Implicit Political Attitudes:

Measurement and Consequences for Political Judgment

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Abstract

We report the results of a laboratory study designed to measure the implicit components of political attitudes (partisanship and ideology), using the Implicit Association Test (IAT; Greenwald, McGhee, and Schwartz, 1998). Implicit attitudes are attitudes that are not under conscious control and are activated automatically; they cannot be measured through standard self-report procedures. We report four sets of results. First, partisanship and ideology have implicit components that can be measured via the IAT. Second, there is a sizable relationship between implicit measures of partisanship and ideology, and the standard self-report measures of those constructs; in line with predictions, this relationship is stronger for more sophisticated individuals. Third, implicit political attitudes have an independent impact on opinions about prominent political leaders and groups, and this impact is stronger for less sophisticated individuals. Fourth, addressing long-standing debates in American politics about the nature 'leaning independents,' we find that leaning independents have stronger implicit partisan attitudes than weak identifiers. These findings suggest that consideration of implicit political attitudes can shed light on the micro-foundations of political judgment and behavior.

Key Words: implicit attitudes, partisanship, ideology, sophistication, leaning independents

Party identification and ideology are two of the dominant constructs in the study of public opinion, exerting a powerful influence over political perceptions and voting decisions. Partisanship and ideology are widely conceptualized as political attitudes, stemming from *The American Voter's* commitment to the explanatory power of the attitude concept (Campbell, Converse, Miller and Stokes, 1960, p. 9). The goal of this paper is to extend our understanding of partisanship and ideology as political attitudes, by considering their implicit elements.

Following standard practice, we adopt a general definition of *attitud*e as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly and Chaiken, 1993, p. 1). Virtually all attitudes in the social sciences are measured *explicitly*: they are consciously accessible, can be expressed directly, and can be measured through self-report procedures. Greenwald and Banaji (1995, p. 8) define *implicit attitudes* as "the introspectively unidentified (or inaccurately identified) traces of past experience that mediate favorable or unfavorable feeling, thought, or action toward social objects." More clearly, implicit attitudes are evaluations that are activated automatically, that are not subject to conscious control, and that have an unknown origin (Wilson, Lindsey and Schooler, 2000).[1] Critically, implicit attitudes can not be measured through self-report procedures.

In this paper, we examine the extent to which partisanship and ideology have implicit components that can be measured systematically, via the Implicit Association Test (IAT; Greenwald and Banaji, 1995; Greenwald, McGhee, and Schwartz, 1998). We report the results of a laboratory study designed with three goals: (1) to measure the implicit components of partisanship and ideology, (2) to consider the correspondence between implicit and explicit measures, and the factors that moderate that relationship, and (3) to illustrate the utility of implicit attitudes for understanding political judgment. We begin by briefly reviewing how partisanship and ideology are traditionally conceptualized and measured as explicit attitudes, and then describe the IAT conceptual and measurement framework.

Partisanship and Ideology

Party identification is the key construct in the vast literature on American electoral voting behavior, "the linchpin of our modern understanding of electoral democracy" (Weisberg and Greene, forthcoming; cf, Bartels, 2000; Fiorina, 1981; Green, Palmquist, and Schickler, 2002; Miller and Shanks, 1996). The classic, and still dominant, conceptualization of party identification was articulated in *The American Voter* (Campbell et al, 1960, p. 121):

> We use the concept here to characterize the individuals' affective orientation to an important group-object in his environment. Both reference group theory and small-group studies of influence have converged upon the attracting or repelling quality of the group as the generalized dimension most critical in defining the individual-group relationship, and it is this dimension that we call identification.

From this perspective, party identification is an attitude based upon a psychological attachment to a political group. This attachment is rooted both in early socialization forces, in particular parental socialization (Niemi and Jennings, 1991), and also influenced by ongoing party and candidate performance (Fiorina, 1981; Franklin and Jackson, 1982; Page and Jones, 1979).

There have been controversies regarding the measurement of party identification but one measure dominates (see Burden and Clofstad, 2002; Greene, 2000, 2001; and Weisberg, 1999, for discussions). Most academic surveys, including the National Election Studies and the General Social Survey, make use of the following branching format:

> *"Generally speaking, do you usually think of yourself as a Republican, a Democrat, and Independent or what?"*

Respondents who identify themselves as Democrats or Republicans are then asked,

> "*Would you call yourself a strong Democrat (or Republican) or a not very strong Democrat (or Republican)?*"

Respondents who called themselves Independents on the first question are asked,

> "*Do you think of yourself as closer to the Republican or Democratic Party?"*

The responses to these questions are then combined in various ways to yield a scale that ranges from "Strong Democrat" on one end to "Strong Republican" on the other. (Controversies

about the specific construction of the summary resulting scale are discussed below). This is the measure of explicit partisan attitudes used in this study.

Ideology has been defined in a variety of ways. Converse (1964) complained that the term had been "thoroughly muddied" by diverse uses, and advocated a definition that was synonymous with *belief system*, or a cognitive structure consisting of an organized configuration of beliefs and attitudes (see also Campbell et al, 1960). The authors of *The American Voter* avoided conceptualizing ideology in the same way as party identification – that is, as a psychological attachment to a political group -- because they assumed ideological attachment had no meaning for most citizens (Knight, 1985). Subsequent research, however, has demonstrated that people are able to identify themselves as liberal or conservative (even if they have little or no understanding of the meaning of those terms), that those identifications are stable (Converse and Markus, 1979), and that they exert a significant impact on the vote (Shanks and Miller, 1985). Our treatment of ideology follows in this tradition, by conceptualizing ideology as a psychological attachment, infused with affect, to the categories of 'liberal' or 'conservative' (Conover and Feldman, 1981; Levitin and Miller, 1979; Sniderman, Brody, and Tetlock, 1991, Chapter 8). In Conover and Feldman's terms, ideological identification from this perspective is a "declaration of group loyalty" (1981, p. 623).

The most commonly used self-report measure of ideology is the seven-point scale used by the National Election Studies:

We hear a lot of talk these days about liberals and conservatives. Here is a 7-point scale on which the political views of liberals and conservatives are arranged from extremely liberal to extremely conservative.

1	2	3	4	5	6	7
Extremely Liberal	Liberal	Slightly Liberal	Moderate	Slightly Conservative	Conservative	Extremely Conservative

Where would you place yourself on this scale, or haven't you thought much about this?

This is the measure of self-reported ideology used in this study.

In summary, both partisanship and ideology can be conceptualized as affective orientations, or psychological attachments, to political groups. The specific psychological model of attitudes – in contrast to the generic definition provided above – that we find most useful in thinking about these attachments is the one put forth by Fazio (1986, 1995), namely an association in memory between an attitude object (e.g., Republican Party) and an evaluation of that object (e.g., positive). Attitudes with the strongest associations are most accessible in memory, and critically for our undertaking, most likely to be activated automatically when a relevant attitude object is encountered. David Sears has recently incorporated the principles of attitude accessibility and automatic activation into his model of symbolic politics (2001). In the Sears model, symbolic predispositions – of which partisanship and ideology are two of the most important – are learned affective responses that are evoked spontaneously and automatically when a relevant attitude object is encountered. More generally, the Fazio model of attitudes has proven to be fruitful in a number of recent investigations of political attitudes (e.g., Fazio and Williams, 1986; Huckfeldt, Craw, and Morehouse, 2001; Huckfeldt, Levine, Morgan, and Sprague, 1998; Lodge and Taber, 2000, 2002; and the contributions to the March, 2000 special issue of *Political Psychology*).

Implicit Attitudes and the Implicit Association Test

Our argument to this point has been that there is a long-standing tradition of considering partisanship and ideology as attitudes towards key political groups in American politics. Moreover, in line with Fazio's model, political scientists have begun to explore the ramifications of automatic processing for understanding political attitudes and judgment. Our study follows in this tradition, by investigating the validity and utility of the Implicit Association Test (IAT). The IAT was designed to "measure implicit attitudes by measuring their underlying automatic evaluation" (Greenwald et al, 1998, p. 1464), and so has a similar logic and intent as other

cognitive priming procedures (e.g., Fazio, Sanbonmatsu, Powell, and Kardes, 1986). The IAT is a computer-based test that requires the classification of specific stimuli into two sets of categories. Its utility as a measure of implicit cognition is based on the assumption that, if two concepts are highly associated in memory, the IAT sorting tasks will be easier when the two associated concepts share the same response than when they require a different response.[2]

-----Insert Figure 1 about here-----

By way of example, Figure 1 provides a schematic description of an IAT designed to measure racial prejudice (from Greenwald et al, 1998). The IAT consists of five blocks of tasks (the columns), where the classification responses are assigned to either the left or the right hand ("L" and "R" in the figure). The first block requires participants to classify female names as typical of *Blacks* or *Whites* (the 'target' category, which represents the object component of the attitude), whereas the second block requires participants to classify words as *Pleasant* or *Unpleasant* (the 'attribute' category, which represents the evaluative component of the attitude). The target and attributes are combined in the third block, and recombined in the fifth block, with a reversal of the target task in the fourth block. The third and fifth blocks are the critical components of the IAT. The more closely associated the target and attribute concepts are in memory, the easier it is to respond to them as a single unit when they are paired with the same response. So, for example, if "white" + "pleasant" and "black + "unpleasant" are strongly associated, the classification tasks in Block 5 will be easier than the classification tasks in Block 3, because the Block 5 responses match the memory representation of the attitude. This example, of course, is suggestive of racial prejudice, and this pattern of faster response latencies for the Block 5 tasks, relative to the Block 3 tasks, is exactly what Greenwald et al (1998) found among White Americans in their initial research with the IAT, even among those for whom self-report measures would classify as non-prejudiced. More generally, research using the IAT has found that people typically respond more easily and quickly when the positive

attributes share the same response key with the preferred category and the negative attributes share the same response key with the non-preferred category.

There has been an explosion of research using the IAT in a very short period of time (see Greenwald and Nosek, 2001, for a review; and the special issue of the *Journal of Personality and Social Psychology*, November, 2001). It has received substantial media coverage, including a report on the NBC program Dateline (March 19, 2000) and a Discovery Channel show on prejudice (March 20, 2000). The IAT has been used to examine attitudes in a variety of domains, including race and ethnicity, nationality; age, sex, sexual orientation, academic and dietary preferences, and the self-concept (see Dasgupta and Greenwald, 2001, p. 801, and the accompanying papers in that issue of *Journal of Personality and Social Psychology* for a host of specific references). The IAT has satisfactory psychometric properties: internal consistency is strong, test-retest reliabilities are adequate, and it demonstrates convergent validity with the Fazio evaluative priming measure (Cunningham, Preacher, and Banaji, 2001; Greenwald and Nosek, 2001). Finally, consequences of implicit attitudes have been demonstrated in a variety of contexts: fMRI-assessed activation of the amygdala (Phelps et al, 2000); willingness to approach a target of phobia (spider; Teachman and Woody, 2001); discrimination against female job applicants (Rudman and Glick, 2001); judgments about a member of an immigrant group (Florack, Scarabis and Bless, 2001; SAT math performance (Nosek, Banaji and Greenwald, 2002b); and nonverbal behavior in a social interaction (McConnell and Leibold, 2001).

The earliest research on implicit attitudes was predicated on the assumption that implicit and explicit attitudes reflect separate psychological processes and that measures of the two ought to be unrelated (Greenwald and Banaji, 1995; see also Bosson, Swann and Pennebaker, 2000). In the first empirical report of the IAT, self-report and implicit measures of racial prejudice were indeed independent, supporting the separate process argument (Greenwald et al, 1998).

However, subsequent research has indicated that the relationship between implicit and explicit attitudes is stronger than initially proposed, although variable in strength across attitude domains. The correspondence between the two tends to be lowest for intergroup attitudes (e.g., race, ethnicity, age, gender and sexuality), stronger for attitudes about the self, and most robust for attitudes about political targets and consumer products (see Greenwald and Nosek, 2001; Nosek and Banaji, 2002; and Nosek, Banaji, and Greenwald, 2002a).[3]

Given variability in the strength of the relationship between implicit and explicit attitudes, attention has turned to understanding the factors that moderate that relationship (Nosek and Banaji, 2002). One is self-presentation, predicated on the assumption that implicit attitudes are not vulnerable to distortion, whereas, in some domains, explicit self-reports are distorted because of social desirability concerns. The general pattern of correlations across attitude domains is consistent with this argument: people are more likely to be motivated to disguise their attitudes about minorities than their attitudes about political candidates and consumer products. Nosek and Banaji argue that self-presentation is not sufficient to explain the variation in correlations between implicit and explicit attitudes, and suggest a second factor, namely, elaboration, or actively thinking about the attitude object. Simply, the more people think about their attitudes, the stronger the correspondence between the two.

Purposes of This Study

We had three purposes in undertaking this study. First, if partisanship and ideology can be conceptualized as attitudes with evaluative associations that are activated automatically, as Sears (2001) has argued, then it should be possible to measure their implicit components via the IAT. If that measurement attempt is successful (meaning, operationally, that we are able to demonstrate systematic patterns of response latencies that conform to established standards), the second goal is to examine the correspondence between the implicit and explicit measures. We would expect the overlap to be substantial, based on published reports (Endnote 3). We

also examine the moderating role of elaboration. In the realm of politics, individual differences in sophistication – the extent to which an individual is interested in, and knows a lot about politics – exert a powerful impact on judgment and decision making (McGraw, 2000). By definition, sophisticates are more actively engaged in thinking about politics (or, high "elaborators"), and so we would expect a stronger correspondence between the implicit and explicit attitudes of sophisticates, and weaker relationships for those who are less sophisticated.

Our third goal is pragmatic. Political scientists and other scholars interested in public opinion have at their disposal explicit self-report measures of partisanship and ideology that are easy to administer and that have tremendous predictive validity. Those measures are not going anywhere, nor should they be. Our intent is not to offer up the implicit measures as alternatives to the standard measures. Rather, our basic argument is that consideration of their implicit components can shed some light on the micro-foundations of partisanship and ideology, and so the implicit measures might prove to be a useful implement in the methodological toolbox of scholars interested in cognitive processing questions.

To support that assertion, we examine the utility of the implicit measures in two ways. First, we consider the impact of the implicit attitudes on political judgment, above and beyond the contribution of the standard self-report measures. In this test of impact, we again expect individual differences in political sophistication to play a critical role. Scholars have argued that automatic associations exert a stronger influence when people are unwilling and/or unable to devote cognitive resources to a judgment task (Fazio, 1990; Greenwald and Banaji, 1995; Wilson et al, 2000). In line with this reasoning, Florack et al (2001) demonstrated that implicit attitudes towards immigrant groups (measured via the IAT) had a significant impact on judgments about a member of such a group only among people who were *not* predisposed to engage in effortful cognitive processing (specifically, people low in need for cognition; Cacioppo and Petty, 1982). In the political realm, the predisposition to be willing and able to think deeply

characterizes sophisticates. Accordingly, we expect a stronger impact of implicit attitudes on the political judgments of less sophisticated individuals.

We demonstrate the utility of the IAT measures in a second way, by focusing on implicit partisanship and in particular, controversies surrounding the nature of "independent leaners." Responses to the standard two-part measure of partisanship, described above, can be combined in various ways to create a single scale. A matter of persistent controversy has concerned the treatment of the two types of independents – those who respond that they 'feel close' to one of the parties on the follow-up question (*independent leaners*) and those who do not 'feel close' to one of the parties (*pure independents).* Sometimes the independents are retained in a single category, yielding a five-point scale (ordered strong Democrats, weak Democrats, independents, weak Republicans and strong Republicans). Alternatively, the independent leaners can be placed into a separate category, yielding a seven-point scale(ordered strong Democrats, weak Democrats, leaning Democrats, pure independents, leaning Republicans, weak Republicans, and strong Republicans).

Here is the problem: although the widely used seven-point scale measurement strategy is based upon a unidimensional view of partisan identification, a number of investigations have demonstrated that leaning independents are as partisan or more partisan in their attitudes and behaviors as those who identify with a party, but only weakly so (most prominently, Keith et al, 1986, 1992; also, Dennis, 1992; Petrocik, 1974; Shively, 1980; Weisberg, 1980). Consequently, the seven-point scale is intransitive, or nonmonotonic, calling into question the validity of estimation techniques that assume linearity. More than statistical estimation techniques are at stake, as our understanding of the nature of the independent leaners has implications for debates about the decline of political parties and the rise in independent voters in contemporary American politics.

As Steve Greene has argued (2000, 2001), there has been too little consideration of

why some people are partisan in their attitudes and behavior, but still consider themselves as independents. Part of the answer is that the standard measure of partisanship is multidimensional, capturing attitudes toward both the parties *and* toward independents (Alvarez, 1990; Dennis, 1988, 1992; Greene, 2000, 2001; Valentine and Von Wingen, 1980; Weisberg, 1980). We hope to shed some light on the question of why independent leaners are "closet partisans" from a different perspective, namely by examining their implicit attitudes. Simply, if independent leaners are indeed as partisan or more partisan than weak identifiers, than those partisan attitudes should be evident at the implicit level.

Method

Participants

Two groups participated in the study. The first consisted of sixty-eight undergraduates who participated in exchange for extra course credit, in February, 2000. The second group consisted of twenty-five graduate students and professionals who were enrolled in the OSU Summer Institute in Political Psychology (SIPP); they participated in July, 2000. Their incentive for participating was both pedagogical (as a later lecture would discuss implicit attitudes) and financial, as they had a chance to win a small ($50) lottery prize.

The undergraduates did not provide a very heterogeneous sample in terms of political sophistication, and so the SIPP participants were added in order provide more leverage in examining the moderating role of sophistication. We assumed that individuals who would devote a summer month to study political psychology would be more sophisticated about political matters than undergraduates who enroll in a course largely to satisfy curriculum requirements. As expected, the two groups did differ systematically on a number of dimensions. As Table 1 indicates, the SIPP participants were older, expressed more interest in, and attention to, politics, and were more likely to be registered to vote. They were also more likely to identify with the Democratic party, were somewhat more liberal and the SIPP group had a more balanced

gender distribution. Given these differences in interest and attention to politics, we use participant group (undergraduate versus SIPP) as one indicator of sophistication. However, because it is not a perfect indicator, and because the two groups differ on dimensions either weakly or completely unrelated to sophistication (e.g., gender, incentives for participating, time during the 2000 presidential campaign cycle), we also created a composite sophistication variable based on the average of two variables measuring interest and attention to politics. To avoid confusion, we refer to the composite measure as "Interest," and conduct parallel analyses for both indicators of sophistication (Interest and Participant Group).[4]

-----Insert Table 1 about here -----

Procedure

The purpose of the study was described as "an exploration of how people think about political issues and public officials." The participants began the study by completing a questionnaire that included the standard demographic and political measures summarized in Table 1, as well as a set of questions assessing their opinions about prominent political leaders and groups. After completing the questionnaire, the participants were directed to attend to the instructions provided on their computer monitors, which described how to complete the IATs.

The study consisted of four different IATs, the order of which was counterbalanced. In addition, within each IAT, the order of the key IAT tasks (i.e., Blocks 3 and 5) was counterbalanced, given evidence that this order can influence the magnitude of observed IAT effects (Greenwald and Nosek, 2001; Nosek et al, 2002). Five items per target category (e.g., five Democrats and five Republicans) were used in each IAT, presented in a random order (Greenwald et al, 1998, demonstrated that the IAT effects were not influenced by category size, i.e., 5 or 25 items per category). In all blocks, the verbal labels for the classification task (e.g., ***Republican*** or ***Democrat***) remained on the computer screen in the upper left or right corner, corresponding to the index finger that was used for the classification task. Participants were

instructed to keep their index fingers on the designated keys throughout the study, and to respond as quickly yet accurately as possible. There was a delay of 100 milliseconds between each trial.

Two of the IATs were designed to measure implicit partisanship, whereas the other two IATs were designed to measure implicit ideology. Because prominent political figures are exemplars of the parties, as well as representative of ideological viewpoints, particularly in the contemporary era of candidate-driven politics, one pair of IATs involved prominent political actors. Parties and ideologies are also characterized by different policy platforms, and so the second pair of IATs involved policy positions. Each IAT is described in turn below. (The Appendix summarizes the stimuli used in each IAT.)

1. Partisanship IAT: Political Figures. This IAT required two tasks: classification of common words to the categories ***good*** or ***bad***, and the names of prominent political figures to the categories of ***Republican*** or ***Democrat***. In the first block, the participants encountered a series of words that have either a positive or negative connotation (e.g., “happy,” “evil,” “smile,” “pain”), and the task was to categorize each target word as either ***good*** or **bad**. This was the first block for all of the IATs. In the second block, the participants encountered a series of names of prominent political figures (e.g., “Bill Clinton,” “Ronald Reagan”); the task required classifying each person as either a ***Democrat*** or ***Republican***.[5]

The third block is critical. Here, the participants encountered a series of names of political figures interspersed with good and bad words, and their task was to classify each into the category of either ***good or Democrat*** , or ***bad or Republican***. The fourth block is a reversal of the second block (the partisan classification of political figures). Finally, the critical fifth replicates the third block, but reversing the classification responses. If the categories in the third block were ***good or Democrat***, and ***bad or Republican***, the categories in the fifth block were ***bad or Democrat***, and ***good or Republican***.

2. Partisanship IAT: Issues. This IAT was identical to the first, except that the names of the political figures were replaced with brief phrases indicative of policy positions (e.g., "pro-choice," "pro-business"). The tasks required classification of those policies as typical of either Democrats or Republicans.

3. Ideology IAT: Political Figures. This IAT used the same stimulus materials as the first IAT, but replaced the partisan classification task of the political figures with an ideological classification task (***Liberal*** or ***Conservative***).

4. Ideology IAT: Policy Issues. This IAT used the same stimulus materials as the second IAT, but replaced the partisan classification task of the policy issues with an ideological classification task.

When the IATs were completed, all participants were debriefed and thanked.

Results

Data Reduction

Following standard practice in research utilizing the IAT, we dropped the first two trials in each block because response latencies tend to be long as participants familiarize themselves with the task. All response latencies that were below 300 ms and above 3000 ms were recoded as 300 ms and 3000 ms, respectively. The latencies were log-transformed to normalize the distribution, and both the logged and raw latencies were considered in all statistical analyses.[6]

IAT Effects for Implicit Partisanship and Ideology

Evidence of an implicit association favoring one category over another is based on a comparison of the mean response times to the third and fifth blocks of each test. Simply, if partisanship and ideology have implicit components that can be measured via the IAT, individuals should find the combined task easier, and so respond more quickly, when their preferred group is matched with ***good*** and their non-preferred group is matched with ***bad***, because these pairings match the presumed representation of the attitude in memory. For

example, a self-professed Democrat should exhibit faster response times when the combined task options for the two partisanship IATs are ***good/Democrat***, and ***bad/ Republican***, and slower response times than if the combined task options are ***bad/Democrat***, and ***good/Republican***. Similarly, a self-professed conservative should exhibit faster response times for the two ideology IATs when the combined task options are ***good/conservative***, and ***bad/liberal***, than if the combined task options are ***bad /conservative***, and ***good /liberal***.

The "IAT Effect", then, is manifested as a significant difference in the mean response time between the compatible and the incompatible blocks, "compatibility" determined by each individual's self-reported identification. Participants who claimed to be ideological moderates were dropped from the analyses of the Ideology IATs (because they do not have an ideology that is compatible with one or the other blocks). Similarly, participants claiming no partisanship were dropped from the analyses of the Partisanship IATs (however, 'leaning independents' were included).

-----Insert Figure 2 about here-----

Figure 2 provides the raw response latency data for the compatible and the incompatible blocks for each of the four IATs. For all four, the "IAT effect" is present, as response latencies were faster when the combined task options were compatible with expressed political attitudes than when they were incompatible. These effects range from a difference of 98.56 ms for the partisanship/issue IAT to 128.26 ms for the ideology/issues IAT. The differences between the compatible and incompatible blocks were statistically significant (from paired t-tests, $t(87)=5.76$, for the partisanship/figures IAT; $t(86)=4.02$ for the partisanship/ issues IAT; $t(71)=4.91$ for the ideology/figures IAT; $t(58)=5.45$ for the ideology/issues IAT; all significant at $p<.001$).[7] In short, these response latency patterns support the expectation that partisanship and ideology have implicit components that can be successfully measured by the IAT.

Correspondence Between Implicit and Self-Report Measures

Next, we turn to a consideration of the relationship between the implicit measures and the standard self-report measures of partisanship and ideology. The measures reported in Figure 2 are free of directional implications, because they were based on *compatibility* with explicit identifications. A re-calculation of the response latencies was necessary to create *directional* measures of implicit partisanship and ideology. These new variables range from strong implicit preferences for Democrats to strong implicit preferences for Republicans, and from strong implicit preferences for Liberals to strong implicit preferences for Conservatives.[8] In contrast to the compatibility-derived analyses, participants claiming to be ideological moderates and partisan independents were retained in these analyses.

-----Insert Table 2 about here-----

Table 2 reports the zero-order correlations between the implicit and the standard self-report measures. Although we have treated the political figures and policy issue IATs separately to this point, in theory they are best conceptualized as separate indicators of the same underlying construct. The intercorrelations between the two pairs were sizable (for the two partisanship IATs, r = .35; for the two ideology IATs, r = .47, both ps<.001), and a quick perusal of Table 2 indicates that there were no differences in the relationships between the self-report measures and the parallel versions of the IAT. For these reasons, we averaged the two partisanship IATs to form an composite measure of implicit partisanship and the two ideology IATs to form an composite measure of implicit ideology. The relationship between these composite variables and the self-report attitudes are reported in the third column of Table 2.[9]

Consider first the relationships for partisanship, in the top panel. For the sample as a whole, the correspondence between the implicit and explicit measures was sizable (r=.58 for the composite implicit measure). This relationship is quite strong when compared to many implicit - explicit attitude correlations, but comparable in magnitude to other reports of the correspondence for *political* attitudes (see Endnote 3). As predicted, the correspondence

between the implicit and explicit attitudes was stronger for the more sophisticated participants, for all six comparisons in Table 2a. The differences were particularly robust for the comparisons between the undergraduate and SIPP participants, with two of the three differences involving the participant groups statistically significant (following Fisher r to z' transformations, the differences between the PID/Issues and Composite PID IATs were significant, z=2.26 and 2.21)

The same patterns hold for the relationships involving the ideology measures. For the sample as a whole, the correlation between the self-report measure of ideology and the composite implicit indicator was .55. In five of the six comparisons, the relationship between the implicit and explicit attitudes was stronger for the more sophisticated participants. As with the partisanship data, the comparisons involving participant group were more robust than those involving the interest measure, and two of those participant group differences were statistically reliable (i.e., the differences between the Ideology/Figures and Composite Ideology IATs as a function of participant group were significant, z=2.34 and 2.04).

The correlations between the implicit and explicit measures reported in Table 2 are important for two reasons. First, they establish the construct validity of the implicit measures of partisanship and ideology, indicating that the patterns of response latencies to these complicated classification tasks were neither random nor epiphenomenal. Rather, they exhibit a striking correspondence to simple self-reports of the political attitudes. Second, these results contribute to our understanding of the factors that moderate the relationship between implicit and explicit attitudes. As predicted, more sophisticated individuals, who presumably have thought more about their political attitudes, exhibited a stronger relationship than those for whom such elaboration is less likely.

Consequences of Implicit Attitudes for Political Opinions

To examine the impact of the implicit attitudes on political opinions, we make use of the composite measures of implicit partisanship and ideology. The dependent variables are of two

sorts: thermometer ratings of twelve prominent contemporary American political figures and six politically-relevant groups. The first two columns in Table 3 describe the bivariate relationships between the two measures of partisanship, and the thermometer ratings. Because both measures of partisanship are coded so that higher values reflect Republican preferences, the signs of the coefficients should vary with the partisanship of the target, and so the expected signs are provided in parentheses. Not surprisingly, the self-report measure of partisanship was a significant predictor of all of the target judgments. Strikingly, implicit partisanship had an impact that was nearly as strong as those exhibited by the explicit measure, and statistically robust for 17 of the 18 judgments.

-----Insert Table 3 about here-----

We estimated the independent impact of implicit partisanship above and beyond that predicted by the self-report measure by computing partial correlation coefficients between the implicit measure and each judgment, partialling out the effect of self-reported partisanship.[10] Those correlations are reported for the full sample, and then as a function of each indicator of sophistication. For the full sample, implicit partisanship exerted a significant impact on the ratings of five of the twelve figures and three of the six groups (or, eight of the 18 judgments).

More importantly, and as predicted, the impact of implicit partisanship varied as a function of sophistication. In considering those comparisons, it is important to take note of reversals in the predicted signs of the correlations. For those with less interest in politics, the impact of implicit partisanship was significant for nine of the 16 thermometer ratings and all but one (Jimmy Carter) of the coefficients were in the predicted direction. In contrast, for those more interested in politics, only two of the 16 coefficients were significant, and there were five sign reversals (for Bill Clinton, George H. Bush, McCain, the Republican Party, and Business Groups). The same pattern is evident for the comparison based on participant group. For the undergraduates, nine of the 16 coefficients were significant, with no sign reversals. For the

more sophisticated SIPP group, only three of the 16 coefficients were significant and in the right direction, with five sign reversals (Reagan, Gore, both Bushes, and McCain).

These patterns support the hypothesis that implicit partisanship has a systematic independent impact on the political judgments of less sophisticated individuals, but not on the judgments of the more sophisticated. It is also clear that there was variability across targets.[11] Moreover, the reliance on the statistical significance of the individual coefficients fails to take into account the fact that the sizes of the sophistication groups are unequal (i.e, the unsophisticated groups are larger). To get an overall sense of the strength of the relationships, we computed the average partial correlation for the 18 thermometer ratings.[12] For the full sample, the average partial correlation was equal to .16 (accounting for 2.6% of the variance in the thermometer ratings, significant at p=.06). Importantly, the average effect size varied as a function of sophistication. For the low interest group, the average partial correlation was equal to .21 (4.4% of the variance, p=.06). In contrast the average partial correlation for the high interest participants was only equal to .09 (0.8% of the variance, p>.30). The same pattern is evident for the second indicator of sophistication. For the undergraduates, the average partial correlation was equal to .18 (3.4% of the variance, p<.07), whereas for the SIPP participants, the average partial correlation was only equal to .09 (0.8% of the variance, p>.35).

In short, implicit partisanship had a consistently stronger impact on the political opinions of the less sophisticated. One possible explanation for these differences is statistical, namely the possibility of stronger collinearity among the implicit and explicit attitudes for the more sophisticated participants. The correlations between the two are stronger for the more sophisticated (Table 2a), and sign reversals (Table 3) are a symptom of collinearity. However, consideration of parallel regression-based analyses of the Table 3 data, and the accompanying diagnostics indicate that collinearity between the two indicators of partisanship was not a severe problem for the more sophisticated groups (i.e., the variance inflation factors and condition

indices were well within normal bounds; Fox, 1991). Although we would not fully rule out a statistical basis to these results, they suggest to us instead a simpler substantive conclusion: implicit partisanship has a stronger impact on the political judgments of less sophisticated individuals, in keeping with the general principle that automatic associations exert a stronger influence when people are unwilling and/or unable to devote cognitive resources to a judgment task (Fazio, 1990; Florack et al, 2001; Greenwald and Banaji, 1995; Wilson et al, 2000).

-----Insert Table 4 about here-----

Table 4 provides the comparable results for implicit ideology. The bivariate relationships show that both implicit and self-reported ideology were significant predictors of the political judgments. While self-reported ideology for the most part outperformed the implicit measure, the effects of implicit ideology were comparable in magnitude to the self-report effects.

The partial correlational analyses reveal that, for the sample as a whole, implicit ideology exerted a significant independent impact on the ratings of seven of the twelve figures and three of the six groups (or, ten of the 18 thermometer judgments). There were no differences between those low and high in political interest. For the low interest participants, three of the 18 coefficients were significant, with three insignificant sign reversals (Democratic Party, liberals, and unions). For the high interest participants, four of the 18 coefficients were significant, with three insignificant sign reversals (Bush senior, McCain, and Carter). More systematic differences emerged in the comparison of the participant groups. For the undergraduates, seven of the 18 coefficients were significant, with no sign reversals. In contrast, for the SIPP participants, none of the coefficients were significant and in the right direction, whereas there were nine sign reversals of various magnitudes (both Clintons, Reagan, Gore, both Bushes, McCain, and both parties).

The average partial correlations yield the essentially the same conclusions. The average partial correlation for the full sample was equal to .17 (2.8% of the variance, $p<.08$). There were

no differences in the impact of implicit ideology as a function of political interest, and those effects on the average were not significant (average partial correlations = .15 and .16, for the low and high interest groups; ps = .17 and .19, respectively). The differences as a function of participant group were more robust, with the average effect of implicit ideology among the undergraduates equal to .18 (3.1% of the variance, p<.10), whereas the effect among the SIPP participants was nonexistent (average partial r = -.02, .03% of the variance).[13]

Implicit Partisanship and "Independent Leaners"

We focus now on implicit partisanship, and its implications for our understanding of the 'independent leaner' paradox. The analyses reported in Tables 2a and 3 rely on the five-point scale measure of self-reported partisanship, where all independents (regardless of whether they lean toward a party or not) were classified at the midpoint of the scale. Those results do not differ if the seven-point scale that includes separate categories for independent leaners is substituted for the five-point scale, because the two are so very highly correlated (r=.97 for this sample). In fact, for many empirical applications the distinction between the five- and seven-point scale operationalization of partisanship is irrelevant because of the high correlation between the two. Nonetheless, there are important theoretical and practical questions about the nature of independent leaners that may be clarified by consideration of their implicit attitudes.

-----Insert Figure 3 about here-----

Figure 3 displays the average implicit partisanship for each of the seven categories of explicit partisan identifier. The measure of implicit partisanship is the composite directional IAT measure, and so that variable ranges from very strong Democratic preferences (high negatives) to very strong Republican preferences (high positives). It is clear from Figure 3 that those who claim to be strong Democrats or Republicans had the strongest implicit attitudes. The important aspect of Figure 3 is the evidence that the relationship between implicit partisanship and the traditional seven-point scale was *not* monotonic. That is, the independent leaners, both

Republican and Democrat, had *stronger* implicit partisan attitudes than did partisan identifiers who report a weak attachment to the parties. The sample sizes are small, and so the differences only approach statistical reliability (for the leaning and weak Republicans, the difference in the means is 60.62 ms, $t(19) = 1.40$, $p<.10$; for the leaning and weak Democrats, the difference is 67.37 ms, $t(31)=1.38$, $p<.10$). Nonetheless, these data are intriguing, because they suggest independent leaners possess fairly strong automatic affective associations toward the political parties, so that at the level of implicit cognition, their attitudes are more partisan than those held by weak identifiers.

Discussion

Let us begin by summarizing the results, as they pertain to the goals outlined in the introduction of this paper. First, we demonstrated that the implicit components of partisanship and ideology can be measured via the IAT. Thus, partisanship and ideology, like most attitudes (Fazio, 1986, 1995), have automatic components that can operate outside conscious awareness and that can be triggered automatically when relevant stimuli are encountered (Sears, 2001). Second, the overlap between the implicit and standard self-report measures was substantial, consistent with previously reported data (Nosek and Banaji, 2002; Nosek et al, 2002a). Supporting Nosek and Banaji's (2002) claim that elaboration moderates the strength of the relationship, the correspondence between the two was consistently stronger for the more sophisticated participants (eleven of the twelve comparisons in Table 2 are in the predicted direction, with four of the eleven differences statistically significant).

Third, we confirmed the predictive utility of the implicit measures in two ways. Implicit partisanship and ideology predicted a unique proportion of the variance in evaluations of prominent political actors and groups, above and beyond that predicted by the standard self-report indicators. Consistent with arguments that automatic associations and implicit effects exert a stronger influence when people are unwilling and/or unable to devote cognitive

resources to a judgment task (Fazio, 1990; Florack et al, 2001; Greenwald and Banaji, 1995; Wilson et al, 2000), the impact of the implicit attitudes was more consistent and robust among the less politically sophisticated (the pattern emerged in three of the four relevant comparisons). Finally, the implicit partisan attitudes of independent leaners were more partisan than those held by weak identifiers, thus shedding light on the cognitive foundations of the different types of political independence.

The persistent differences attributable to sophistication underscore the importance of this individual difference in understanding political cognitive processes (McGraw, 2000). We made use of two different indicators of sophistication (stated political interest and group from which the participants were solicited), and while the differences were consistently stronger across the participant group comparison, by and large the two indicators yielded similar patterns, thus providing an internal replication of the results. Both groups – the undergraduates and the SIPP enrollees – are no doubt more sophisticated (on average) than the American public, and so our investigation of sophistication-based differences in implicit political attitudes is limited to individuals in the middle- to high-end of sophistication. As always, replication of the present research findings to more diverse and representative samples will be useful.

There are two potentially paradoxical findings involving sophistication deserving of elaboration. First, the magnitude of the IAT effects tended to be stronger among the more sophisticated participants (see Endnote 7), as was the correspondence between their implicit and explicit attitudes. Nevertheless, the sophisticates' implicit attitudes were largely inconsequential, having little systematic impact on political judgment. Thus, although implicit attitudes and automatic associations appear to be stronger among the more politically sophisticated (consistent with Lodge and Taber, 2002), their implicit attitudes also exert less influence on political judgments (contrary to the Lodge and Taber, 2000, 2002 conclusions). This suggests that sophisticated individuals, who by definition bring to bear more cognitive

resources to a judgment task, are willing and able to bypass the automatic, even "mindless," application of the immediate affect elicited by an attitude object, and instead reach a more reasoned, deliberate judgment (see Devine and Monteith, 1999, for a similar argument in regards to control of prejudice and stereotyping). This is not to say that the resulting judgment is devoid of affect and dominated by cognition, but rather that more conscious, controlled, and deliberative processes – both affective and cognitive – are brought to bear on the judgment task (see Giner-Sorolla, 1999, for the distinction between immediate and deliberative affect). One implication of this argument is that care must be taken to avoid linking automatic affective processes to phenomena such as resistance to persuasion and control of prejudice, absent any systematic evidence of the influence of those automatic processing links. Just because an attitude has strong automatic associations does not mean that those associations are inevitably consequential (or, as Bargh, 1994, put it, "the use of automatically supplied input in consciously produced judgmental output is not mandatory," p. 30).

The key question, then, is, under what conditions are implicit political attitudes likely to be consequential? Again, our data point to the general principle of individual differences in political sophistication: all else equal, the implicit attitudes of individuals who are *less* interested and involved in politics should be *more* potent than the implicit attitudes of those who are more cognitively engaged with the political world. Sears invokes this principle when he argues "strongly affective symbolic processing (or, in social psychological language, automatic processing) is most likely under the conditions that hold most commonly in mass politics" (2001, p. 32). Our disagreement with Sears is a matter of degree, as he has in mind a world of mass politics with little to no information, cognitive engagement, and deliberation. In our view, there is a broader continuum of cognitive engagement that is useful to take into account when explaining political judgment and decision making (McGraw, 2000). Nonetheless, we agree with Sears (2001) that the practice of symbolic politics, and in particular evoking symbols that

automatically activate political attitudes, can create the conditions for implicit, unconscious cognitive dynamics (see also Mendelberg, 2001).

The results pertaining to the implicit partisan attitudes are particularly intriguing, because they shed light on the cognitive foundations of partisanship. In particular, the evidence indicating that independent leaners have stronger implicit partisan attitudes than weak identifiers is consistent with more general claims that the independent leaners are closet partisans. Moreover, this evidence suggests their implicit attitudes towards the parties may partially account for the partisan-like attitudes and behaviors of independent leaners. We would be quick to underscore that consideration of implicit partisan attitudes would provide only a partial understanding of the (explicit) attitudes and behaviors associated with partisan-leaning independence, which has multiple psychological sources (Greene, 2000). Do these data shed any light on more general models of partisanship, and in particular debates between those who would conceptualize partisan identification as a stable and enduring attitude formed relatively early (Converse et al, 1960; Green et al, 2002; Sears, 2001) versus those who contend that partisan identities are evolving and rational evaluations of ongoing party performance (Downs, 1957; Fiorina, 1981; Page and Jones, 1979)? Although at first blush, our evidence that partisanship has implicit components that are automatically activated may appear to support the former camp, in fact, that is not the case. Implicit attitudes and stereotypes are malleable, influenced by contemporaneous information such as group exemplars (Dasgupta and Greenwald, 2001), situational cues (Wittenbrink, Judd and Park, 2001), and social influence (Lowery, Hardin and Sinclair, 2001). This potential for change at the implicit level is consistent with the rational updating models, although the extent to which implicit partisanship actually changes as well as whether that change is consistent with the rational updating models is a question for future research.

It probably comes as no surprise to students of American public opinion, raised within

the ‘innocence of ideology’ tradition (Converse, 1964; Kinder, 1983), that the results pertaining to implicit ideology were messier than those pertaining to implicit partisanship; those same students of American public opinion may be simultaneously surprised that the implicit ideology effects were as robust as they were. The initial IAT effects (Figure 2) were similar in magnitude for both the ideology and partisanship IATs. For the sample as a whole, the average impact of implicit partisanship and ideology on political evaluations was comparable, although the predicted differences attributable to political sophistication were weaker for implicit ideology. To some extent, these results echo those reported by Huckfeldt et al (1999), who also examined the micro-foundations of partisanship and ideology. Huckfeldt et al (1999) demonstrated that the accessibility of (explicit) partisan and ideological identifications is critical in determining their impact on political judgment, with more accessible attitudes (both partisanship and ideology) being of much greater consequence than less accessible attitudes (see also Huckfeldt et al, 2001). The implication from this study and the Huckfeldt research program is that cognitive measurement of ideology as an attitude represented in memory may reveal more potent effects on political judgment than standard self-report measures might detect.

Finally, let us emphasize once again that our position is not that measures of implicit political attitudes should be used in lieu of, or even widely in conjunction with, the standard self-report measures that have served political and social scientists so well. But this investigation has established that the implicit components of partisanship and ideology can be measured systematically, and that they have an impact on political judgments under theoretically meaningful conditions. Measures of implicit cognition hold great promise for illuminating our understanding of the micro-foundations of democratic citizenship (Huckfeldt et al, 1999; Lodge and Taber, 2002). It is our hope that the present findings will further encourage additional theoretical and empirical work identifying when and why implicit and explicit political attitudes diverge, and their independent consequences for public opinion and political behavior.

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Appendix: Sample Stimuli Used in the Political IATs

- For the *Good/Bad* Attribute Discrimination Tasks (all four IATs): happy, evil, smile, pain, joy, abuse, peace, disaster, paradise, rotten
- For the Political Figures (Target/Concept) Discrimination Tasks (*Democrat/Republican* response for the Partisan IAT, *Liberal/Republica*n response for the Ideology IAT): Al Gore, Ronald Reagan, Bill Clinton, George Bush, Bill Bradley, Bob Dole, Jimmy Carter, John McCain, Ted Kennedy, Dan Quayle
- For the Issues (Target/Concept) Discrimination Tasks (*Democrat/Republican* response for the Partisan IAT, *Liberal/Republican* response for the Ideology IAT): gun control, right-to-bear arms, pro-choice, pro-life, social welfare, pro-business, affirmative action, tax cutes, progressive, traditional

Endnotes

1. We make use of the *implicit/explicit* terminology in this paper because the framework and analysis draws upon in the Greenwald and Banaji research program. As those authors note (1995, p. 4), the implicit/explicit distinction has a good deal of overlap with other descriptors, such as *unaware/aware*, *unconscious-conscious*, and *automatic-controlled*.

2. Interested readers are urged to vist the IAT website at http://implicit.harvard.edu/implicit/. Greenwald, Banaji, and their colleagues are to be commended for generously making this tool available for scholarly and educational purposes.

3. Nosek and Banaji (in press) and Nosek et al (2002) report in tabular form the correlations between implicit and explicit political attitudes (Bush and Gore; r = .52; Democrats and Republicans, r=.45). However, those papers do not provide any measurement specifics, and there are no published papers from that research group focusing on the political IATs.

4. The two questions for interest and attention were: "Some people are interested in politics, others aren't much interested. Generally speaking, would you say you are very interested, somewhat interested, not much interested or not at all interested in politics?" and "Some people pay a lot of attention to politics, others don't have time to pay much attention to politics. Generally speaking would you say you pay a lot of attention, some attention, not much attention, or not attention at all to politics?" The two were correlated at r=.76.

As Table 1 suggests, the two indicators of sophistication were strongly, but not perfectly, correlated. Following a median split of the Interest variable, 28% of the SIPP participants would be classified in the low Interest group, whereas 26.5% of the undergraduates would be classified in the high Interest group.

5. We conducted a pretest to select the stimuli, relying on the expert judgment of 28 graduate students in political science. These experts rated a larger number of political figures and policy issues according to the extent to which they were representative of the target political categories (Democrat or Republican, and then liberal or conservative). The stimuli used in this study were all rated as representative of the target categories. We used names, rather than pictures, of the political figures, for a variety of reasons: ease in programming, comparability across the political figures and policy issue IATS, and because of evidence indicating that IAT effects are weaker with picture stimuli than with verbal stimuli (Greenwald, 2001).

6. We present the raw latencies in Figures, as these are more descriptively informative, whereas the logged latencies were used in the statistical models reported in tabular form. All of the results we report hold for both the logged and raw latencies.

7. We also estimated multivariate models to explore the determinants of the magnitude of the IAT effects, where the dependent variable was the difference between the compatible and incompatible blocks. Three sets of findings emerged, although they were not terribly robust. First, participants with stronger explicit partisanship and ideology (based on folded scales) tended to exhibit stronger IAT effects. Second, more sophisticated participants, and in particular the SIPP participants, exhibited stronger IAT effects. Third, in a number of studies, the IAT effect tends to be larger when the compatible block precedes the incompatible block (Greenwald et al, 1998; Greenwald and Nosek, 2001; Nosek et al, 2002); that procedural order effect was significant in our data for the two IATs involving political figures, but not for the two

IATs involving policy issues. None of the other procedural factors that we considered – the order in which the IATs were presented, subject handedness, and the match between the response options in the combined tasks and the underlying "left-right" continuum in American politics – had an impact on the magnitude of the observed IAT effects.

8. Operationally, the implicit partisanship measure was computed by taking the average response time on the ***Democrat/bad*** and ***Republican/good*** block, and subtracting it from the average response time on the ***Democrat/good*** and ***Republican/bad*** block. This produces a variable where high positive scores reflect a strong preference for Republicans whereas high negative scores reflect a strong preference for Democrats. Scores around the zero point suggest no implicit preference for either party. The implicit ideology measure was computed in a similar fashion.

9. Because our hypotheses are directional, and sample sizes are small, from this juncture on in the paper we make use of one-tailed tests of statistical significance.

10. This is functionally equivalent to including both measures of partisanship in a multiple regression model, and so, necessarily, regression-based results duplicate conclusions reached via the partial correlational analysis reported in Tables 3 and 4.

11. One source of this variability for the political actors is familiarity with the target. The names of the political figures in Tables 3 and 4 are arranged from most (Clinton) to least (Carter) familiar, based on ratings provided by the participants. Familiarity appears to moderate the magnitude of the effects of implicit partisanship among the less sophisticated participants. Specifically, for the 12 observations, the correlation between the mean familiarity ratings and the partial correlation coefficient for implicit partisanship was .74 and .73, for the low interest and undergraduate groups, respectively (both ps<.006), indicating the effect size of implicit partisanship decreased as familiarity decreased. This suggests that some minimal level of familiarity with the target is necessary for these automatic associations to be evoked. There was no systematic relationship between familiarity and the impact of implicit partisanship among the more sophisticated participants (rs= - .54, p=.06, and .06, ns, for the high interest and SIPP participants, respectively).

12. In computing these average correlations, we took the absolute value of the partial correlations, as long as they were in the predicted direction, because the question here concerns the magnitude of the impact. All correlations with a sign reversal, on the other hand, were given a negative sign for the estimation.

13. In contrast to the partisanship results, there was no evidence of a systematic relationship between target familiarity and the impact of implicit ideology.

Table 1: Characteristics of Study Participants

	Full Sample (N=93)	**Undergraduates** (N=68)	**SIPP Participants** (N=25)
Average Age:	21.89	19.66	28
% Female:	67.7%	74%	52%
% White:	79.6%	78%	84%
% Registered to Vote	75.3%	68%	96%
Mean Interest in Politics	3.19/4.00	3.01/4.00	3.68/4.00
Mean Attention to Politics	3.09/4.00	2.91/4.00	3.56/4.00
Partisanship:			
Strong Democrats	18.3%	8.8%	44%
Weak Democrats	19.4%	22.1%	12%
Independents	31.2%	35.3%	20%
Weak Republicans	12.9%	14.7%	8%
Strong Republicans	18.3%	19.1%	16%
Ideology:			
Extremely Liberal	5.4%	2.9%	12%
Liberal	22.6%	19.1%	32%
Slightly Liberal	18.3%	16.2%	24%
Moderate	24.7%	30.9%	8%
Slightly Conservative	10.8%	10.3%	12%
Conservative	16.1%	17.6%	12%
Extremely Conservative	2.2%	2.9%	0%

Table 2a: Correlations between Implicit and Explicit (Self-Report) Measures of Partisanship

	PID-Figures IAT	PID-Issues IAT	Composite PID IAT
Full Sample (n=93)	.50 ***	.47 ***	.58 ***
Less Interested (n=57)	.41 ***	.43 ***	.50 ***
More Interested (n=36)	.58 ***	.54 ***	.68 ***
Undergraduates (n=68)	.40 ***	.29 **	.43 ***
SIPP Participants (n=25)	.61 ***	.69 ***	.76 ***

Table 2b: Correlations between Implicit and Explicit (Self-Report) Measures of Ideology

	Ideol-Figures IAT	Ideol-Issues IAT	Composite Ideol IAT
Full Sample (n=73)	.48 ***	.46 ***	.55 ***
Less Interested (n=42)	.43 ***	.53 ***	.52 ***
More Interested (n=31)	.56 ***	.38 *	.59 ***
Undergraduates (n=51)	.31 **	.39 **	.40 **
SIPP Participants (n=22)	.74 ***	.58 **	.75 ***

Note: The entries are zero-order correlation coefficients between the IAT-based implicit measures of partisanship (3a) and ideology (3b), and the self-report measures.

* p<.05 ** p<.01 *** p<.001 (One-tailed tests)

Table 3: Impact of Implicit Partisanship on Political Judgments, Controlling for Explicit (Self-Reported) Partisanship

	Zero-Order Correlations		Partial Correlations				
	Implicit PID	Explicit PID	Full Sample	Low Interest	High Interest	UG Participants	SIPP Participants
Bill Clinton (-)	-.55***	-.72 ***	-.23 **	-.41 ***	.08	-.31**	-.15
Hillary Clinton (-)	-.48***	-.58 ***	-.21 *	-.25 *	-.17	-.23*	-.11
Ronald Reagan (+)	.50***	.62***	.21 *	.28 *	.12	.26 *	-.30
Al Gore (-)	-.41***	-.57***	-.11	-.14	-.03	-.14	.03
George H. Bush (+)	.39***	.58***	.07	.17	-.11	.12	-.18
John McCain (+)	.38***	.49***	.14	.31**	-.08	.29**	-.34*
George W. Bush (+)	.47***	.64***	.16	.20	.06	.25 *	-.28
Bob Dole (+)	.50***	.54***	.27**	.32**	.18	.20 *	.46**
Newt Gingrich (+)	.38***	.46***	.15	.18	.11	.14	.16
Bill Bradley (-)	-.33***	-.22*	-.25**	-.13	-.43***	-.16	-.37*
Jimmy Carter (-)	-.11	-.19 *	.00	.10	-.12	.05	-.12
Ted Kennedy (-)	-.31***	-.35***	-.14	-.10	-.18	-.04	-.27
Republican Party (+)	.54***	.75***	.19*	.31**	-.14	21*	.11
Democratic Party (-)	-.47***	-.76***	-.06	-.12	-.01	-.09	-.22
Conservatives (+)	.51***	.60***	.24**	.26*	.23	.25*	.19
Liberals (-)	-.54***	-.65***	-.26***	-.25*	-.26*	-.22*	-.34*
Business Groups (+)	.32***	.37***	.14	.23*	-.02	.08	.14
Unions (-)	-.33***	-.48***	-.08	-.20	.18	-.07	-.09

Note: The entries in the first two columns are zero-order pearson correlation coefficients. The entries in the remaining five columns are the partial correlation coefficients between the implicit measure of partisanship and the judgments, controlling for explicit partisanship. The partisanship measures are coded so that higher values reflect an implicit preference for, and identification with, the Republican Party. The dependent variables are thermometer ratings, where higher values reflect more positive evaluations. The direction of the predicted relationship (+ or -) is in parentheses after the name of the target judgment.

* p<.05 ** p<.01 ***p<.001 (all tests one-tailed)

Table 4: Impact of Implicit Ideology on Political Judgments, Controlling for Explicit (Self-Reported) Ideology

	Zero-Order Correlations		Partial Correlations				
	Implicit Ideology	Explicit Ideology	Full Sample	Low Interest	High Interest	UG Participants	SIPP
Bill Clinton (-)	-.47***	-.53***	-.19*	-.14	-.28	-.32***	.15
Hillary Clinton (-)	-.35***	-.60***	-.03	-.06	-.02	-.08	.06
Ronald Reagan (+)	.52***	.57***	.30**	.32*	.22	.26*	-.22
Al Gore (-)	-.34**	-.42***	-.14	-.10	-.22	-.26*	.07
George H. Bush (+)	.30**	.52***	.02	.06	-.09	-.02	-.22
John McCain (+)	.24*	.37***	.04	.23	-.18	.09	-.50**
George W. Bush (+)	.51***	.62***	.26**	.19	.28*	.26*	-.07
Bob Dole (+)	.46***	.55***	.23*	.20	.24	.19	.25
Newt Gingrich (+)	.49***	.35***	.38***	.36**	.35*	.30*	.15
Bill Bradley (-)	-.28**	-.11	-.27**	-.13	-.42**	-.21	-.15
Jimmy Carter (-)	-.12	-.13	-.06	-.13	.03	.03	-.06
Ted Kennedy (-)	-.36***	-.38***	-.20*	-.23	-.22	-.24*	-.07
Republican Party (+)	.49***	.66***	.20*	.20	.16	.22	-.34*
Democratic Party (-)	-.32**	-.55***	-.03	.11	-.27	-.11	.07
Conservatives (+)	.59***	.68***	.27**	.18	.32*	.25*	.07
Liberals (-)	-.42***	-.80***	.02	.07	-.05	.08	-.23
Business Groups (+)	.47**	.42***	.31***	.39**	.17	.19	.18
Unions (-)	-.19*	-.42***	.05	.04	-.01	.07	-.20

Note: The entries in the first two columns are zero-order pearson correlation coefficients. The entries in the remaining five columns are the partial correlation coefficients between the implicit measure of ideology and the judgments, controlling for explicit ideology. The ideology measures are coded so that higher values reflect an implicit preference for, and identification with, conservatives. The dependent variables are thermometer ratings, where higher values reflect more positive evaluations. The direction of the predicted relationship (+ or -) is in parentheses after the name of the target judgment.

* p<.05 ** p<.01 ***p<.001 (all tests one-tailed)

Figure 1: Example of the Implicit Association Test

Sequence	Block 1	Block 2	Block 3	Block 4	Block 5
Task Description	Initial Target-Concept Discrimination	Associated Attribute Discrimination	Initial Combined Task	Reversed Target-Concept Discrimination	Reversed Combined Task
Classification Responses	Black (L) White (R)	Pleasant (L) Unpleasant(R)	Black or Pleasant (L) White or Unpleasant(R)	Black (R) White (L)	Black or Unpleasant(R) White or Pleasant (L)
Sample Stimuli	Betsy LaTonya Katie Shavonn	Lucky Poison Disaster Happy	Jasmine Pleasure Peggy Evil Colleen Miracle Temeka Bomb	Sharise Megan Sue-Ellen Tia	Peace LaTisha Filth Lauren Rainbow Shanise Accident Nancy

Figure 1: Schematic description and example of the Implicit Association Test (from Greenwald et al, 1998, p. 1465). The IAT involves a series of five discrimination tasks, or blocks. A pair of target concepts (black/white in this example) and an attribute dimension (pleasant/unpleasant) are introduced in the first two blocks. Classification responses are assigned to a left hand (L) or right hand (R) response. The targets and attributes are combined in the third block, and then recombined in the fifth block, after reversing the response assignments in the fourth block for the target discrimination tasks.

Figure 2: IAT Effects

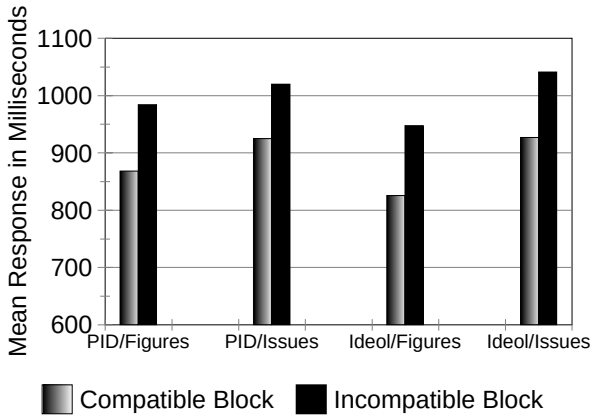

Figure 3:

Implicit PID and Independent Leaners