders easily recognize many species by their songs, and can call up in their minds the coloration, size, and behavior of the bird producing that melody. In general, a target category (bird) becomes associated with attributes (singing, coloration, size) in memory.

Social schemas help individuals to organize existing knowledge and collect new information about the world. Specifically, they help people to make sense of abstract social categories by associating them with familiar people and/or situations, reducing the cognitive effort needed to process information and make decisions (Moskowitz 2005). Associations between social attributes within schemas allow people to correctly interpret relevant information

about the object and use it to make guesses about other characteristics that are unavailable at the time. As noted by Bruner and Goodman (1947),

...perceptual categorization of an object or event permits one to go beyond the properties of the object or event perceived to a prediction of other properties of the object not yet tested. The more adequate the category systems constructed for coding environmental events in this way, the greater the predictive veridicality that results (14).

In other words, schemas can enhance the efficiency of social cognition.

At the same time, schema-based reasoning creates several potential challenges. First, schemas lead individuals to discount or dismiss information that does not fit the mental model (Hunzaker 2016). In other words, schemas are relatively stable and resilient to change. Second, schemas do not necessarily spring from lived experiences, but can also be derived from biased sources like friends, media, or figures of authority. Third, schemas are usually assumed to be activated automatically as response to social stimuli, without regard for their usefulness in each particular case (Bargh, Chen, and Burrows 1996). All these features suggest the use of schemas can sometimes lead to suboptimal outcomes.

Another point of debate is whether the impact of schemas springs entirely from the massive but unconscious underside of the iceberg of human cognition or, instead, from the conscious tip riding above the waves. Social and cognitive psychologists have yet to arrive at a consensus about how much of our cognition is automatic and outside conscious awareness (Bargh and Chartrand 1999; Dijksterhuis and Bargh 2001). In any case, there is a consensus that schemas do not need to be consciously acknowledged in order to impact opinions and behavior.

The Schematic Model for Politics

All the features of schemas discussed above make their application particularly relevant for the study of political cognition. Politics often forces people to make judgments about abstract objects that are both unfamiliar and of negligible direct value. This makes the application of schemas useful to voters who must choose between policies, parties, and candidates. At the same time, the nature of the political process amplifies the perils of schemas as cognitive tools: They can make political loyalties more rigid, give political actors incentives to misrepresent information, and lead to decisions that undermine the interests of voters.

An important contemporary example of this logic would be relevant in the domain of immigration. If the theory we advance is correct, policy schemas that become entwined with social groups should be politically consequential. For instance, one of the strictest and most sweeping immigration laws in the U.S. was passed in 2010 in Arizona---SB 1070---requiring state law enforcement officers to inquire about the citizenship status of individuals they were arresting if they had a reasonable suspicion that the individual was in the country illegally. Critics of the law argued that citizens who belong to social groups stereotypically marked as immigrants---most importantly, Latinos---would be actively and disproportionately profiled. Indeed, Americans do seem to think of Latinos when they think about immigrants (Valentino, Brader, and Jardina 2013). These well-worn mental links between the policy target (immigrants) and a particular social group (Latinos) might have consequences in the real world.

Originally, the schematic model has been imported into political science from social psychology to integrate elements of sociological and psychological theories explaining the origins of belief systems (Conover and Feldman 1984). The initial formulation of the schematic model for political behavior was relatively broad: it was thought to encompass the way the brain stored information about a wide array of objects including values, issue positions, party

attachments, and candidate preferences. However, the approach was later narrowed to specify the way attitudes about social groups mapped onto mass political preferences (Conover 1988).

The model rests on a series of assumptions that are now widely accepted in behavioral political science. It begins with the premise that human cognitive resources are limited, and an average person prefers not to deliberate very extensively about politics. Therefore, in order to make fast and relatively consistent judgments about political objects, individuals rely on schemas.¹ A large share of these schemas represent links between political objects---policies, parties, and candidates---and social groups, with which people have a lot of experience. Importantly, as a group and a political object become schematically linked, emotions about the group are transferred into political preferences.

The model offers a nice framework for understanding the role of groups in public opinion formation. First, it is grounded in a large literature in social and cognitive psychology. Second, it is based on intuitive and uncontroversial assumptions. Third, it illuminates a psychological mechanism that may underlie the long observed statistical association between opinions about social groups and political preferences. Finally, it is general: it can help explain public opinion formation in a variety of cultural contexts and across national borders.

To date, however, applications of the schematic model in empirical research on public opinion have been surprisingly limited. We suspect the measurement of schemas has been a key obstacle. Consider the elements of the model as presented in Figure 1. Figure 1a represents the model as it has been tested to date in a variety of studies, including the original paper by

¹ Our use of the term “schema” is different from the one suggested by Conover (1988). She distinguishes between the four types: self-schemas, ingroup schemas, outgroup schemas, and causal schemas. We believe the first three types are largely equivalent to group identities and/or group attitudes. Therefore, we reserve the term “schema” for the fourth category: a cognitive linkage between a social group and a political attitude object.

Conover (1988). Researchers estimate a regression model predicting political preferences with group attitudes and interpret a significant coefficient as evidence for the respective schema.

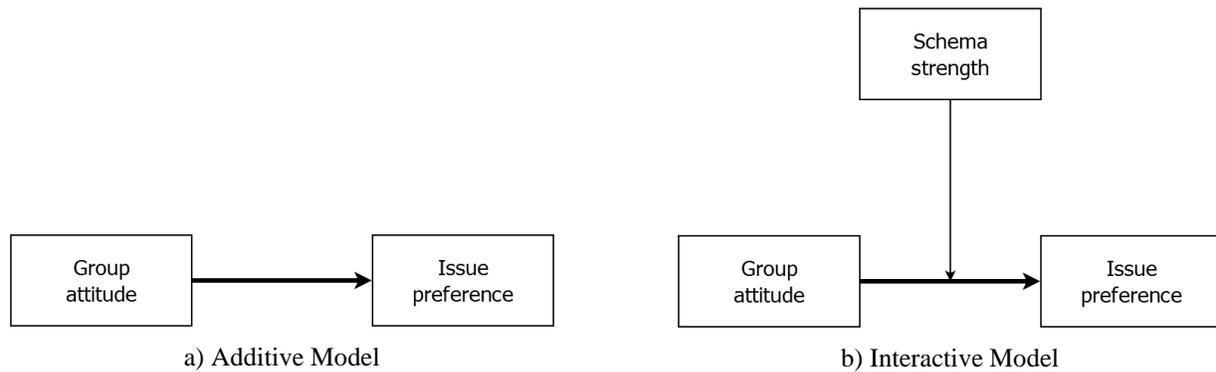


Figure 1. The two variants of the schematic model

This approach is problematic because the key variable within the model---the direction and strength of cognitive associations between the group and the issue, i.e. the schema---is never measured. By omitting it, researchers essentially assume schema strength to be constant at a relatively high level across the population. A strong test of the model must include an individual-level measure of schema strength (as in Figure 1b). Conceptually speaking, schema strength moderates the effect of group attitudes on political preferences.

Early Measurement of Cognitive Associations

While measurement challenges remain, scholars have explored a wide variety of techniques for tapping cognitive associations between constructs in memory. Early attempts were based on observable implications of the underlying model: activating one node in a schematic network would “spread” to other closely linked nodes, a phenomenon known as “spreading activation” (Collins and Loftus 1975). For example, making gender salient by having a person focus on what it is like to be a man or woman can be expected to cause them to identify gendered nouns (such

as “mother” vs. “father”) more quickly than gender neutral ones in a lexical task. The original motivation for measures like this one was to examine whether automatic accessibility could be altered by a prime (Fazio 1990). So, for example, one would prime the concept “rude” via a sentence construction task where random word strings were placed in order that would convey a rude behavior and then an individual would be timed to see how long it took to behave rudely in a lab setting (Bargh, Chen, and Burrows 1996). Simple lexical response tasks were also used in priming research, where the recognition of words thought to be relevant to a schema were contrasted with those unrelated to the schema after exposure to a stimulus.

Several consistent patterns largely confirming the basic tenets of schema theory have emerged. First, people cannot recall or process every possible category relevant to a given decision (Taylor and Fiske 1978), so they utilize the most accessible categories to classify stimuli while making decisions. For instance, impressions of a person are significantly colored by priming a positive or a negative trait term in an “unrelated” task (Higgins, Rholes, and Jones 1977): An individual described as enjoying risky outdoors activities is assessed as “adventurous” vs. “reckless” depending on whether affectively charged personality descriptions have been primed. This result is in line with the accessibility theory: some categories are used more readily than others during impression formation about the self and others (Tversky and Kahneman 1974; Srull and Wyer 1979).

Another important aspect of the category activation process is the “fit” of the primed category with the incoming stimulus (Bruner 1957): the priming effect is strongest when the active trait categories are applicable to the description of the stimulus person. This phenomenon has important implications for priming effects related to social identities, such as gender. For example, priming gender-specific traits leads subjects to more quickly identify female pronouns

compared to nonsense letter strings---even when told that the gender primes are irrelevant to the task---suggesting gender stereotypes are activated automatically (Banaji and Hardin 1996).

Similarly, subjects primed to think of women as sexual objects respond faster to sexist words in a lexical task and are subsequently more likely to evaluate female job applicants in stereotype-consistent ways (Rudman and Borgida 1995). Thus, when a social group is made salient, it is invoked automatically in subsequent decision-making involving the relevant identity.

Altogether, these early attempts to capture schematic associations attempted to change the cognitive associations of interest---and, therefore, were based on the assumptions that relatively strong and uniform schemas existed within the population. It is interesting that the two most widespread types of survey experiments in political psychology, aimed at identifying respectively framing and priming effects (Chong and Druckman 2007; Hutchings and Jardina 2009), make assumptions identical to the schematic model. Priming experiments attempt to activate or suppress a specific schema, such as in the case of race and redistribution (Valentino, Hutchings, and White 2002), whereas framing studies aim to switch between different relevant schemas, such as free speech vs. public safety in the context of a Klan rally (Nelson, Clawson, and Oxley 1997). These experiments, however, return only a single result indicating either the presence or absence of the hypothesized association by revealing a significant vs. insignificant treatment effect. Our goal in this chapter is to come up with an individual-level measure of schema strength that would allow the researcher to (a) uncover the previously underexplored variance of schematic associations within the population and (b) estimate the effects of these schemas on the political outcomes of interest.

The Implicit Association Test Architecture

To measure the direction and strength of group schemas in political cognition, we adopt a modified version of the implicit association test (IAT; Greenwald, McGhee, and Schwartz 1998). The IAT has been validated repeatedly in psychological research (Greenwald, Poehlman, Uhlmann, and Banaji 2009), and its creators maintain a comprehensive online infrastructure that eases its application in practice.

The standard IAT measures the strength of associations between concepts (e.g., flowers vs. insects) and affective attributes (e.g., pleasant vs. unpleasant). The task requires respondents to quickly sort stimuli (pictures, symbols, or words) into categories that are on the left and right hand side of the computer screen by pressing the left-hand key if the word belongs to the category on the left and the right-hand key if the word belongs to the category on the right. The main idea behind the IAT architecture is that classification is easier, and therefore faster, when closely related items share the same response key. If an attitude object is positively affectively valenced (“flower”), an individual will more quickly pair the object with an affectively positive word (“pleasant”) compared to an affectively inconsistent one (“unpleasant”). The normalized difference between sorting times in affectively consistent versus inconsistent pairs is known as the D-score.

To date, timed-response tasks have been predominantly applied to measure implicit affective evaluations of social groups or political objects, which are then used to predict explicit attitudes and behaviors (for a comprehensive review, see Gawronski, Galdi, and Arcuri 2015). A more recent application is the “implicit identity” task- a variant of the IAT that uses references to the respondent (“self”) vs. others and a social group of interest, such as a party, to measure identification strength (Hawkins and Nosek 2012; Theodoridis 2017). Within the task, respondents sort stimuli denoting self (e.g., Me or My) and others (e.g., Them or Their) and

stimuli denoting the identity category of interest, such as a political party. This particular application is closest to ours because it does not involve affective evaluations of any object---but is also distinct because it taps links between the self and an attitude object, not general associations between concepts and/or attributes.

The IAT has drawn some criticism for both theoretical and methodological reasons. Some have suggested that differences in sorting times may simply tap the awareness of a group's social stigma, not the respondent's true attitude, let alone an intention to discriminate (Arkes and Tetlock 2004). Low test--retest reliability has also been a persistent problem (Nosek, Greenwald, and Banaji 2005). In addition, it is unclear how the scores substantively map to the underlying theoretical construct---such as prejudice in the case of the best known "race IAT" (Blanton and Jaccard 2006). Finally, IAT scores heavily depend on the specific stimuli used as well as on the overall context in which the test is taken (Meissner and Rothermund 2015; Rothermund and Wentura 2004).

Here, we do not use the IAT to measure affect or prejudice, instead we employ the test architecture to record reaction times to pairs of objects presumed to be schema consistent compared to those that are schema inconsistent. Therefore, problems mentioned above are not critical for our application. Our proposed measure is not designed to categorize respondents as prejudiced or not---our D-scores simply rank respondents in terms of the strength of the cognitive association between a group and a party. Using this measure, we explore whether the strength of a cognitive link between a party and gender group interacts with affective evaluations of the latter to predict affective evaluations of the former. Whether the IAT measures "true" cognitive linkages between groups and parties or just the "awareness" that many others believe such linkages exist is, after all, an empirical question. If we are simply tapping beliefs about the

societal prevalence of such associations, and those are orthogonal to an individual's own attitudes about these objects, then the measure will not predict the political outcomes of interest.

Finally, since the IAT requires precision in capturing response times, its use online---the most cost-effective mode of data collection in the social sciences---has been limited until recently due to potential impact of internet connection speed. Fortunately, a variety of software solutions exist. One is Inquisit Web, software developed especially for implementation of the timed-response tasks in online studies.² Respondents download a browser plugin that implements the task on their local hard drive and then transfers recorded data to a server, so that response latencies are not impacted by the user's network connection speed.

Outline of Empirical Studies

Next, we validate our measurement instrument and test the schematic approach to public opinion formation in four studies. Studies 1 and 2 address the cognitive linkages between political parties and social groups building upon the approach to partisanship as an "umbrella" identity (Green, Palmquist, and Schickler 2002; Lazarsfeld, Berelson, and Gaudet 1948). Studies 3 and 4 revisit a well-known example of group--policy linkage in political psychology: the racialization of social welfare in the United States (Brown-Iannuzzi et al. 2017; Gilens 1999).

In all four studies, we follow the same procedure. We measure the schemas of interest using the proposed IAT architecture. Then, we present descriptive statistics on schema distributions within the studied samples. Mean scores significantly different from zero signify the presence of a non-trivial association between the two categories of interest, e.g. a social group and a party or policy. Then, we use these scores to predict relevant political outcomes. See Table 1 for the list of studies with corresponding schemas and political outcomes.

² <https://www.millisecond.com/products/inquisit5/weboverview.aspx>.

Table 1. Outline of empirical studies

	Schema	Political outcome
Study 1	Gender--party	Partisan attitudes (Republican Party vs. Democratic Party)
Study 2	Religion--party	Partisan attitudes (Labour Party)
Study 3	Race--welfare	Support for welfare programs
Study 4	Race--poverty	Support for welfare programs (vs. other programs as a placebo test)

Study 1: Gender and Parties in the U.S.

We first explore the value of our new measure by examining the political consequences of variation in the cognitive association between gender and the two major parties in the United States, which we refer to as the “gender--party schema.” Americans have been found to hold gendered images of the parties---i.e., they commonly associate femininity with Democrats and masculinity with Republicans---according to both explicit and implicit measures (Winter 2010).

We use a measure of group--party linkages based on the IAT architecture to replicate and extend these previous findings. Our goals are to validate the proposed measurement strategy and to test whether gendered images of parties are consequential for partisan attitudes.

Data and Measures

We recruited a sample of respondents using Amazon Mechanical Turk (MTurk), oversampling moderates and conservatives to balance the sample on political ideology.³ The sample included only those who responded from the United States, had unique IP addresses, and showed acceptable error rates in the IAT task.⁴ This left us with 639 valid cases out of 703 otherwise completed surveys. In the analyzed sample, 84.4% respondents were non-Hispanic Whites. The sample was balanced in terms of gender (54% female), but overrepresented the highly educated, with nearly half having Bachelor’s degrees or higher (48%). The modal household income was

³ Despite being substantially more diverse than most other convenience samples, such as college students, MTurk is known to significantly overrepresent liberals compared to the general population (Berinsky, Huber, and Lenz 2012).

⁴ For each unique IP address, we kept only the first (earliest) response. This procedure was applied in all studies described in this chapter.

between \$40,000 and \$50,000. The mean age was 39.8 years. In terms of partisanship, 36.9% of respondents identified as Democrats, 34.6% as Republicans, and 26.3% as Independents.

In constructing the IAT, we used masculine and feminine English nouns---man, boy vs. woman, girl---similar to the “gender-career IAT” (Nosek, Banaji, and Greenwald 2002). For the symbols of the Democratic Party and the Republican Party, we used a collection of publicly available images representing official as well as unofficial logos and mascots (elephants vs. donkeys), campaign buttons, and posters. IAT D-scores were calculated from the observed response latencies according to the updated guidelines (Greenwald, Nosek, and Banaji, 2003).

Gender attitudes were assessed using the hostile sexism scale (Glick and Fiske 1996). Attitudes towards political parties were measured using an 11-point scale ranging from 0 = *Strongly dislike* to 10 = *Strongly like*. The dependent variable is the difference between the Democratic and Republican feeling thermometers---a measure of attitudinal preference for the Republican Party vs. the Democratic Party.

Results

Figure 2 presents the empirical density of D-scores in the analyzed sample. Note that, in theory, D-scores can assume values in the interval from -2 to 2. The distribution is bi-modal; a Shapiro-Wilk test rejects normality on the 99.9% confidence level ($z = 3.25, p < .001$). One mode coincides with the neutral point, where respondents are no faster in identifying the schema-consistent pairings of the Democratic Party with females and the Republican Party with males, compared to the schema-inconsistent pairs. Another mode indicates a group of respondents with rather strong stereotype-consistent gender--party linkages (feminine Democrats, masculine Republicans). The overall mean D-Score is therefore positive ($b = 0.16, p < .001$), indicating that

the average respondent in our sample implicitly associates the Democratic Party with women and the Republican Party with men.

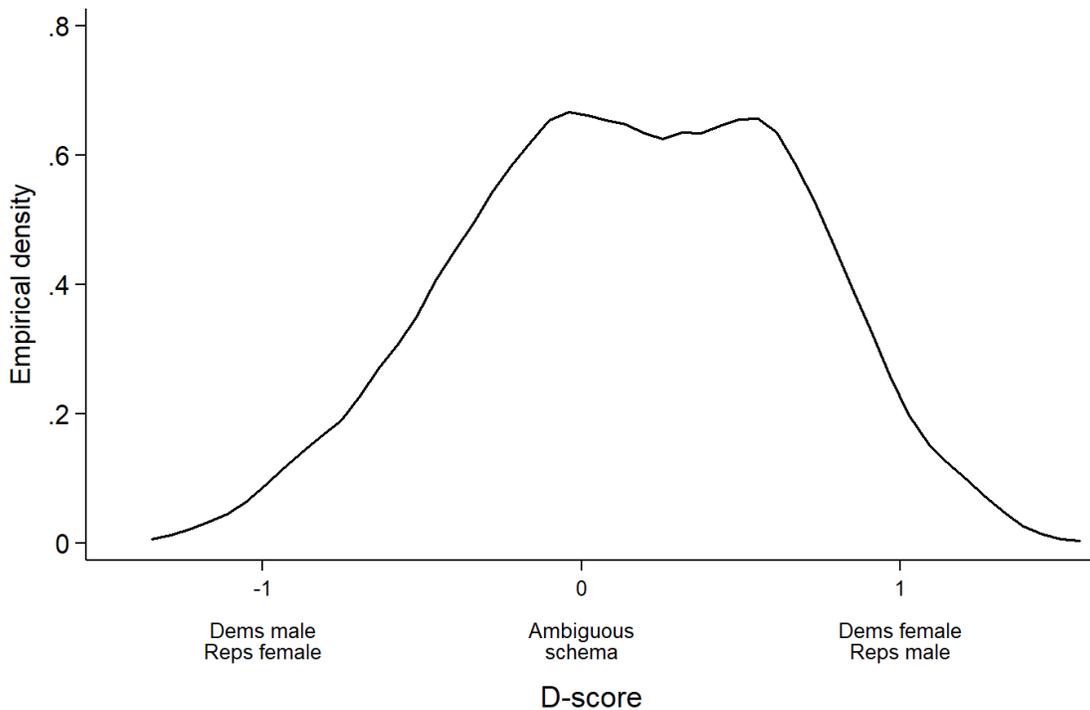


Figure 2. Observed distribution of the gender--party schemas

Next, we turn to a test of a substantive hypothesis regarding the impact of gender--party schemas on partisan attitudes. We first estimate regression models independently for males and females. If the schematic model is correct, the more strongly one associates one's gender with a given party, the greater should be one's attitudinal preference for that party. Results of the regression analysis presented in Table 2 show strong support for this conjecture. In both cases, schema strength has a statistically significant effect on partisan attitudes in the predicted direction. Specifically, males who think of the Republican Party as male and the Democratic Party as female express much more positive evaluations of the Republican party. For females, the effect is the complement: having a masculine image of the Republicans and feminine image

of the Democrats leads women to feel much warmer towards the Democratic Party. The magnitude of the schema effect on party preference is somewhat larger for women than for men but the difference is not significant ($p = .118$). The explained variance in partisan preference is almost twice as large for women than for men in the sample but variables other than the gender--party schema contribute to this difference.

Table 2. Gender--party schemas and attitudinal preference for the Republican Party affect among men and women

	Men	Women
Gender--party schema	3.97 ^{***} (0.66)	-5.06 ^{***} (0.52)
Age	-0.01 (0.03)	0.08 ^{***} (0.02)
Education	-0.38 (0.25)	-0.66 ^{**} (0.23)
Income	0.03 (0.11)	0.17 (0.10)
Black	-1.84 (1.18)	-3.51 ^{***} (1.03)
<i>N</i>	294	343
<i>R</i> ²	0.130	0.290

Note. Standard errors in parentheses. Greater gender--party schema = stronger association of women with the Democratic Party and men with the Republican Party

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

To test whether group affect interacts with schema strength to impact political preferences, we estimate the interaction between implicit gender--party schema strength with the hostile sexism battery. Results are presented in Table 3. The interaction is significant and in the predicted direction: schema strength amplifies the relationship between sexism and the attitudinal preference for Republicans over Democrats.

Table 3. Gender--party schemas, sexism, and attitudinal preference for the Republican Party

	Effect estimate
Gender--party schema	-2.31 ^{***} (0.67)
Hostile sexism	10.86 ^{***} (0.72)
Schema * Sexism	3.31 ^{**} (1.28)
Female	0.37 (0.39)
Age	0.06 ^{***} (0.02)
Education	-0.26 (0.15)
Income	0.12 (0.07)
Black	-2.88 ^{***} (0.70)
<i>N</i>	637
<i>R</i> ²	0.367

Note. Standard errors in parentheses. Greater gender--party schema = stronger association of women with the Democratic Party and men with the Republican Party

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

In order to interpret these results substantively, we present the interaction in the graphical form (Brambor, Clark, and Golder 2006). Figure 3 demonstrates that respondents with high levels of sexism tend to express attitudinal preference for the Republican Party over the Democratic Party regardless of the direction and strength of their gender--party schemas. On the other hand, the schema matter substantially for those low in sexism. Non-sexists feel much more warmly toward the Democratic Party as the “masculine Republicans, feminine Democrats” gender--party schema strengthens, but are almost indifferent toward the two parties when the schema is opposite.

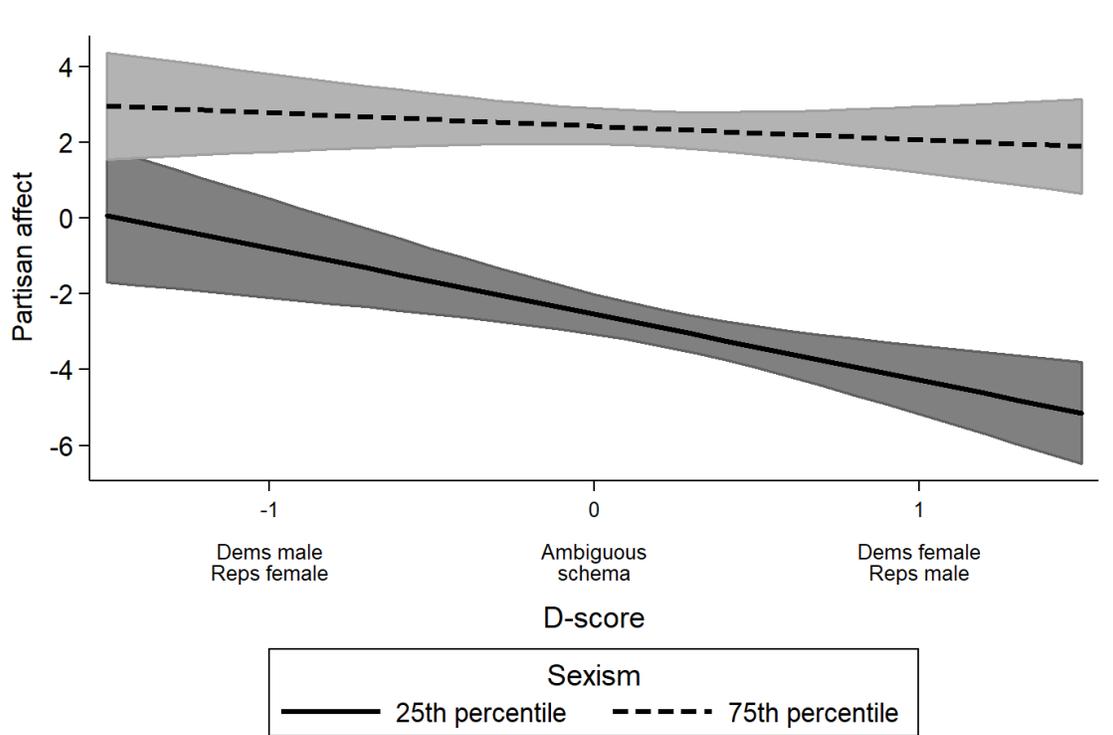


Figure 3. The interactive effect of gender--party schemas and sexism on attitudinal preference for the Republican Party

Discussion

The results of Study 1 support the schematic model with regard to gender and partisan attitudes. First, we find that respondents have consistent gender--party cognitive linkages: individuals, on average, are more likely to identify pairs that implied the Democratic Party is feminine and the Republican Party is masculine. Second, the strength of this linkage is a significant predictor of partisan polarization. Respondents feel warmer towards the party that they perceive closest to their gender. Finally, the gender--party schema interacts significantly with attitudes towards women. It is most consequential for respondents low in sexism, perhaps because highly sexist voters also have other issue-based reasons for preferring the Republican Party.

Study 2: Religion and parties in the UK

We next extend the investigation of implicit group--party schemas to a different context. In Study 2 we intend to understand whether respondents in West European countries start to develop implicit schemas linking center-left parties with minority groups. Center-left parties, compared to their right-wing counterparts, are more willing to embrace growing ethnic and religious diversity in Europe---for instance, by nominating politicians with minority backgrounds for political offices (Dancygier 2017). We expect that this shift might have altered popular schemas about partisan coalitions. These processes could also have contributed to the observed decline of the mainstream social democratic parties (Berman 2016). As a testing ground, we use the UK and religious (Christian vs. Muslim) schemas about its main center-left political force, the Labour Party.

Data and Measures

To collect the data, we used the UK-based crowdsourcing platform Prolific. Recent evidence suggests that its participants are naiver, come from more diverse backgrounds, and provide data comparable in quality to MTurk (Peer et al. 2017). Since Prolific allows pre-screening, we recruited only British citizens who reported that their first language was English. Altogether, we obtained 543 complete survey questionnaires. As in Study 1, we excluded duplicated IP addresses, those who responded to survey from outside of the UK, and cases with too many errors in the IAT. Also, many respondents were not able to complete the IAT due to technical difficulties---we discuss this problem more in depth in the concluding sections of this chapter. As a result, the final sample consisted of only 342 respondents. Mean age was 36.4 years; 52.2% of respondents were female; 59.1% had a Bachelor's degree or higher; 92.7% self-identified as White British.

To measure religion--party schemas, we built a single-category implicit association test (SC-IAT; Karpinski and Steinman 2006). SC-IAT is a modification of the original IAT format that measures strength of implicit associations between two attributes and a single object category. Our choice was motivated by the multiparty character of the British political system: it was difficult to choose a single reference object category for the Labour Party.⁵ Within the test, the Labour Party was represented using official logos and badges---similar to ones used for the two major U.S. parties in Study 1. The IAT stimuli for the two religious groups were commonly recognizable Muslim and Christian names, both male and female (e.g., Mohammad and Fatima vs. Harry and Emily). The names were pre-tested on Prolific in a separate sample of 100 individuals, and all names used in the study were rated by respondents as either typically Muslim or Christian.

Attitudes toward the Labour Party was measured using the 11-point party feeling question, identical in format to Study 1. Anti-Muslim attitudes were assessed by asking respondents about four statements concerning Muslims in Britain. A sample statement: “For Muslims who live in Britain, how likely is it that their first loyalty is to Britain rather than to their home country?” Answers were scored on a 7-point Likert scale ranging from 1 = *Extremely likely* to 7 = *Extremely unlikely*.

Results

Figure 4 presents the empirical density of D-scores in the UK sample. The distribution is unimodal and not significantly different from normal according to a Shapiro--Wilk test ($z = -1.53, p = .937$). The mode of the distribution is situated almost exactly at the neutral point and the mean is not significantly different from zero ($b = 0.02, p = .180$). In other words, the average

⁵ It was unclear, for instance, whether the center-right Conservative Party or the radical right UK Independence Party should have been chosen.

respondent in our sample does not implicitly associate the Labour Party with Muslims rather than with Christians.

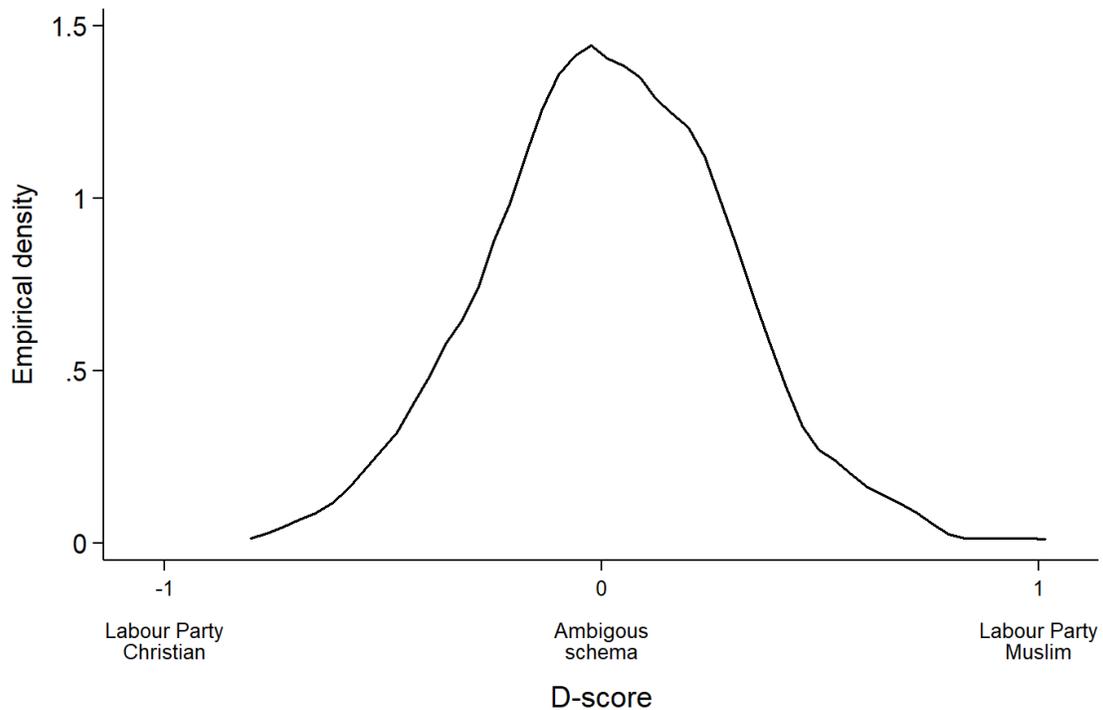


Figure 4. Observed distribution of the religion--party schemas

Are these schemas consequential for respondents' feelings toward the Labour Party? To answer this question, we turn to inferential analysis. We start with estimating a regression model with the direct effect of the religion--party schema on partisan attitudes controlling for issue positions (size of government and environmentalism) and demographics (age, gender, education, social class, and race/ethnicity). Results are presented in Table 4 (see Model 1). The cognitive link between Muslims and the Labour Party, as measured here at least, does not significantly influence feelings toward the Labour Party. Opinions on taxes vs. spending issue and anti-Muslim attitudes, on the other hand, strongly predicts partisan attitudes in the expected way. We then proceed to estimate the interactive model (see Model 2 in Table 4). It assumes that the effect

of the religion--party schema on attitudes toward the Labour Party is moderated by anti-Muslim attitudes. However, empirical results show no support for this prediction.

Table 4. Religion--party schemas, anti-Muslim affect, and attitudes to the Labour Party

	Model 1	Model 2
Religion--party schema	0.75 (0.43)	1.47 (1.09)
Anti-Muslim affect	-0.52*** (0.09)	-0.52*** (0.09)
Schema * Affect		-0.21 (0.30)
Issue: gov't spending	-0.25*** (0.06)	-0.25*** (0.06)
Issue: environment	-0.02 (0.06)	-0.03 (0.06)
Working class	0.20 (0.25)	0.19 (0.25)
Female	0.32 (0.24)	0.34 (0.24)
Age	-0.01 (0.01)	-0.01 (0.01)
Education	0.03 (0.10)	0.03 (0.10)
Non-White	-0.34 (0.45)	-0.34 (0.45)
<i>N</i>	340	340
<i>R</i> ²	0.216	0.217

Note. Standard errors in parentheses. Greater religion--party schema = stronger association of Muslims (rather than Christians) with the Labour Party

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Discussion

Study 2 explores the religion--party linkage in the UK, and returns null results. First, respondents, on average, do not implicitly associate the Labour Party with Muslims more strongly than with Christians. Second, variation in the strength of this linkage is not politically consequential: respondents with larger D-scores do not report more negative feelings about the

Labour Party overall. Third, this null result persists across all levels of affect toward Muslims as a group, contrary to our prediction.

It is possible to interpret the null result substantively: most respondents in the sample do not possess strong cognitive links between Muslims and the Labour Party, and for those who do, the linkage is not consequential. However, one must remember that anti-Muslim attitudes significantly impact feelings toward the Labour Party. Therefore, we suspect that our respondents may hold religious stereotypes about the Labour Party whereas our measure simply has not captured them. We elaborate more on this possibility later.

Study 3: Race and Welfare Programs in the U.S.

In Study 3, we apply the schematic model to a widely debated topic in U.S. politics: the race-centric explanation for welfare policy opinions. The work by Gilens (1999) demonstrates that, when coverage of welfare programs disproportionately depicts African Americans as poor, Whites' opposition to social welfare grows. He also finds that explicit perceptions about the race of welfare beneficiaries influence Whites' support for social welfare policies. Here, we revisit this same policy domain, both to validate our measurement and to see if the political consequences of welfare racialization have persisted. In our analysis, we use the proposed measurement strategy based on the IAT architecture to test the power of race--welfare linkages in predicting opposition to welfare spending at the individual level.

Data and Measures

We collected the data using the Amazon MTurk platform. Initially, we obtained 617 completed questionnaires but, as in previous studies, we deleted duplicate IP addresses, respondents from outside the U.S., and those with high error rates in the IAT. The final sample consisted of 433 cases. The modal age was between 25 and 34 and modal yearly income was between \$30,000

and \$39,999. Also, 52.0% of respondents were female, 82.4% were non-Hispanic White, and 55.0% had a Bachelor's degree or higher. We oversampled moderates and conservatives, so the sample was balanced in terms of partisanship: 37.9% Democrats, 29.1% Republicans, and 30.0% independents.

We took the stimuli for the racial groups from the standard "race IAT" intended to measure automatic preference for White vs. Black faces (Nosek et al. 2007): morphed young Black and White faces cropped at forehead and chin.⁶ Welfare was represented with the names of specific government measures aimed at reducing poverty and/or redistribution of wealth such as food stamps and Medicaid. As a non-racial comparison to welfare, we chose the environmental programs.⁷

Anti-Black prejudice was measured using the standard stereotype battery. We asked respondents to what extent they considered Blacks and Whites hardworking vs. lazy and law-abiding vs. violent. To calculate the overall prejudice scores, we subtracted respondent's ratings of Whites from those of Blacks on the two traits and then took the average of the differences. To measure support for redistributive policies, we asked respondents about their support for spending on public schools, assistance to the poor, public healthcare, and assistance to the homeless. Answers were on a 7-point scale with higher values representing greater support for spending.

Results

⁶ The stimuli are available at: <https://www.projectimplicit.net/stimuli.html>.

⁷ The opposite category is required by the standard IAT design (two categories, two attributes). Given results of Study 2, we decided against using a SC-IAT with welfare as the single target category. We also wanted to have a spending counter-category that would not be likely opposed by liberals/Democrats such as policing or defense---as that would potentially bias the results in our favor. If anything, our choice of environment, another spending category associated with the political left, should have depressed the IAT scores and the regression effects of interest. (And, chances are, it did. We discuss this further in the concluding sections of this chapter.)

We begin by examining the observed distribution of the race--welfare schemas in the analyzed sample. The empirical density is presented in Figure 5. The mode is at zero but the distribution is slightly skewed---more mass is situated on the right side, i.e. among those with positive D-scores meaning faster associations between Blacks and welfare. However, a Shapiro--Wilk test shows no significant deviations from normality ($z = -0.15, p = .559$). At the same time, the mean is greater than zero ($b = 0.12, p < .001$), suggesting expected association of welfare recipients with African Americans in the sample.

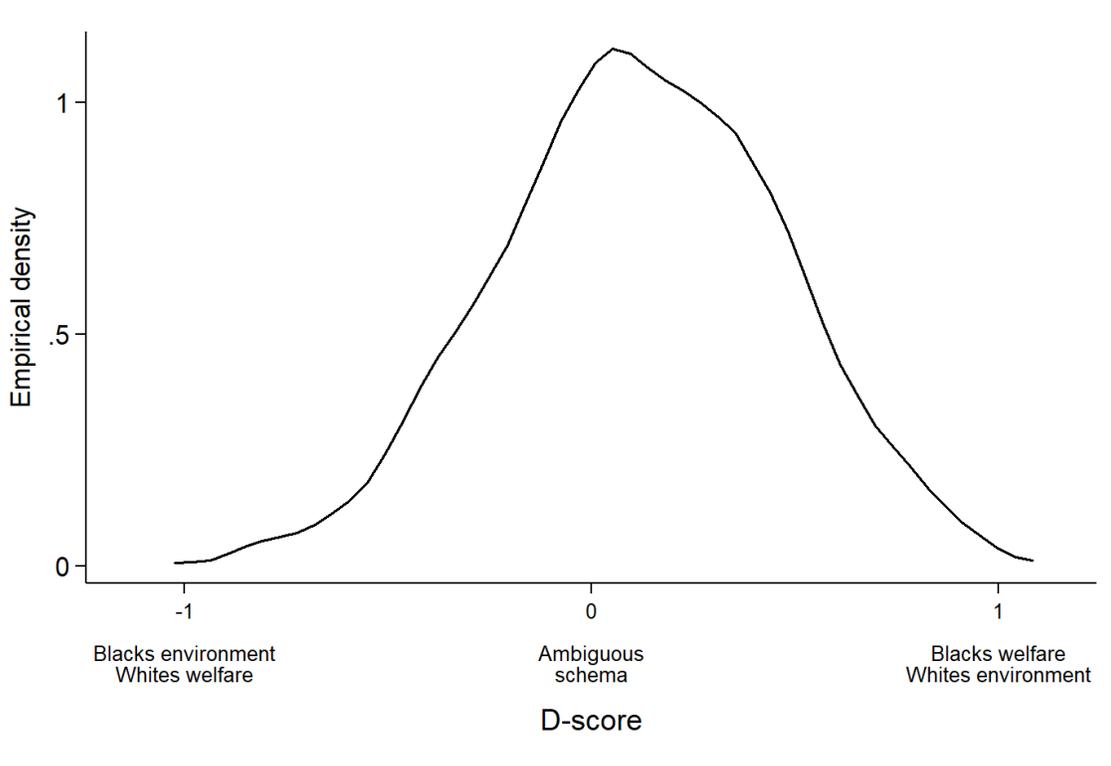


Figure 5. Observed distribution of the race--welfare schemas

However, according to our inferential analysis, these associations are not consequential for respondents' opinions about redistributive policies. Results are presented in Table 5. The race--welfare schemas do not impact support for welfare spending. Instead, the only significant predictors are income and anti-Black prejudice. Specifically, the affluent and those who express

prejudice against Blacks show greater opposition to welfare spending. The null result for the schema variable is true for both the direct effect and the interactive one where it is interacted with anti-Black stereotypes.

Table 5. Race--welfare schemas, anti-Black affect, and support for welfare spending

	Model 1	Model 2
Race--welfare schema	-0.19 (0.18)	-0.15 (0.19)
Anti-Black stereotypes	-0.13*** (0.03)	-0.13*** (0.03)
Schema * Stereotypes		-0.05 (0.07)
Age	-0.07 (0.05)	-0.07 (0.05)
Education	-0.10* (0.05)	-0.10 (0.05)
Income	-0.08*** (0.02)	-0.08*** (0.02)
Non-White	0.27 (0.16)	0.28 (0.16)
<i>N</i>	430	430
<i>R</i> ²	0.135	0.136

Note. Standard errors in parentheses. Greater race--welfare schema = stronger association of Blacks with welfare programs and Whites with non-welfare programs

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Discussion

The results of Study 3 are somewhat ambiguous. On the one hand, we find that our respondents are faster in associating Blacks rather than Whites with welfare programs---suggesting presence of race--welfare linkages in the direction hypothesized by Gilens (1999). At the same time, regression analysis show that the linkages are not consequential for policy attitudes, neither directly nor in interaction with anti-Black prejudice.

Do these findings mean that racialized schemas do not play a role in respondents' positions on welfare? Not necessarily. Remember that anti-Black prejudice does lead to

opposition to welfare spending---thus suggesting that some connection between race and welfare exists in respondents' minds. Therefore, the null finding might again be the product of measurement issues, as in Study 2. By requiring respondents to recognize the names of specific redistributive measures, we may have introduced too high cognitive burden. We address this possibility in Study 4.

Study 4: Race and poverty in the U.S.

The null result in Study 3 suggests three possibilities. First, racialized schemas about welfare recipients are not consequential for policy preferences. Second, implicit associations are unrelated to explicit opinions about policies. Third, our measure contains too much error to produce a meaningful effect in a regression model. Specifically, recognizing the names of particular welfare policies in the IAT might have been difficult for those respondents who do not follow politics closely. In Study 4, we specifically address this concern. In doing so, we keep the IAT format but change the target categories and the stimuli. Now, we effectively measure the race--poverty schemas (rather than race--welfare ones) and use visual rather than textual stimuli. We expect these changes to reduce noise in the IAT measures and improve estimated relationships between the variables of interest.

Data and Measures

The sample of 500 was recruited using MTurk, as in Study 3. Respondents answered a web-based survey on the Qualtrics platform with the IAT administered using Inquisit. After removing duplicate IP addresses, cases with too many errors in the IAT, and those who completed the survey from outside of the United States, the final sample contained 446 observations. The sample was disproportionately female (61.4%) and college educated (50.7%). The modal household income was between \$50,000 and \$60,000. The sample was also relatively young,

with a mean age between 35 and 44 years. In terms of partisanship, 35.1% of respondents were Democrats, 33.0% were Republicans, and 31.8% were independents (again, non-liberals were oversampled). Finally, 82.7% of the sample self-identified as non-Hispanic Whites.

In the new IAT-type task designed to capture the associations between race and poverty, we kept the same stimuli for race as we used in Study 3. Following Newheiser and Olson (2012), we used pictures to depict poverty vs. wealth in the task. This choice minimizes confounding with vocabulary size since the latter might be correlated with both schemas of interest and support for welfare. Specifically, 12 pictures were representing objects that people of different income levels might possess: expensive vs. cheap houses, cars, clothing, and so on.

To measure support for government spending, we asked respondents 11 questions regarding spending on welfare, public safety, military and intelligence, and infrastructure. We included different categories as a placebo test: If the “racialized welfare” hypothesis is true, the implicit associations between race and poverty should suppress support for welfare spending--- but not for other forms of spending. Answers were given on a 7-point scale with higher values representing greater support for spending.

Results

Figure 6 presents empirical densities of the race--poverty schemas. The distribution is effectively normal according to a Shapiro--Wilk test ($z = 0.12, p = .453$). The mean is positive, indicating that the average respondent is faster associating poverty with Blacks and wealth with Whites ($b = 0.20, p < .001$).

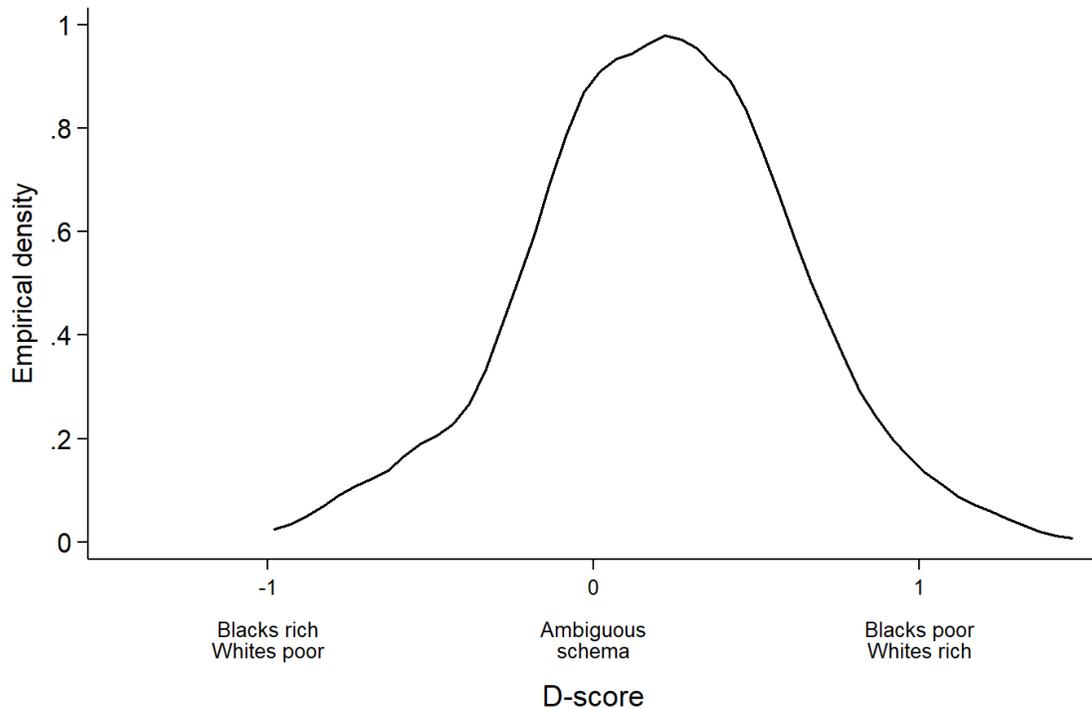


Figure 6. Observed distribution of the race--poverty schemas

Next, we turn to inferential analysis. Since dependent variables in the study are measured using multi-item batteries, we use structural equation modeling framework (Kline 2010). Specifically, we estimate the effects of the race--poverty schema on various spending preferences controlling for age, gender, education, income, and race/ethnicity. The model and results are presented in Figure 7. Results strongly confirm that the race--poverty schema significantly predicts welfare spending preferences but is unrelated to spending in other domains. Those with racialized images of poverty strongly prefer less support for spending on welfare: Given the effect magnitude, estimated difference in welfare spending support between individuals with very weak and very strong race--poverty schemas amounts to nearly one point on the 7-point scale welfare support scale.

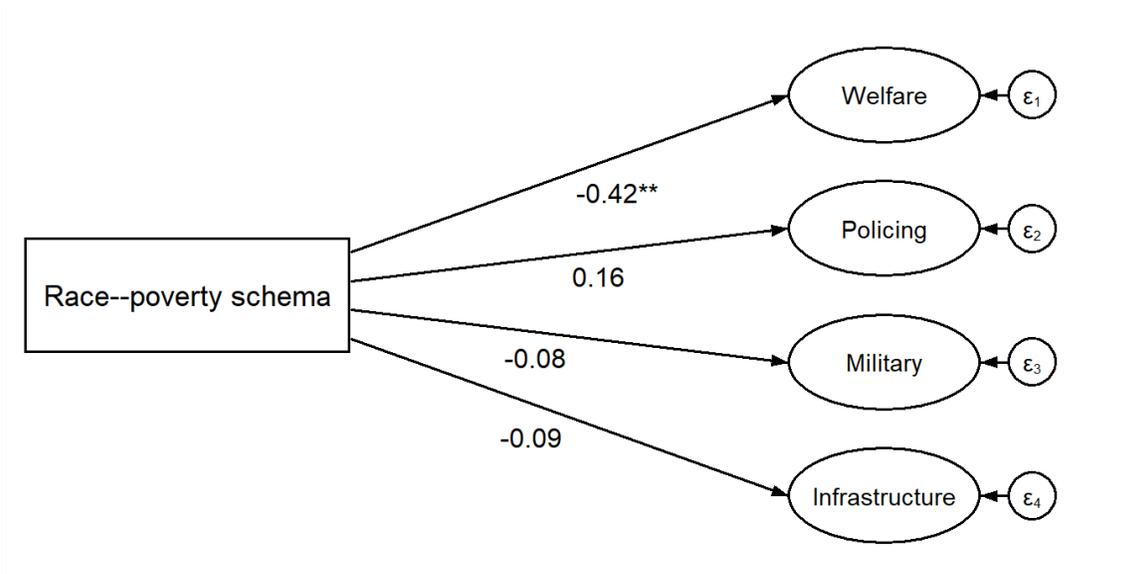


Figure 7. Race--poverty schemas and support for spending programs
Note. $N = 446$. Fit indices: RMSEA = .074, CFI = .912, SRMR = .059. Measurement parts and controls omitted for space considerations. Greater race--poverty schema = greater association of Blacks with poverty and Whites with affluence. Control variables: age, gender, education, income, race
 * $p < .05$, ** $p < .01$, *** $p < .001$

Discussion

In Study 4, we apply the schematic model to understand whether group attitudes impact preferences on welfare redistribution. Results provide strong support for the schematic approach to formation of political preferences: Individuals with pro-stereotypical schemas (i.e., those who associated African Americans with poverty) tend to oppose spending on welfare---but not other spending domains. This result supports our interpretation of the null finding in Study 3: The measure of race--welfare schemas based on the IAT architecture was too noisy to produce adequate relationships with other covariates. It means that, in designing tasks measuring implicit associations between social groups and political objects, researchers should pay attention to their cognitive difficulty for those not very knowledgeable about politics. We discuss this more in-depth in the following sections.

Substantive Implications

Results of Study 1 support the schematic model with respect to gender and partisanship in the United States. First, respondents have stereotype-consistent gender--party schemas: on average, they tend to perceive the Democratic Party as feminine and the Republican Party as masculine. Second, this schematic overlap significantly impacts partisan attitudes as respondents consistently feel warmer towards the party that is linked to their own gender. Third, the relationship between gender--party schema and partisan polarization is moderated by attitudes towards women, as predicted by the schematic model. Specifically, schemas are particularly important for the least sexist respondents, probably because highly sexist respondents tend to prefer the Republican Party for reasons other than group schemas.

In Study 4, we also find strong support for the racialization of poverty in the United States: Respondents who associate poverty with Blacks are more opposed to welfare---but not to other forms of spending. In other words, we have been able to replicate the famous result linking race and redistributive government policies in the eyes of Americans (Gilens 1999).

Methodological Implications

In this chapter, we propose a novel application of implicit measurement technique, and of the IAT architecture in particular: measuring non-affective associations between social groups and political objects. Since this application of the IAT is new, we next lay out some advice for researchers inspired by the empirical results discussed above.

First, the standard IAT task is symmetric: it has two target categories matched to either end of an affective dimension, and can be easily modified to measure symmetric group schemas in politics. However, researchers can be interested in associations between a single political object or a single target group. A modification of the IAT has been offered to solve this problem that uses only a single target category (SC-IAT). In Study 2 we attempted to capture the

schematic association of British Labour Party with Muslims vis-a-vis Christians but found no demonstrable effect of variation on this score with political preferences. The reasons for these null results are unclear. Of course, they could reflect the absence of the association of interest in the minds of most British citizens---but strong links between anti-Muslims attitudes and support for the Labour Party contradict this interpretation. The null result may also hint at a possible theoretical interpretation of the underlying schema architecture. A two-category task effectively measures the *relative* association between contrasting political objects (parties) and social groups in their coalitions, whereas a single category task captures only the *absolute* association of one object and a group. Expecting such a strong and asymmetric stereotype may be unrealistic even from the most politically sophisticated or ideologically extreme respondents. Therefore, we suggest that researchers should use symmetric (two-category) IAT rather than its single-category variant when relative strength of a politically relevant schema is of interest.

Another important challenge for using the IAT-based tasks is technical. Behavioral political scientists often seek samples that are diverse, if not representative of populations. Among survey modes that allow reaching such populations, only internet surveys permit objective timed-response tasks like the IAT. At the same time, the IAT D-scores rely on high-precision time response data whereas standard online survey platforms do not possess the capability to record these. Use of special IAT-capable software, in turn, creates a number of practical difficulties. They include time necessary to program the survey, loss of data due to platform compatibility issues, and a necessity for respondents to download and install the software. Altogether, these challenges create a higher risk of non-response and drop-outs causing both decrease in statistical power and, more seriously, biases in parameter estimates. We encountered relatively high drop-out rates in all four studies---but most prominently in Study 2,

where an apparent conflict between the recruitment platform and the software led us to lose approximately 37% of responses. One solution for this problem is to use packages that allow timed-response tasks being integrated directly into survey platforms, such as the one recently introduced for Qualtrics (Carpenter et al. 2018). We would also encourage scholars to explore attrition in similar studies in order to determine how highly correlated it is with key covariates of interest in order to offer design-based or estimation-based solutions.

The final problem in applying the IAT architecture to the measurement of political schemas involves the role of political sophistication. Standard timed-response tasks deal with target concepts and attributes that are simple and familiar to participants whereas many political objects are less familiar and have fewer symbols or words that can be used to cue them in memory. In such cases, it is challenging to come up with appropriate stimuli for an IAT to measure these schemas. Stimuli used to represent political categories can differ enough in complexity to cause difficulties in recognition, even after the “practice” part of the IAT. In this case, response latencies are contaminated by the differential effort required to recognize the stimuli, making it more difficult to discover the associations of interest. We think the above bias may explain the results in Study 3, where we attempted to tap the strength of the race--welfare linkage in the United States. We believe that respondents needed too much time to recognize many listed programs as government welfare. Our conjecture is that the policy-related stimuli in Study 3 were too complex even for relatively knowledgeable MTurk respondents---suggesting that this might be an even bigger problem for a more diverse national sample. Therefore, we would advise researchers to minimize the complexity of the stimuli they use to represent political objects in timed-response tasks.

Concluding Remarks

Over the last half century, from Converse (1964) to Kinder and Kalmoe (2017), political psychologists have argued that most voters lack coherent ideological worldviews as a base for coming to opinions about specific issues. Instead, political preferences are consistently and powerfully influenced by group identities and attitudes. In this chapter, we re-introduce the notion that group attitudes get translated into political opinions via group schemas. Cognitive linkages between social groups and political objects like parties and/or policies moderate the transfer of affect about the former onto the latter. Here we offer a new approach to the measurement of group schemas in politics that builds on classic contributions in the discipline as well as on recent developments in the measurement of implicit social cognition. Specifically, in order to assess the degree of cognitive overlap between a social group and a political object for each respondent, we rely on a timed-response sorting task based on the IAT architecture.

Altogether, our findings provide evidence in favor of the schematic model of political belief formation and validate the proposed measurement strategy based on the IAT technique. The method has several limitations related to the cognitive effort required to recognize specific stimuli within the sorting task and technical challenges for implementation in modern-day online surveys. However, proper design and selection of the stimuli can significantly mitigate these problems. Also, technical developments in both survey platforms and time response software should allow for more seamless integration in the near future. In addition, the proposed method is universal and can be applied to almost any theorized cognitive linkage between social groups and political objects---as long as the categories of interest can be represented by visual and/or textual stimuli. Therefore, the method is not confined to American public opinion and, as the discipline becomes internationalized, its applicability in comparative political behavior may well deliver substantial returns to knowledge.

References

- Anderson, John R. 1983. "A Spreading Activation Theory of Memory." *Journal of Verbal Learning and Verbal Behavior* 22 (3): 261--95.
- Arkes, Hal R., and Philip E. Tetlock. 2004. "Attributions of Implicit Prejudice, or 'Would Jesse Jackson "Fail" the Implicit Association Test?'" *Psychological Inquiry* 15 (4): 257--78.
- Banaji, Mahzarin R., and Curtis D. Hardin. 1996. "Automatic Stereotyping." *Psychological Science* 7 (3): 136-41.
- Bargh, John A., and Tanya L. Chartrand. 1999. "The Unbearable Automaticity of Being." *American Psychologist* 54 (7): 462--79.
- Bargh, John A., Mark Chen, and Lara Burrows. 1996. "Automaticity of Social Behavior: Direct Effects of Trait Construct and Stereotype Activation on Action." *Journal of Personality and Social Psychology* 71 (2): 230--44.
- Berinsky, Adam J., Gregory A. Huber, and Gabriel S. Lenz. 2012. "Evaluating Online Labor Markets for Experimental Research: Amazon.com's Mechanical Turk." *Political Analysis* 20 (3): 351--68.
- Berman, Sheri. 2016. "The Lost Left." *Journal of Democracy* 27 (4): 69--76.
- Blanton, Hart, and James Jaccard. 2006. "Arbitrary Metrics in Psychology." *American Psychologist* 61 (1): 27--41.
- Brambor, Thomas, William Roberts Clark, and Matt Golder. 2006. "Understanding Interaction Models: Improving Empirical Analyses." *Political Analysis* 14 (1): 63--82.
- Brown-Iannuzzi, Jazmin L., Ron Dotsch, Erin Cooley, and B. Keith Payne. 2017. "The Relationship Between Mental Representations of Welfare Recipients and Attitudes Toward Welfare." *Psychological Science* 28 (1): 92--103.

- Bruner, Jerome S. 1957 "On Perceptual Readiness." *Psychological Review* 64 (2): 123--52.
- Bruner, Jerome S., and Cecile C. Goodman. 1947. "Value and Need as Organizing Factors in Perception." *Journal of Abnormal Psychology* 42 (1): 33--44.
- Carpenter, Thomas P., Ruth Pogacar, Chris Pullig, Michal Kouril, Stephen Aguilar, Jordan LaBouff, Naomi Isenberg, and Alek Chakroff. 2018. "Survey-Based Implicit Association Tests: A Methodological and Empirical Analysis." <https://doi.org/10.31234/osf.io/hgy3z>.
- Chong, Dennis, and James N. Druckman. 2007. Framing Theory." *Annual Review of Political Science* 10: 103--26.
- Collins, Allan M., and Elizabeth F. Loftus. 1975. "A Spreading-Activation Theory of Semantic Processing." *Psychological Review* 82 (6): 407--28.
- Conover, Pamela Johnston. 1988. "The Role of Social Groups in Political Thinking." *British Journal of Political Science* 18 (1): 51--76.
- Conover, Pamela Johnston, and Stanley Feldman. 1984. "How People Organize the Political World: A Schematic Model." *American Journal of Political Science* 28 (1): 95--126.
- Converse, Philip E. 1964. "The Nature of Belief Systems in Mass Publics." In *Ideology and Its Discontents*, edited by David Apter, 206--61. New York: Free Press.
- Dancygier, Rafaela M. 2017. *Dilemmas of Inclusion: Muslims in European Politics*. Princeton, NJ, and Oxford: Princeton University Press.
- Dijksterhuis, Ap, and John A. Bargh. 2001. "The Perception--Behavior Expressway: Automatic Effects of Social Perception on Social Behavior." In *Advances in Experimental Social Psychology*, Vol. 33, edited by Mark P. Zanna, 1--40. New York: Academic Press.

- Fazio, Russell H. 1990. "A Practical Guide to the Use of Response Latency in Social Psychological Research." In *Review of Personality and Social Psychology, Vol. 11: Research Methods in Personality and Social Psychology*, edited by Clyde Hendrick and Margaret S. Clark, pp. 74--97. Newbury Park, CA: SAGE.
- Fiske, Susan T., and Patricia W. Linville. 1980. "What Does the Schema Concept Buy Us?" *Personality and Social Psychology Bulletin* 6 (4): 543--57.
- Gawronski, Bertram, Silvia Galdi, and Luciano Arcuri. 2015. "What Can Political Psychology Learn from Implicit Measures? Empirical Evidence and New Directions." *Political Psychology* 36 (1): 1--17.
- Gilens, Martin. 1999. *Why Americans Hate Welfare: Race, Media, and the Politics of Antipoverty Policy*. Chicago: University of Chicago Press.
- Glick, Peter, and Susan T. Fiske. 1996. "The Ambivalent Sexism Inventory: Differentiating Hostile and Benevolent Sexism." *Journal of Personality and Social Psychology* 70 (3): 491--512.
- Green, Donald, Bradley Palmquist, and Eric Schickler. 2002. *Partisan Hearts and Minds: Political Parties and the Social Identities of Voters*. New Haven, CT: Yale University Press.
- Greenwald, Antony G., Debbie E. McGhee, and Jordan L. K. Schwartz. 1998. "Measuring Individual Differences in Implicit Cognition: The Implicit Association Test." *Journal of Personality and Social Psychology* 74 (6): 1464--80.
- Greenwald, Antony G., Brian A. Nosek, and Mahzarin R. Banaji. 2003. "Understanding and Using the Implicit Association Test: I. An Improved Scoring Algorithm." *Journal of Personality and Social Psychology* 85 (2): 197--216.

- Greenwald, Antony G., T. Andrew Poehlman, Eric Luis Uhlmann, and Mahzarin R. Banaji. 2009. "Understanding and Using the Implicit Association Test: III. Meta-Analysis of Predictive Validity." *Journal of Personality and Social Psychology* 97 (1): 17--41.
- Hawkins, Carlee Beth, and Brian A. Nosek. 2012. "Motivated Independence? Implicit Party Identity Predicts Political Judgments among Self-Proclaimed Independents." *Personality and Social Psychology Bulletin* 38 (11): 1437--52.
- Higgins, E. Tory, William S. Rholes, and Carl R. Jones. 1977. "Category accessibility and impression formation." *Journal of Experimental Social Psychology* 13 (2): 141--54.
- Hunzaker, M. B. Fallin. 2016. "Cultural Sentiments and Schema-Consistency Bias in Information Transmission." *American Sociological Review* 81 (6): 1223--50.
- Hutchings, Vincent L., and Ashley E. Jardina. 2009. "Experiments on Racial Priming in Political Campaigns." *Annual Review of Political Science* 12: 397--402.
- Karpinski, Andrew, and Ross B. Steinman. 2006. "The Single Category Implicit Association Test as a Measure of Implicit Social Cognition." *Journal of Personality and Social Psychology* 91 (1): 16--32.
- Kinder, Donald R., and Nathan P. Kalmoe. 2017. *Neither Liberal nor Conservative: Ideological Innocence in the American Public*. Chicago: University of Chicago Press.
- Kline, Rex B. 2010. *Principles and Practice of Structural Equation Modeling*. 3rd edition. New York: Guilford Press.
- Lazarsfeld, Paul F., Bernard Berelson, and Hazel Gaudet. 1948. *The People's Choice: How the Voter Makes Up His Mind in a Presidential Campaign*. New York: Columbia University Press.

- Meissner, Franziska, and Klaus Rothermund. 2015. "A Thousand Words Are Worth More Than a Picture? The Effects of Stimulus Modality on the Implicit Association Test." *Social Psychological and Personality Science* 6 (7): 740--48.
- Moskowitz, Gordon B. 2005. *Social Cognition: Understanding Self and Others*. New York: Guilford Press.
- Nelson, Thomas E., Rosalee A. Clawson, and Zoe M. Oxley. 1997. "Media Framing of a Civil Liberties Conflict and Its Effect on Tolerance." *American Political Science Review* 91 (3): 567--83
- Nelson, Thomas E., and Donald R. Kinder. 1996. "Issue Frames and Group-Centrism in American Public Opinion." *Journal of Politics* 58 (4): 1055--78.
- Newheiser, Anna-Kaisa, and Kristina R. Olson. 2012. "White and Black American Children's Implicit Intergroup Bias." *Journal of Experimental Social Psychology* 48 (1): 264--70.
- Nosek, Brian A., Mahzarin R. Banaji, and Antony G. Greenwald. 2002. "Harvesting Implicit Group Attitudes and Beliefs from a Demonstration Web Site." *Group Dynamics* 6 (1): 101--15.
- Nosek, Brian A., Antony G. Greenwald, and Mahzarin R. Banaji. 2005. "Understanding and Using the Implicit Association Test: II. Method Variables and Construct Validity." *Personality and Social Psychology Bulletin* 31 (2): 166--80.
- Nosek, Brian A., Frederick L. Smyth, Jeffrey J. Hansen, Thierry Devos, Nicole M. Lindner, Kate A. Ranganath, Colin Tucker Smith, Kristina R. Olson, Dolly Chugh, Anthony G. Greenwald, and Mahzarin R. Banaji. 2007. "Pervasiveness and Correlates of Implicit Attitudes and Stereotypes." *European Review of Social Psychology* 18 (1): 36--88.

- Rudman, Laurie A., and Eugene Borgida. 1995. "The Afterglow of Construct Accessibility: The Behavioral Consequences of Priming Men to View Women as Sexual Objects." *Journal of Experimental Social Psychology* 31 (6): 493--517.
- Page, Scott E. 2007. *The Difference: How the Power of Diversity Creates Better Groups, Firms, Schools, and Societies*. Princeton, NJ: Princeton University Press.
- Peer, Eyal, Laura Brandimarte, Sonam Samat, and Alessandro Acquisti. 2017. "Beyond the Turk: Alternative Platforms for Crowdsourcing Behavioral Research." *Journal of Experimental Social Psychology* 70: 153--63.
- Rothermund, Klaus, and Dirk Wentura. 2004. "Underlying Processes in the Implicit Association Test: Dissociating Salience from Associations." *Journal of Experimental Psychology: General* 133 (2): 139--65.
- Schneider, David J. 2004. *The Psychology of Stereotyping*. New York: Guilford Press.
- Sears, David O. 1993. "Symbolic Politics: A Socio-Psychological Theory." In *Explorations in Political Psychology*, edited by Shanto Iyengar and William J. McGuire, 113--49. Durham, NC: Duke University Press.
- Simon, Herbert A. 1957. *Models of Man: Social and Rational*. Oxford: Wiley.
- Srull, Thomas K., and Robert S. Wyer. 1979. "The Role of Category Accessibility in the Interpretation of Information about Persons: Some Determinants and Implications." *Journal of Personality and Social Psychology* 37 (10): 1660--72.
- Taylor, Shelley E., and Jennifer Crocker. 1981. "Schematic Bases of Social Information Processing." In *Social Cognition: The Ontario Symposium*, edited by E. Tory Higgins, C. Peter Herman, and Mark P. Zanna, 89--134. Hillsdale, NJ: Lawrence Erlbaum.

- Taylor, Shelley E., and Susan T. Fiske. 1978. "Salience, Attention, and Attribution: Top of the Head Phenomena." *Advances in Experimental Social Psychology* 11: 249--88.
- Theodoridis, Alexander G. 2017. "Me, Myself, and (I), (D), or (R)? Partisanship and Political Cognition through the Lens of Implicit Identity." *Journal of Politics* 79 (4): 1253--67.
- Tversky, Amos, and Daniel Kahneman. 1974. "Judgment under Uncertainty: Heuristics and Biases." *Science* 185 (4157): 1124--31.
- Valentino, Nicholas A., Ted Brader, and Ashley E. Jardina. 2013. "Immigration Opposition Among U.S. Whites: General Ethnocentrism or Media Priming of Attitudes About Latinos?" *Political Psychology* 34 (2): 149--66.
- Valentino, Nicholas A., Vincent L. Hutchings, and Ismail K. White. 2002. "Cues That Matter: How Political Ads Prime Racial Attitudes during Campaigns." *American Political Science Review* 96 (1): 75--90.
- Winter, Nicholas J. G. 2010. "Masculine Republicans and Feminine Democrats: Gender and Americans' Explicit and Implicit Images of the Political Parties." *Political Behavior* 32 (4): 587--618.