

The Impact of Self-Identifications on Political Attitudes: An Experimental Test Employing Subliminal Priming

Milton Lodge
Charles Taber
Inna Burdein

Department of Political Science
Stony Brook University
Stony Brook, NY 11794-4392
milton.lodge@sunysb.edu
charles.taber@sunysb.edu
iburdein@ic.sunysb.edu
unnoii@hotmail.com

Abstract: In this paper we report on an experimental test of the automaticity of affective political identifications. We hope to demonstrate – in line with the symbolic politics perspective of Sears (2000) and our own emphasis on the primacy of affect on political judgment (Lodge & Taber, 2000; 2003; Taber & Lodge, 2002) – that the “simple” act of categorization is not so simple after all as it involves both cognitive and affective processes which prove to be impossible to disentangle. The labeling of one’s self as a Democrat, Independent, or Republican, man or woman, black, white, or Asian is affectively charged, typically triggering a positive self-to-in-group label effect and typically a less-than-positive or even negative affective coloration to the out-group label. From this “hot cognition” perspective the categorization of self, in-groups, and out-groups is an affectively charged process. What is more, if it proves to be the case that the affective component of the categorization process is primary, in the sense that the affective tag attached to one’s self, in-groups, and out-groups comes to mind faster than do the cognitive attributes that define and differentiate the categories, then how we political scientists think and analyze the effects of identification on political beliefs and attitudes is in need of fundamental revision.

Categorization is the basic act of human information processing (Eysenck & Keane, 2000; Lachman, Lachman, & Butterfield, 1997; Rosch, 1975). The labeling of oneself, another person, object, or event as a member or instance of a group, be it a robin is a bird, or a politician is a Democrat, is critical in how we think and reason, as the categorized individual spontaneously inherits many of the characteristics of the group label. While the act of categorization can and does serve important beneficial functions (we could not function intelligently without categorizing and classifying), it has its well-documented downside as well as we quickly and unconsciously create in-groups and out-groups and then come to believe that our own group shares many favorable attributes in common that differentiate “us” from “them”. The simple act of categorization then can promote discriminatory attitudes and prejudicial behavior even when there are no objective differences between the groupings (Pilivan, Dovidio, Gaertner, & Clark, 1986; Tajfel, 1981).

The act of categorization may be made consciously, as when explicitly labeling “us” versus “them”, or unconsciously (Taylor, 1981, 1982; Perdue, Dovidio, Gurtman, & Tyler, 1990). Calling an act of categorization “automatic” reflects the well-documented finding that the categorization of people into in-groups and out-groups is sparked in milliseconds on mere exposure to the person, thing, event, or idea, with little or no effort, intention, awareness, or conscious control (Bargh, 1994; 1997; 2002). Further, it is now clear that social categories are “hot,” that is, that most if not all social objects are affectively charged (Bargh et al., 1992; Fazio, Sanbonmatsu, Powell, & Kardes, 1986; Fazio, 1992; Lodge & Taber, 2000). This the case, the “simple” act of categorization is not so simple after all as it involves both cognitive and affective processes which prove to

be impossible to disentangle (Lodge & Taber, 2002). The labeling of one's self as a Democrat, Independent, or Republican is affectively charged, typically triggering a positive self-to-in-group label effect and typically a less-than-positive or even negative affective coloration to the out-group label. From this "hot cognition" perspective the categorization of self, in-groups, and out-groups is an affectively charged process. What is more, if it proves to be the case that the affective component of the categorization process is primary, in the sense that the affective tag attached to one's self, in-groups, and out-groups comes to mind faster than do the cognitive attributes that define and differentiate the category, then how we political scientists think and analyze the effects of identification on political beliefs and attitudes is in need of fundamental revisions. If indeed the affective aspect of one's in-and-out-group identifications – once developed – are evoked automatically on mere exposure, that is, immediately and unconsciously, and thereby precede any cognitive appraisals, then our reliance on explicit, self-report measures of identifications mis-specify what is happening and likely capture but a small portion of the effects.

In this paper we report on a first test of the automaticity of affective political identifications under minimalist conditions. What we cannot do in this study is test the rival claims of social identity theory (Tajfel & Turner, 1986) or social categorization theory (Turner, 1987; Huddy, 2002), or differentiate either from conflict theory (Bobo, 1988), or dominance theory (Sidanius, 1993); nor can we resolve the Kinder vs. Sniderman debate on the impact of racism on policy attitudes (Kinder, 1986; Sniderman & Tetlock, 1986). What we hope to demonstrate – this more in line with the symbolic politics perspective of Sears (2000) and Sears, Huddy & Schaffer (1986) and our

emphasis on the primacy of affect on judgment (Lodge & Taber, 2000; 2003; Taber & Lodge, 2002) – is that one’s gender, race, and political identifications are, once developed, thereafter driven by an automatic affective response that positively links one’s self to in-groups and an automatic negative response to out-groups. This affect is, we argue, what generates the well-documented biasing effects of identification on political beliefs, attitudes, and behavior.

When and what automatic affective responses are activated depends on the set of preconditions operative in the environment at the time and what’s going on inside the individual’s head at the moment. The key here is that once triggered, once the preconditions come into play, the affective responses can occur without any further conscious or deliberative guidance. Following this logic, our experiment examines the momentary, unconscious impact of self, in-group, and out-group identifications on political beliefs and attitudes.

Underlying Cognitive Architecture

Before turning to the literature on the primacy of affective identifications and how this affect might impact the formation of political judgments, let us briefly review the cognitive architecture underlying our dual-process theory of political information processing, which sees affect as preceding cognition in the evaluation of political candidates, groups, and issues (Lodge & Stroh, 1993; Lodge & Taber, 2000, 2003; Taber, forthcoming). A cornerstone of any model of political reasoning is the citizen’s preexisting knowledge and predilections. These long-term factors, functionally speaking, require a vast long-term memory (LTM) for storing facts, beliefs, and predispositions,

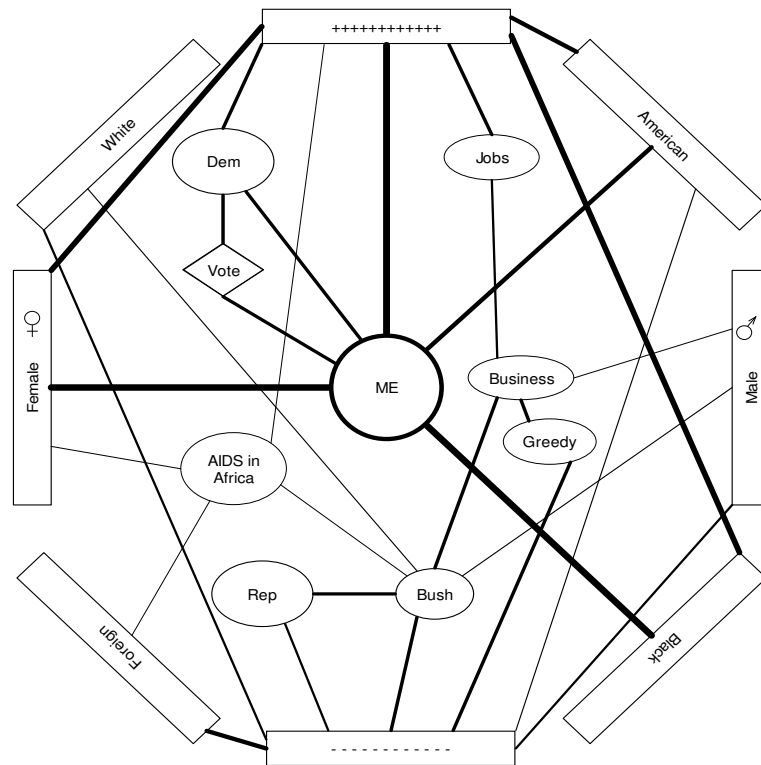
and a mechanism for “moving” one’s thoughts and feelings about leaders, parties, and issues from LTM into working memory (WM) where they can be attended to (Barsalou, 1992; Rumelhart & Norman, 1977; Sanford, 1986; Simon, 1969). Conscious attention is very limited, perhaps to the magic number 7 ± 2 bits or chunks of information, hence the need for categories, heuristics, stereotypes, habits, and other simplifying mechanisms for thinking and reasoning (Cialdini, 2003).

LTM is organized associatively, and it is useful to think of LTM metaphorically as a configuration of nodes linked to one another in a network of associations (Anderson, 1983; 1999; or if you prefer as neurons “bundled” together by weighted connections [Read & Miller, 1998; Smith, 1996]). Were we able to tap a citizen’s complete political knowledge structure, there might be tens of thousands of nodes (among them one for George W. Bush) with a complex network of associations (perhaps his demographics, stands on issues, perceived traits, and maybe an inferential abstraction or two – e.g., that he is conservative). Linked nodes represent beliefs, the strength of which will vary in accessibility – the ease with which a stored concept lying dormant in LTM can be retrieved into conscious WM.

Figure 1 provides a simplified example of the architecture of one woman’s political knowledge (for a somewhat similar framework, see Greenwald et al., 2002). Note first that the self is the strongest node in the network and that identity (female, black) and self-esteem are the strongest links in the network. Positive and negative affect and basic identity nodes are distinguished in this representation because of their centrality in human information processing. As with more standard semantic network models, beliefs are represented as links among basic memory objects (e.g., “I am intelligent,”

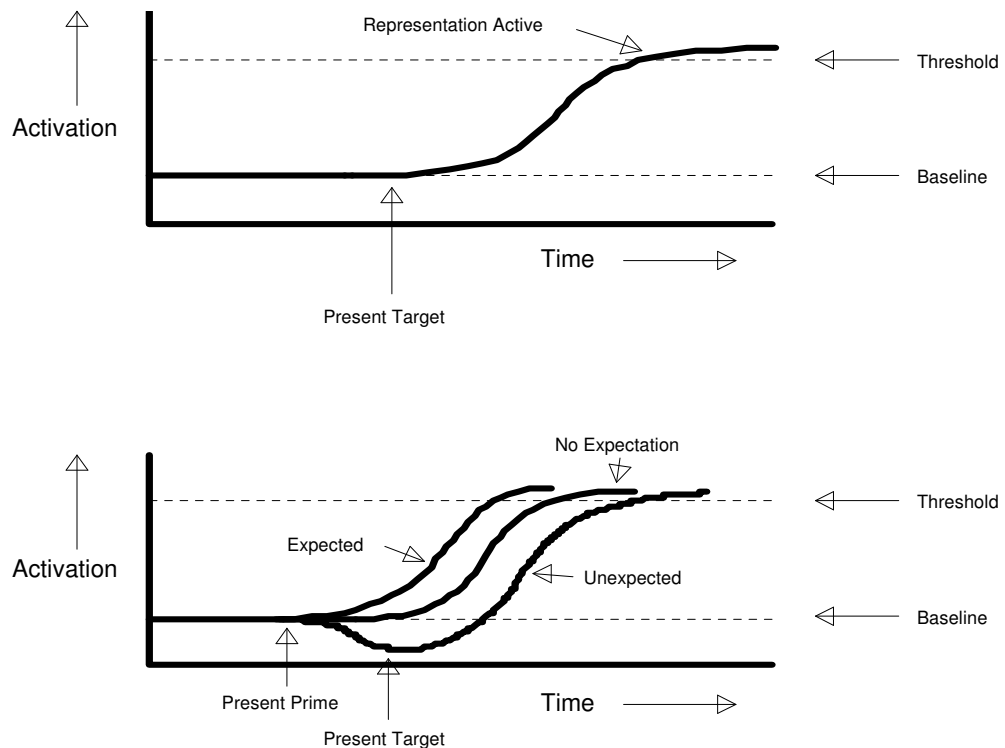
“President Bush has ties to big business”). Attitudes appear as links between basic memory objects and positive and/or negative affect. (Note that ambivalence can be represented by allowing links to both positivity and negativity, as with “American” in Figure 1). The impact of context or priming on evaluations may also be depicted: see, for example, that if the concept “jobs” were primed, “business” would be seen in a positive light, while in the context of “greed” “business” is evaluated negatively. Finally, we represent behavioral intentions – as here the intention “to vote Democrat” – as diamond shaped nodes (the traditional shape for decision points in flow charts).

Figure 1: The Structure of Political Beliefs, Attitudes, and Intentions



But how is information moved from LTM into WM? Spreading activation provides the mechanism. A node in LTM switches from being dormant to a state of readiness with the potential to be moved into WM when it is activated on mere exposure, or as a direct object of thought, or because it is closely linked to an activated object of thought. The top panel of Figure 2 (adapted from Barsalou, 1992, pp.46-47) depicts the activation process, with the Y-axis representing the level of activation of a given node in LTM and the X-axis representing time in milliseconds. The rise time from dormant-state to activation threshold is almost instantaneous. Though Figure 2 does not show this, activation also decays quite rapidly so that a given node will drop back to baseline in a second or so if there is no further source of activation. Imagine a person reading about

Figure 2: Activation of a Node in LTM



President Bush in a newspaper headline. Without perceptible effort, the concept BUSH (G.W., not a shrub) becomes activated and pops into WM. Even more important for our purposes, activation spreads along the network of links to related concepts, thereby “priming” strong semantic associations of BUSH (is a REPUBLICAN) as well as beliefs (is pro business). For a few hundred milliseconds, these associated concepts remain in a heightened state of arousal, with any additional activation likely to push them over threshold and into WM.

It is useful to think of priming through spreading activation as producing preconscious expectations. The bottom panel of Figure 2 shows the activation of associations under different priming conditions. Consider again the activation of the concept BUSH from a newspaper headline. Concepts associated with BUSH in LTM also receive activation, thereby raising their potential so that any subsequent processing which passes activation to these energized concepts will likely drive them over threshold. If a primed association (perhaps Bush’s Republican label or his stand on gun control) is “expected,” it takes substantially less processing to activate and has a better chance of getting into WM, of being processed faster, and thereby of “framing” the perception, recognition, and interpretation of subsequent information.

Conversely, spreading activation can inhibit the processing of unexpected categories (the bottom course in Panel b of Figure 2). When a concept is encountered unexpectedly, more effortful bottom-up processing is necessary before it may pass threshold and enter WM. If the word “walnut” were processed initially, this would inhibit the recognition of semantically unrelated concepts (such as REPUBLICAN), which would thereby take more time and effort to process. Finally, the middle course in

Panel b is a control or “baseline” condition in which no “expectations” are created by a prime. The non-word BBB, for example, which conveys no semantic expectations, would neither facilitate nor inhibit the recognition and categorization of subsequent concepts.

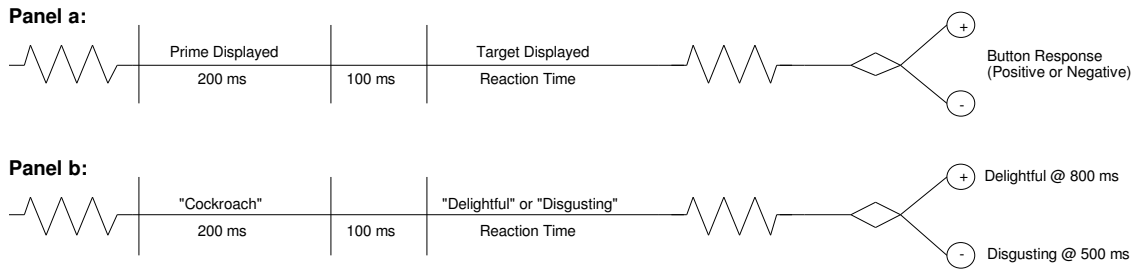
Evidence for the Automaticity of Beliefs, Feelings, Goals, and Actions

With this brief excursion into the priming paradigm, which is preeminent in the experimental study of automaticity in social and cognitive psychology, let us now turn to a discussion of the automaticity of beliefs, feelings, goals, and actions. Which responses are activated depends on their accessibility – a function of the set of cognitive, affective, and behavioral preconditions then operative in the environment and what representations and processes are occurring inside the individual’s head at the moment. The key here is that once triggered, once the preconditions come into play, those responses that have been contiguously and repeatedly associated in the past can now be evoked without any conscious or deliberative guidance (Bargh, 1996; 2001; 2002). These automatic responses – whether thoughts, feelings, intentions to act, or overt behaviors – can occur spontaneously, within milliseconds of a triggering event, even if the individual does not or cannot focus conscious attention on the object or event (i.e., the response can be primed subliminally, outside the individual’s awareness, with neither conscious appraisal nor intention).

Some of the most compelling demonstrations of the impact of implicit processes on social thought and attitudes involve the subliminal priming of traits and stereotypes. Many demonstrations of pre-conscious processing rely – as we do here – on the attitude-

priming paradigm developed by Fazio, Sanbonmatsu, Powell & Kardes (1986), and Bargh, et.al. (1992; 1996), as depicted in Figure 3.

Figure 3: Affective Priming Paradigm



As in the cognitive priming paradigm (Neely, 1975; 1976), people are exposed to a prime followed soon after by a target word, and they are expected to make some response to the target. In this attitudinal variant of the paradigm the Ss' task is to press a button labeled "plus" or "minus" to indicate "as fast as possible without making too many errors" whether the target word has a positive or negative connotation. The logic of the design is that to the extent that presentation of the attitude prime activates an associated evaluation, this evaluation (good or bad) will then influence how quickly subjects can correctly classify the target adjective as positive or negative in meaning. If the adjective were of the same valence as the attitude object prime, responses should be faster (i.e., facilitated) relative to a baseline response. Conversely, if the target and prime were of opposite valence, responses should be slower. The time from the onset of the prime word to the onset of the target word (here 300 ms) is a critical feature of this priming paradigm as it is too brief an interval for Ss to develop an active expectancy or response strategy regarding the target adjective that follows. Such conscious and flexible expectancies

require at least 500 ms to develop, and to influence responses in priming tasks (Neely, 1977; Posner & Snyder, 1975). Given an SOA (interval from prime to target) of 300 ms, if presentation of a prime influences response time to a target, it can only be attributed to an automatic, unintended activation of the corresponding attitude” (Bargh, Chaiken, Govender, and Pratto, 1992, p. 894).

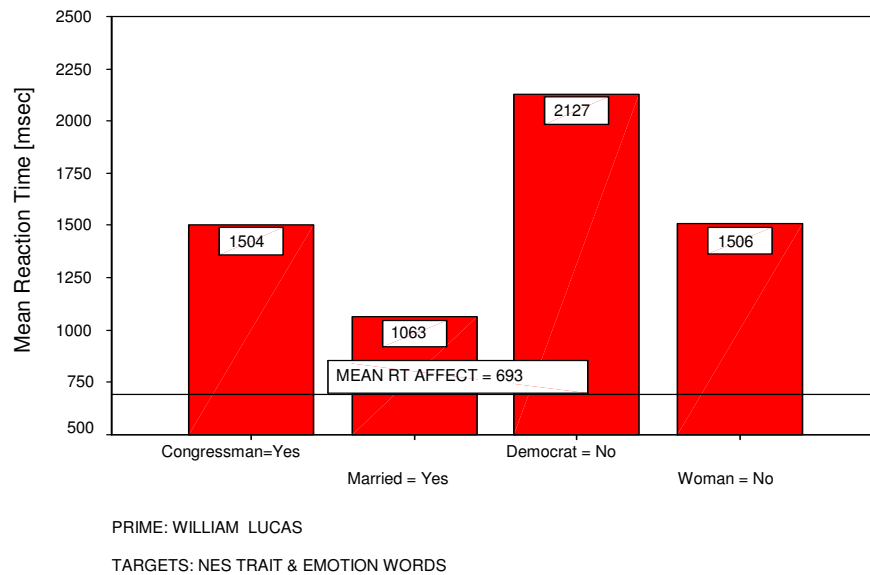
In Panel b of Figure 3 is a classic example of the attitude-priming paradigm: if COCKROACH is the prime and the target word is “disgusting” we would expect facilitation – a fast reaction time (RT), predictably, on the order of 500-600 milliseconds, to say “Disgusting” is a negative word – a relatively fast response time because the prime and target are affectively congruent. Conversely, if the target word were “delightful,” we would expect inhibition – a slower latency time to respond (on average around 800 ms) to say “delightful” is a positive word – because the association is affectively incongruent.

Note that this is a non-reactive measure: the S’s task is to not to say whether the target word describes the prime word but rather to simply indicate whether the target word is positive or negative, not whether the concepts are or are not semantically associated. Because most if not all social concepts in LTM are affectively charged and their positive or negative tag is triggered almost instantly on their mere exposure, prime-target pairings at a short SOA provide a strong test for discerning whether affect is automatically activated along with the concept itself. Affective priming within this paradigm has been demonstrated for hundreds of concepts (Bargh, Chaiken, Govender, & Pratto, 1992; Fazio, 2001).

In a series of experiments within this attitude priming paradigm to test the hot cognition hypothesis for political attitude objects, Lodge & Taber (2000) had Ss read a

campaign brochure of a hypothetical Congressman William Lucas. In addition to the Congressman’s picture was information detailing his background and experience as well as his strong position on the death penalty (pro for half the Ss, con for the others). After reading the brochure, Ss were engaged in a classical sentence verification task in which they indicated by a True/False button response whether LUCAS was, for example, a

Figure 4: Comparison of Cognitive and Affective RTs



Republican (Yes), a woman (No), pro (Yes) or anti (No) death penalty. The Ss were also engaged in the attitude-priming task at an SOA of 300 milliseconds where “LUCAS” primed such target adjectives as “delightful,” “disgusting,” “angry” and “sad”. In Figure 4 we report the reaction times for the cognitive True/False responses to the single-word targets “Congressman,” “Democrat,” “Married,” and “Woman,” as well as the mean reaction time to the affective target words in the attitude-priming task. On average it took Ss about 700ms to make an affective response, about twice as fast as the time to verify a cognitive association. We interpret this finding as support for our “hot cognition”

hypothesis and, what is more, as supporting Zajonc's "primacy of affect" hypothesis (Zajonc, 1980, 2002; Murphy & Zajonc, 1993) – in showing that affect comes to mind faster than do the cognitive associations thought to cause the affective response.

Once a concept acquires its affective charge – whether hardwired or learned – it can then serve as a prime. This was first demonstrated by Staats & Staats, 1957, in a series of classical conditioning experiments in which Ss saw a word paired with a nonsense syllable in a cued recall task. In one study – this a predecessor to Zajonc's 1980 study of affective priming – Staats & Staats systematically paired such nonsense syllables as "xeh" and "yeh" with such positive or negative words as "good" or "bad," finding that the heretofore affect-free nonsense syllables took on the affective coloration of the associated "primes". In another study they paired the national labels "Swedish" and "Dutch" with either such negative words as "ugly" and "failure" or such positive words as "sacred" and "happy," finding that the nationalities took on affective coloration of the primes.

In a study on which we model part of our experimental design, Perdue, Dovidio, Gurtman, & Tyler (1990) found that nonsense syllables repeatedly paired subliminally with the in-group designating pronouns (us, we, ours) were later rated by experimental participants as more pleasant than nonsense syllables paired with the out-group pronouns (they, them theirs), even under these minimal conditions outside of a social context and even though Ss were unaware of the primes. Similarly, they also found that experimental participants were able to make decisions concerning positive traits in a trait-rating task significantly faster after exposure to the in-group designators than after exposure to non-group pronouns.

The case for the automaticity of social beliefs, attitudes, and behavior has been strengthened considerably in the last decade by reducing the prime-to-target SOA, from 300 milliseconds to subliminal speeds as brief as 15 milliseconds (Murphy & Zajonc, 1993). At an SOA of 300 milliseconds some Ss may be dimly aware that a word or picture flashed by before the target word, although few if any are able to recall any of the primes or even recognize the primes at better than chance levels in their debriefing. By reducing the SOA to speeds below 50 milliseconds the word or picture primes appear as no more than a flicker on the computer screen and extensive debriefing reveals no awareness among Ss of having been primed. (See reviews of subliminal priming in Bargh, 1989, 1994, 1997; Greenwald & Banaji, 1995; Higgins, 1989; Smith, 1994; Wyer & Srull, 1989, with many studies directly comparing explicit to implicit measures.)

Taking our lead from social identity theory, which links one's self identification to affect (Huddy, 2001; Tajfel, 1969; Tajfel & Turner, 1986), in this study we explore how the activation of one's self identifications will spontaneously impact how citizens think about themselves (e.g., "I am a Democrat") and how they evaluate political groups and issues (e.g., "I support/oppose affirmative action"). What the primes are expected to do is enhance the saliency and strength of one's self identifications (Huddy, 2002), which – in turn – is expected to influence how in-groups, out-groups, and identification-related issues are evaluated.

What is not clear are the processes generating the enhancement effects, in particular the role of affect. Sears (2001), for example, argues that a basic premise of social identity theory is that one's social identifications automatically activate an affective response. This is in line with our hot cognition and the primacy of affect

hypotheses as well. Our hypothesis throughout is that one's self-identifications are affectively charged and it is this affect that determines the speed and strength of the activation of one's self-identifications, affiliations, and preferences. True enough, context matters: How salient and strong my identification as an American depends in part on the evening's news, but our expectation is that it is the spontaneously activated affect generated on mere exposure to the concept "American" that makes the identification momentarily salient and which once activated will directly impact subsequent judgments. A clear test of this hypothesis would be to show that affective primes that are semantically unrelated to one's identification as a White, or a Democrat, or an American, for instance "*cancer*" or "*sunshine*", produce the hypothesized saliency and strengthening effects.

The Experiment

To this point, we have argued that one's basic orientations toward politically relevant groups – what are commonly called group identifications – are powerful influences on political information processing. They enable rapid categorization of political constructs and provide ready interpretations and expectations for what people and groups say and do. Most important, we believe that group identifications are among the most powerful sources of hot cognition for most citizens most of the time, with predictable affect-driven consequences for subsequent information processing. Here we describe the experiment designed to put some of these theoretical conjectures to the test.

This experiment presents subjects with two tasks.¹ In the first, which we call the “I AM” task, we ask how quickly/easily participants can categorize themselves as belonging (or not) to basic social/political groups. We are interested both in the relative accessibility of these categories and in the degree to which one’s basic categorizations can be influenced by a (subliminal) prime. In the second task, which we call the “I SUPPORT” task, we are interested in the impact that the (subliminal) priming of such basic identifications will have on the evaluations of political persons and issues.

Subjects. Undergraduate students in introductory political science courses at Stony Brook University received extra credit for their participation (N=108; 44 female; 54 non-white; 59 Democrat, 22 Republican). The study was conducted in the fall semester of 2002.

Procedures. All studies were conducted in our Laboratory for Behavioral Research on Windows-based personal computers using *EPrime*, an experimentation software package developed by Psychology Software Tools, Inc. Subjects completed the experimental tasks singly in separate rooms.

Subjects received verbal and on-screen instructions and practice in using two buttons on a computer keyboard to indicate their responses “as quickly as possible without making too many errors.” Figure 5a illustrates the basic procedure: each trial begins when a prompt appears for 1 second in the center of the screen. This prompt – “I AM...” for the first set of trials and “I SUPPORT...” for the second set – serves both to prepare the subject for their response to the target word and to orient their visual focus to the exact center of the screen. A forward mask follows for 13 ms, followed by the prime

¹ There was a third task, not described in this paper, which examined what sorts of concepts are made accessible when people reason more deliberately about a political issue.

word for 39 ms and a backward mask for 13 ms.² It is very important, given our interest in automaticity, to understand that each part of this sequence occurs too quickly to be consciously perceived, so that any effects of the prime on subsequent processing must be outside of awareness. The masks, which consist of jumbled strings of letters, serve to replace the contents of visual sensory memory (ensuring that the prime does not remain in sensory memory even after it has disappeared from the screen). Finally, the target word appears and remains on the screen until the subject presses one of two keys to indicate their response to the target (indicating group membership for the I AM task or candidate/issue evaluations for the I SUPPORT task). Each subject completed 170 I AM trials followed by 212 I SUPPORT trials (not counting practice trials).

In Figure 5b, we see the I AM task illustrated in the case of an incongruent prime-target pair. Our subject, who is black in this example, would be slower to press the button indicating that she was black (in-group identifications, we argue, carry positive affect) because of the inhibiting influence of the affectively negative prime word, cancer. By contrast, we see facilitation illustrated in panel 5c for the I SUPPORT task: our subject is faster to respond that she opposes the death penalty because she was primed with an out-group label (White), which should ready a negative response.

Figure 5: Procedure on Each Experimental Trial

² In critical timing experiments, one must determine the rate at which full frames are written to the monitor (13 ms on our lab machines). Critical timing stimuli must be set to some multiple of the frame rate.

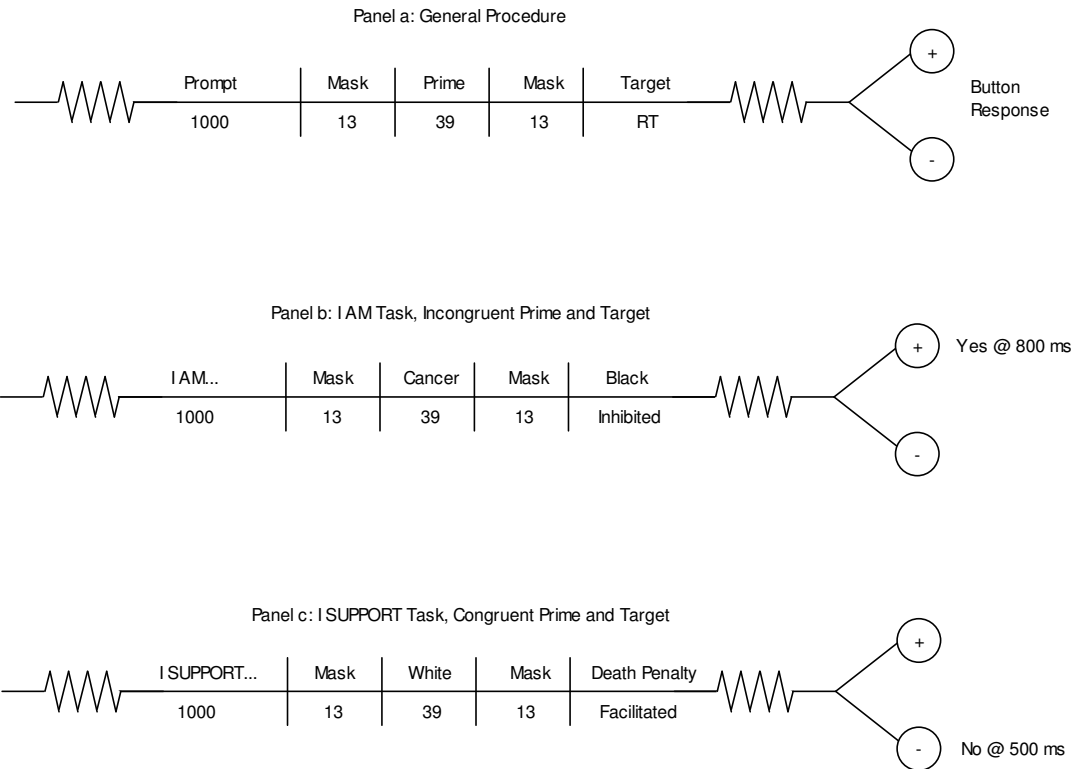


Table 1 lists the primes and targets used in this study. For targets in the I AM task, we chose basic political groups thought to be important in orienting citizens in American politics: race, gender, class, party, and ideological labels. As we will see, the categories are readily accessible – subjects generally have no trouble placing themselves in or out of these groups. For this task, we used three types of primes: pure affect words (semantically unrelated to the target), general pronouns (two personal, two group), and the same set of political identification groups used as targets. This allows us to examine the impact priming concepts on responses to the targets, if any, of pure affect primes, the most general of group primes that have been found to evoke self, singular other, in-group, and out-group orientations (Perdue et al., 1990), and political group primes thought to be

most relevant in American politics. Each prime was paired once with each target, excluding same prime-target pairs (so Black was never paired with Black, etc.).

For the I SUPPORT task, targets were selected to represent well-known political persons and issues. In addition to the primes just described for the I AM task, we also were interested in the relative impact of semantically-related concepts on evaluations of the issues. So each issue was paired with several topic-related words (e.g., Baby, God, and Life with Abortion Rights) as well as with several unrelated and non-affective primes (cup, door, stereo, and table, not reported in Table 1).

Following the two priming tasks, a computer-based survey was administered to collect basic demographics and responses to an open-ended political knowledge test.

Table 1: Primes and Targets

I AM Task					
Primes			Targets		
Affect	Pronouns	Political Groups	Political Groups		
Cancer Sunshine	Me You We They	Black White Woman Man Poor Rich Democrat Republican Liberal Conservative	Black White Woman Man Poor Rich Democrat Republican Liberal Conservative		
I SUPPORT Task					
Primes				Targets	
Affect	Pronouns	Pol Groups	Issue Words	Persons	Issues
Cancer Sunshine	Me You We They	Black White Woman Man Poor Rich Democrat Republican Liberal Conservative	Baby God Life Crime Freedom Safety Equality Justice Harlem Nigger Killer Lazy Work	Al Gore George W. Bush Hillary Pataki	Abortion Rights Affirmative Action Death Penalty Green Party Gun Control Welfare

Data Manipulations. Reaction time data generally require substantial “cleaning”. First, extremely fast times should be eliminated as indicating random responses and extremely slow RTs should be truncated so as not to overly bias analyses. Following standard procedures (Fazio, 1990), we eliminated trials in which the RT fell below 300 ms and set RTs over 2500 ms to 2500 ms (1.2% of trials). Next, we eliminated trials in which there was an incorrect response to the target on the RT task (i.e., trials where the S’s response differed from other trials using the given target; such errors are of course another potential DV, one not explored in the current paper), with error rates averaging 4.3% of trials across the two tasks.

The RT dependent variable must be normed by some baseline measure of individual performance for any analyses involving between subjects factors so that individual differences in average RTs do not have to be treated as error variance. Following Fazio’s (1993) recommendation, we normalized by each subject’s mean RT to positive/in-group and negative/out-group targets separately: we computed each subject’s mean across all trials involving a negative target and subtracted this from each trial involving a negative target; we then did the same thing for positive targets. This allows us to see whether congruent prime-target trials lead to faster than average RTs for targets of the given valence, controlling for individual variation in RTs to targets of that valence.

Sophistication in this study was measured dichotomously by the median split in the number of correct answers on our political knowledge/civics test (median was 10/17

correct). Subjects above the median we call sophisticates; subjects below are unsophisticates.³

Hypotheses

Hypothesis 1: Group identifications vary in their accessibility, with more “basic” or practiced identifications coming more quickly and easily to mind. Accessibility is a function of its repeated or momentary activation. Hence in the I AM condition we expect that the speed to respond “Yes” will be faster for one’s in-group than will “No” be for out-group identifications, with race and gender identifications the fastest, partisan and ideological the slowest, and the class primes indeterminate since many of the “poor” apparently think of themselves as “middle class” and middle class as soon-to-be rich (Cite NYT survey).

Moreover, the relative accessibility of group identifications should be influenced by group primes. So, for example, priming the target word “Democrat” by the prime word “Black” is expected to speed up the I AM response to Democrat by African Americans but inhibit the response time of Whites.

Hypothesis 2a: Group identifications carry automatic affect, so that in-group targets are facilitated and out-group targets inhibited by positive primes, while out-group targets are facilitated and in-group targets inhibited by negative primes, even when these primes are presented subliminally, outside of awareness. In this study we measure the automaticity of affective and cognitive responses within a subliminal priming paradigm

³ Note that one needn’t be particularly knowledgeable to qualify as a sophisticate here. It is worth pointing out that our results for sophisticates are not limited to true political elites.

in which the primes are presented at 40 milliseconds, which is below the threshold of conscious awareness and the effects are measured in latency to respond.

Hypothesis 2b: Because group identifications are affectively charged – self and in-groups positively, out-groups negatively (or perhaps less-than-positively) – we expect that the stronger the affective connection of group to self, the greater the facilitation and inhibition effects.

Hypothesis 2c: Following the lead of Perdue et al. (1990), we expect that the most general of group identification words – the group pronoun primes (“we” vs. “they”) will show the same congruency effects as do the more specific race and gender primes (and perhaps more strongly than the partisan and ideological primes): “we” should facilitate in-group targets and inhibit out-group targets, while “they” should have the opposite effects.

Hypothesis 2d: Again following Perdue et al. (1990), we test the hypothesis that the group pronouns will show stronger facilitation and inhibition effects than will the personal pronouns (“me” vs. “you”).

The next set of hypotheses shifts from basic “I am” categorization processes to more evaluative I support/oppose evaluations. Here we ask whether or to what degree group identifications (as well as basic affect words) influence evaluations of political candidates and issues.

Hypothesis 3: Group identifications have a congruency effect on the accessibility of both political candidates and issues, so that in-group primes are expected to lead to faster positive responses and slower negative responses to candidate or issue targets, while out-group primes reverse the effect. That is, when primed with an in-group label

(Black), we expect faster response times to favored political candidates or issues. We also expect to replicate Lodge and Taber's (2002) priming effects for pure affect primes ("cancer" and "sunshine", in the present study) on political person or issue targets.

Hypothesis 4: With but two exceptions we predict the facilitation and inhibition effects will be strongest for political sophisticates, as they are those who have made the group-to-candidate and group-to-issue associations most frequently and we assume have the strongest feelings (Lodge & Taber, 2002).

- The two exceptions are race and gender identifications in the I AM task as we assume all people have repeatedly accessed these identifications over a lifetime.
- But, we expect these very same primes will impact the political judgments in the I SUPPORT task as sophisticates are thought to be the most prone to make the identification to political associations.

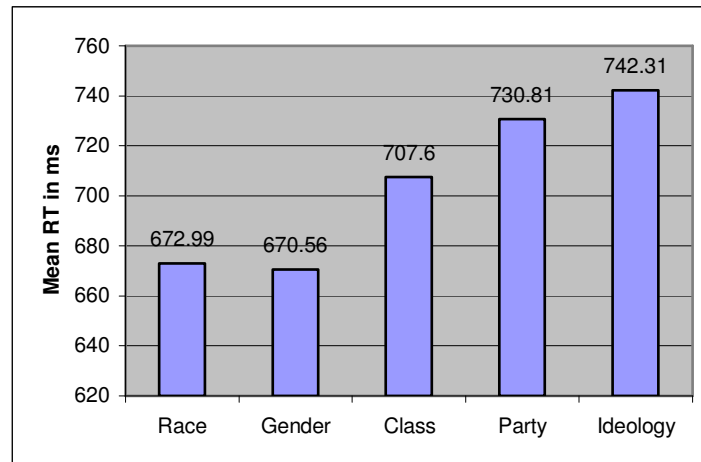
Results

Here, we report and briefly discuss preliminary findings from the study, broken down by hypothesis.

Hypothesis 1: Group identifications will vary in their accessibility, with more "basic" or practiced identifications (race and gender) coming more quickly and easily to mind.

Our results clearly support the varying accessibility of different identifications, with a repeated measures ANOVA on RTs to group label targets in the IAM task highly significant: $F(107,4)=47.03$, $p<.0001$. Figure 6 shows that Black/White and Male/Female

Figure 6: Accessibility of Group Identifications



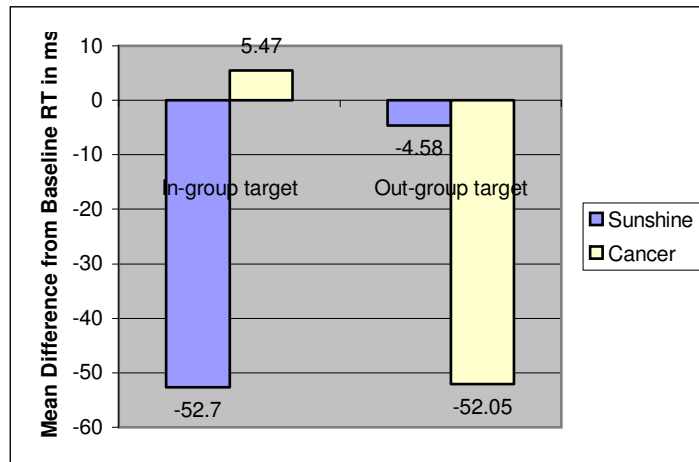
were the most accessible group identifications among our targets. Indeed, follow up contrasts found race and gender to be significantly faster than rich/poor, which were significantly faster than party ID and Ideology (there was no significant difference between gender and race, and party or ideology).

Hypothesis 2a: Group identifications carry automatic affect; in-group targets will be facilitated and out-group targets inhibited by positive primes, while out-group targets will be facilitated and in-group targets inhibited by negative primes.

In support of “hot” group identifications we found in a repeated measures ANOVA a highly significant interactive effect between target and affect prime valence ($F=19.74$, $p<.001$). In-group and out-group targets are facilitated by positive (sunshine) and negative (cancer) affect words respectively. Only congruent conditions are significantly different from baseline, however; incongruent pairings did not inhibit responses (Figure 7). Once again, we must stress that these affect primes should have no semantic association in memory with the political group targets, so these facilitation and

inhibition effects can only be attributed to affective congruence with the targets. Also, that we achieve such strong results with subliminal primes makes very clear the automatic nature of the affective associations.

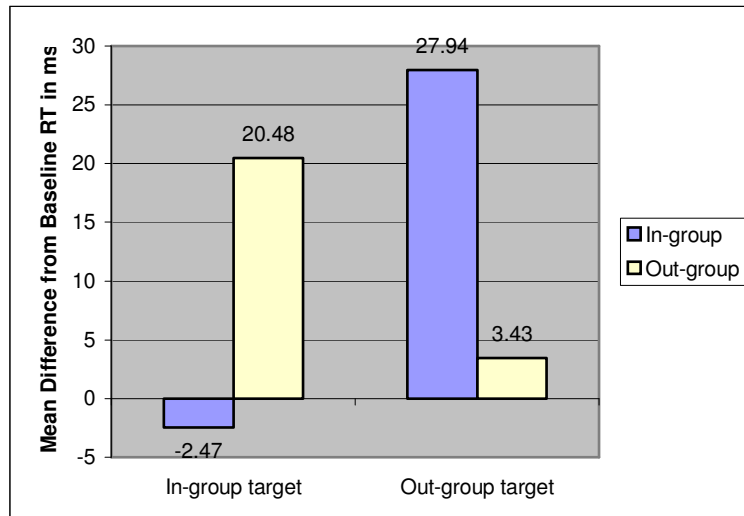
Figure 7: Interaction of Affect Primes and Group ID Targets



Hypothesis 2b: We expect that group ID primes will also show a congruency effect, with more accessible group identifications (race and gender) having greater facilitation and inhibition effects than less accessible identifications.

In Figure 8 we see the expected pattern of results for all group ID primes taken together, though we have yet to break the analysis down by individual primes as we would need to do to fully test hypothesis 2b. Where the congruency effect for affect primes was largely a result of facilitation for congruent pairs, here we see the effect driven by inhibition on the incongruent pairs.

Figure 8: Interaction of Group ID Primes and Group ID Targets



Hypothesis 2c: Personal and Group Pronoun primes (“me/we” vs. “you/they”) will show the same congruency effects as do affect and the more specific race and gender primes (and perhaps more strongly than the partisan and ideological primes).

Though we do not yet have a full comparison of the different prime types that would allow us to test hypotheses 2b and 2c, Figure 9 does show the same expected pattern of strong congruency effects for the pronoun primes as we found for affect primes (stronger than for political id primes taken together).

Hypothesis 2d: Group pronouns will show stronger facilitation and inhibition effects than will personal pronouns (“me” vs. “you”).

In Figure 10 we see support for this expectation, with only the group pronouns showing significant congruency effects ($p < .05$); the weaker facilitation/inhibition effects for personal pronouns are insignificant.

Figure 9: Interaction of Pronoun Primes and Group ID Targets

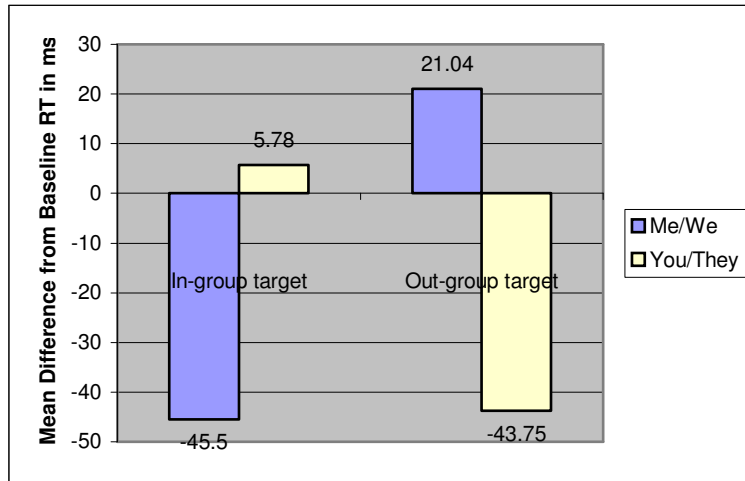
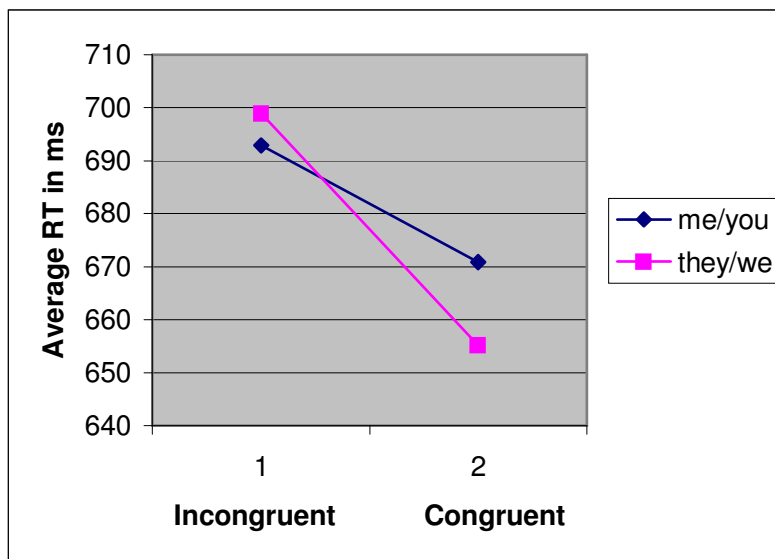


Figure 10: Group vs. Personal Pronouns

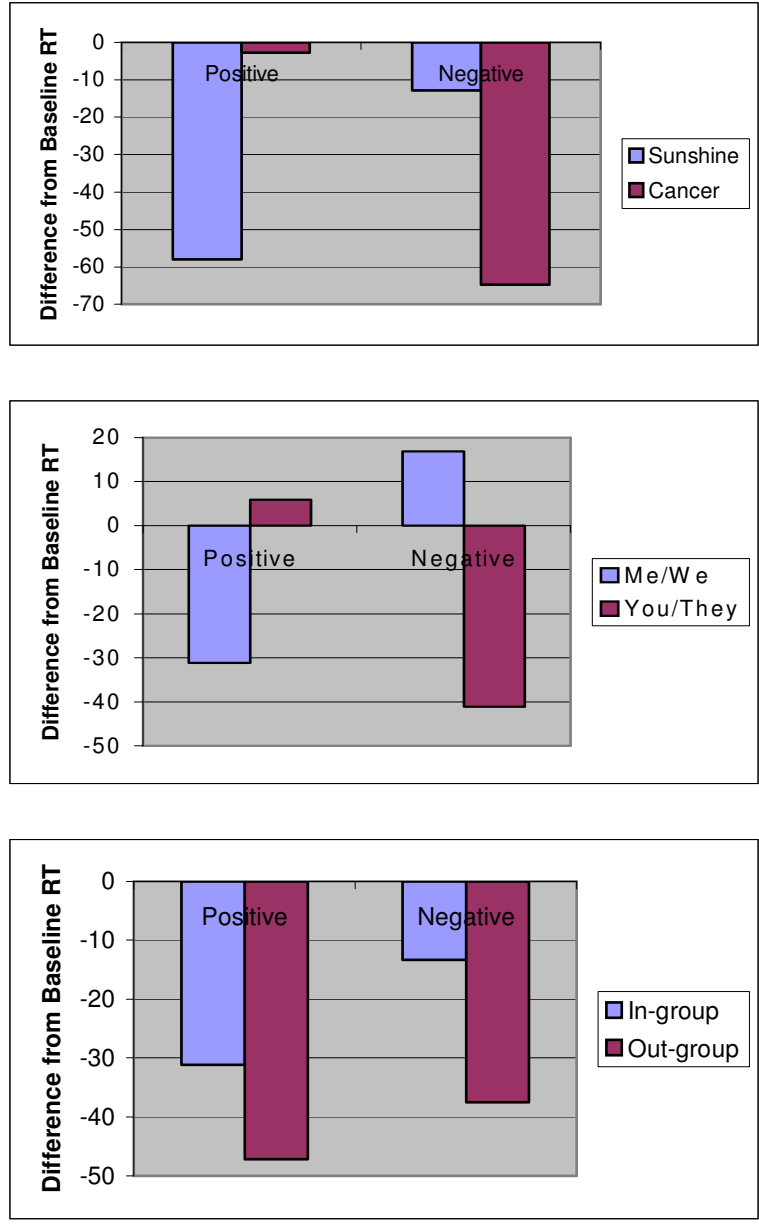


Hypothesis 3: Group identification primes have a congruency effect on the accessibility of both political candidates and issues, so that in-group primes lead to faster positive responses and slower negative responses to candidate or issue targets, while out-group primes reverse the effect.

For candidate targets (see Table 1 for the list), we find significant congruency effects for pure affect primes ($F=8.82, p<.01$) and pronouns ($F=7.31, p<.01$), but contrary

to our expectation the key interaction was not significant for political group primes (Figure 11).⁴

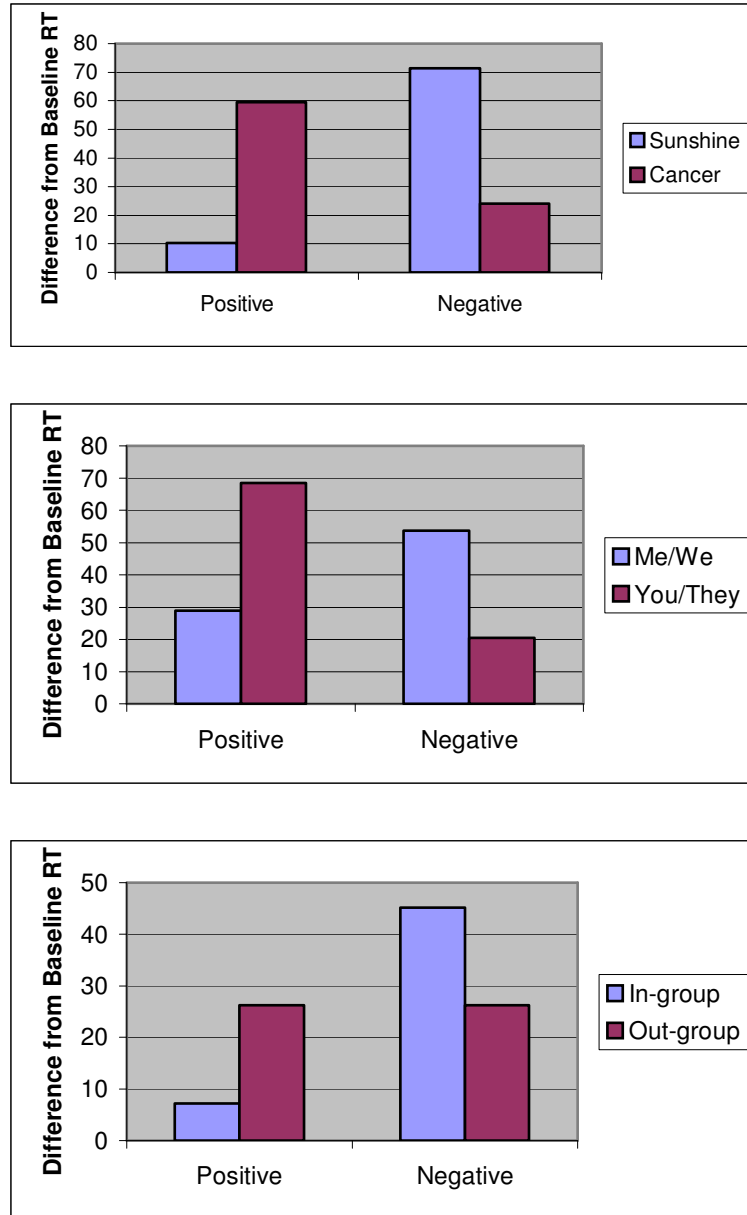
Figure 11: Effects of Various Prime Types on Positive or Negative Candidate Targets



⁴ There is an overall facilitation effect for most of these primes, but we believe this is a function of our current choice for baselines. We intend to recompute the baselines for particular types of targets (and not, as we do here, using the overall average for positive/in-group targets and negative/out-group targets).

Turning now to issue targets (see Table 1 for the list), we find marginally significant congruency effects for pure affect primes ($F=3.56, p<.1$), and significant effects for pronouns ($F=7.02, P<.01$) and political group primes ($F=3.53, p<.01$; see Figure 12).⁵

Figure 12: Effects of Various Prime Types on Positive or Negative Issue Targets



⁵ For the same reasons described in the last note, we do not place much confidence in the apparent overall inhibition effects in these analyses. These are a product of our baseline.

Hypothesis 4: Facilitation and inhibition effects will be strongest for political sophisticates, except for race and gender priming effects in the I AM task.

Analyses in progress.

Discussion

Group identifications have long been thought to orient American public opinion, but virtually all work has assumed this effect to occur overtly, at the level of conscious deliberation. In this paper we make two claims, which are admittedly only partly addressed in the experiment we present: first, we view the most important influences of group identifications as occurring automatically, within the first few milliseconds of processing political information; and second we believe that much of the influence of group identifications comes from the affective coloration that they automatically invoke, even before cognitive appraisal brings semantic associations to mind. Social and political group identifications are hot; in fact, we suspect that such group identifications as race and gender are among the “hottest” of all objects of political thought.

REFERENCES

- Abelson, Robert. (1963). “Computer Simulation of ‘Hot’ Cognition.” In Tomkins and Messick (Eds.). *Computer Simulation of Personality*. New York: Wiley, 277-298.
- _____ and Deborah Prentice (1989). “Beliefs as Possessions: A Functional Perspective.” In Anthony Pratkanis, Steven Brecker, and Anthony Greenwald (Eds.), *Attitude Structure and Function*. Hillsdale: Lawrence Erlbaum Associates, pp. 361-382.
- Anderson, John. (1983). *The Architecture of Cognition*. Cambridge, Mass: Harvard.
- Aronson, Elliot (1992). “The Return of the Repressed: Dissonance Theory Makes a Comeback,” *Psychological Inquiry*, Vol 3, No. 4, 303-311.
- Bargh, John (1994). “The Four Horseman of Automaticity: Awareness, Intention, Efficiency, and Control in Social Cognition.” In Robert Wyer and Thomas Srull (Eds.) *Handbook of Social Cognition: Basic Processes*, Volume I. Hillsdale: Lawrence Erlbaum Associates.
- _____ (1997). “The Automaticity of Everyday Life.” In Robert Wyer (ED.), *Advances in Social Cognition*(VOL 10). Mahwah, NJ: Erlbaum.

- _____, Shelly Chaiken, Rajen Govender, and Felicia Pratto (1992). "The Generality of the Automatic Attitude Activation Effect." *Journal of Personality and Social Psychology*, 62, 6: 893-912.
- Barsalou, Lawrence (1992). *Cognitive Psychology: An Overview for Cognitive Scientists*. Hillsdale: Lawrence Erlbaum Associates.
- Betsch, Tilman, Henning Plessner, Christiane Schwieren, & Robert Gutig (2001). "I Like It But I Don't Know Why: A Value Account Approach to Implied Attitude Formation." *Personality and Social Psychology Bulletin*, 27: 242-253.
- Bodenhausen, G. (1993). "Emotions, Arousal, and Stereotypic Judgments: a Heuristic Model of Affect and Stereotyping." In Donald Mackie & Donald Hamilton (Eds.) *Affect, Cognition, and Stereotyping: Interactive Processes in Group Perception*. San Diego: Academic Press, 13-37.
- Bradley, Margaret, & Peter Lang (1999). "Affective Norms for English Words (ANEW)." Instruction Manual and Affective Ratings. Technical Report C-1. The Center for Research in Psychophysiology, University of Florida.
- Cacioppo, John, & George Berntson (1994). "Relationship Between Attitudes and Evaluative Space: A Critical Review, With Emphasis on the Separability of Positive and Negative Substrates." *Psychological Bulletin* 115: 401-423.
- Cacioppo, John, Wendi Gardner, & George Berntson (1997). "Beyond Bipolar Conceptualizations and Measures of Attitudes and Evaluative Space." *Personality and Social Psychological Review*, 1:3-25.
- Cialdini, Robert (2001). *Influence: Science and Practice*. Boston: Allyn & Bacon.
- Clore, Gerald and Linda Isbell (1996). "Emotion and Virtue and Vice," In James Kuklinski (Ed.). *Political Psychology in Practice*. Hillsdale, Lawrence Erlbaum Associates, 103-123.
- Coats, S., E.R. Smith, H.M. Claypool, & M.J. Banner (2000). "Overlapping Mental Representations of Self and In-group: Reaction Time Evidence and its Relationship to Explicit Measures of Group Identification." *Journal of Experimental Social Psychology*, 36, 304-315.
- Collins, A. and M. R. Quillian (1968). "Retrieval Time From Semantic Memory." *Journal of Verbal Learning and Verbal Behavior*. 8: 240-247.
- _____, and Elizabeth Loftus (1975). "A Spreading-Activation Theory of Semantic Processing." *Psychological Review*, 82: 407-428.
- DeHouwer, Jan (2001). "A Structural and Process Analysis of the Implicit Attitude Test." *Journal of Experimental Social Psychology*, 37: 443-451
- Devine, Patricia (1989). "Stereotypes and Prejudice: Their Automatic and Controlled Components." *Journal of Personality and Social Psychology*. 56: 680-690.
- Ditto, Peter H., and David F. Lopez. (1992). "Motivated Skepticism: Use of Differential Decision Criteria for Preferred and Nonpreferred Conclusions." *Journal of Personality and Social Psychology* 63: 568-584.
- Eagly, Alice and Shelly Chaiken. (1993). *The Psychology of Attitudes*. Fort Worth, TX: Harcourt Brace Jovanovich.
- Eysenck, Michael, & Mark Keane (eds.). (2000) *Cognitive Psychology: A Student's Handbook*. East Sussex: Psychology Books.
- Fazio, Russell (1993). "Variability in the Likelihood of Automatic Activation: Data Reanalysis and Commentary on Bargh, Chaiken, Govender & Pratto (1992)." *Journal of Personality and Social Psychology*, 64, 5: 753-758.
- _____, (1995). "Attitudes as Object-Evaluation Associations: Determinants, Consequences, and Correlates of Attitude Accessibility." In Richard Petty and Jon Krosnick (Eds.), *Attitude Strength: Antecedents and Consequences*. Hillsdale: Lawrence Erlbaum Associates, 247-282.
- _____, and Williams, C. (1986a). "Attitude Accessibility as a Moderator of the Attitude-Perception and Attitude-Behavior Relations: an Investigation of the 1984 Presidential

- Election." *Journal of Personality and Social Psychology* 51: 505-514.
- _____, David Sanbonmatsu, Martha Powell & Frank Kardes (1986b) "On the Automatic Activation of Attitudes," *Journal of Personality and Social Psychology*, 50, 2: 229-238.
- Fiske, Susan (1981). "Social Cognition and Affect." In James Harvey (ed.), *Cognition, Social Behavior, and the Environment*. Hillsdale: Lawrence Erlbaum Associates, 227-264.
- _____ and Shelley Taylor (1991). *Social Cognition* (2nd Ed.). New York: McGraw-Hill.
- Gollwitzer, Peter, & John Bargh (1996). *The Psychology of Action: Linking Cognition and Motivation to Behavior*. New York: The Guilford Press.
- Greenberg, Anthony & Mahzarin Banaji (1995). "Implicit Social Cognition: Attitudes, Self-Esteem, and Stereotypes." *Psychological Review*, Vol. 102, 1: 4-27.
- Greenwald, A.G., M.R. Banaji, L.A. Rudman, S.D. Farnham, & B.A. Nosek (2002). "A Unified Theory of Implicit Attitudes, Stereotypes, Self-Esteem, and Self-Concept." *Psychological Review*, 109, 3-25.
- Huang, Li-Ning & Vincent Price (2001). "Motivations, Goals, Information Search, and Memory about Political Candidates." *Political Psychology*, 22,4:665-692.
- Huddy, Leonie (2002). "The Role of Context Within Social Identity Theory: A Response to Oakes." *Political Psychology*, 23, 825-838.,
- Kinder, Donald. (1998). "Opinion and Action in the Realm of Politics." In Daniel Gibert, Susan Fiske, & Gardner Lindzey (eds.). *The Handbook of Social Psychology*, NY: Oxford University Press, Vol 2: 778-866.
- Kunda, Ziva. (1987). Motivation and Inference: Self-serving Generation and Evaluation of Evidence. *Journal of Personality and Social Psychology* 53: 636-647.
- _____ (1990). The Case for Motivated Reasoning. *Psychological Bulletin* 108(3): 480-498.
- Lachman, Roy, Janet Lachman, & Earl Butterfield (eds.) 1979. *Cognitive Psychology and Information Processing: An Introduction*. Hillsdale, NJ: Lawrence Erlbaum
- Lakoff, George (1991). "Metaphors and War," Electronic message on the Internet, January 3, 1991.
- Lau, Richard (1989). "Construct Accessibility and Electoral Choice," *Political Behavior*.1: 5-32.
- LeDoux, Joseph (1996). *The Emotional Brain: The Mysterious Underpinnings of Emotional Life*. New York: Simon & Schuster.
- Lodge, Milton, Marco Steenbergen, and Shawn Brau, (1995). "The Responsive Voter: Campaign Information and the Dynamics of Candidate Evaluation." *American Political Science Review* 89: 309-326.
- _____ and Charles Taber (2000). "Three Steps Toward a Theory of Motivated Political Reasoning." In Arthur Lupia, Mathew McCubbins, and Samuel Popkin, (Eds.). Cambridge, MA: Cambridge University Press.
- Marcus, George (1991). "Emotions and Politics: Hot Cognitions and the Rediscovery of Passion." *Social Science Information*. 30: 195-232.
- Markus, Helen, and Robert Zajonc (1985). "The Cognitive Perspective in Social Psychology." In G. Lindzey & E. Aronson (Eds.), *the Handbook of Social Psychology* (Vol. 1). New York: Random House.
- Martin, Leonard, and Martin Tesser. (Eds.), *Construction of Social Judgments*. Hillsdale, NJ: Lawrence Erlbaum Associates (Pp. 37-65).
- McGraw, Kathleen (2000). "Contributions to the Cognitive Approach to Political Psychology." *Political Psychology*, 21: 805-832.
- _____, Mark Fischle, Karen Stenner, & Milton Lodge (1996). "What's in a Word? Bias in Trait Descriptions of Political Leaders." *Political Behavior*, 18, 3: 263-287.
- _____, Milton Lodge, & Jeffery Jones (2002). "The Pandering Politicians of Suspicious Minds." *Journal of Politics*, 64, 2: 362-383.
- Morris, James, Nancy Squires, Charles Taber, and Milton Lodge. "The Activation of Political Attitudes: Psychophysiological evidence for the hot cognition hypothesis." *Political Psychology*, forthcoming

- Murphy, S.T. & Robert Zajonc (1993). "Affect, Cognition and Awareness: Affective Priming with Optimal and Suboptimal Stimulus Exposures." *Journal of Personality and Social Psychology*, 64: 723-729.
- Neely, James. (1977). "Semantic Priming and the Retrieval of Lexical Memory: Roles of Inhibitionless Spreading Activation and Limited-capacity Attention." *Journal of Experimental Psychology: General* 106: 226-254.
- Niedenthal, P. M. And M. Setterlund (1994). "Emotional Congruence in Perception." *Personality and Social Psychology Bulletin*. 20: 401-411.
- Nisbett, Richard & Lee Ross. (1980). *Human Inference: Strategies and Shortcomings of Social Judgment*. Englewood Cliffs, Prentice-Hall.
- Perdue, Charles, John Dovidio, Michael Gurtman, & Richard Tyler (1990). "Us and Them: Social categorization and the Process of Intergroup Bias." *Journal of Personality and Social Psychology*, 59, 3: 475-486.
- Redlawsk, David (2000). "Hot Cognition or Cool Considerations: Testing a Theory of Motivated Reasoning." Paper presented at International Society of Political Psychology, July 1-4, 2000, Seattle, WA.
- Rumelhart, David, & Ortony, A. (1977). "The Representation of Knowledge in Memory." In Robert Anderson, R.J. Spiro, & W.E. Montague (Eds.), *Schooling and the Acquisition of Knowledge*. Hillsdale, NJ: Lawrence Erlbaum.
- Sanbonmatsu, David & Russell Fazio (1990) "The Role of Attitudes in Memory-Based Decision Making," *Journal of Personality and Social Psychology* 59, 4: 614-622.
- Sanford, Anthony. (1986). *The Mind of Man: Models of Human Understanding*. New Haven: Yale.
- Schwartz, Norbert and Gerald Clore. (1983). "Mood, Misattribution, and Judgments of Well-being: Informative and Directional Functions of Affective States." *Journal of Personality and Social Psychology*, 45: 513-523.
- _____ and Gerald Clore. (1988). "How Do I Feel about It? Informative Functions of Affective States." In K. Fiedler & J. Forgas (Eds.) *Affect, Cognition, and Social Behavior*. Toronto: Hogrefe International, 44-62.
- Sears, David (2001). "The Role of Affect in Symbolic Politics." In James Kuklinski (Ed.) *Citizens and Politics: Perspectives from Political Psychology*. Cambridge, MA. Cambridge University Press, 14-40.
- _____, Leonie Huddy, and Lynitta Schaffer (1986). "A Schematic Variant of Symbolic Politics Theory, as Applied to Racial and Gender Equality." In Richard Lau & David Sears (Eds.). *Political Cognition*. Hillsdale: Lawrence Erlbaum Associates, 159-202.
- Simon, Herbert (1967). "Motivational and Emotional Controls of Cognition." *Psychological Review*. 74: 29-39.
- Smith, E. (1999). "Affective and Cognitive Implications of a Group Becoming Part of the Self: New Models of Prejudice and the Self-Concept." In D. Abrams & M.A. Hogg (eds.) *Social Identity and Social Cognition*. London: Blackwell Publishers
- Stevens, Laura, and Susan Fiske (1995). "Motivation and Cognition in Social Life: A Social Survival Guide." *Social Cognition*, 13, 3: 189-214.
- Taber, Charles S. (Forthcoming). "Information Processing and Public Opinion." In David O. Sears, Leonie Huddy, and Robert Jervis, eds., *Handbook of Political Psychology*. London: Cambridge University Press.
- _____ and Milton Lodge (2001). "Motivated Skepticism in Political Information Processing."
- Tajfel, H. (1981). *Human Groups and Social Categories*. Cambridge, MA: Cambridge University Press.
- Tesser, Abraham. (1986). "Some Effects of Self-Evaluation Maintenance on Cognition and Action." In Richard Sorrentino & E. Tory Higgins (Eds.), *The Handbook of Motivation and Cognition: Foundations of Social Behavior* (Pp. 435-464). New York: Guilford Press.
- Turner, J. (1987). *Rediscovering the Social Group: A Self-Categorization Theory*. Oxford: Basil Blackwell.

- Uleman, James, and John Bargh (1989). *Unintended Thought*. New York: Guilford Press.
- Valentino, Nicholas, Vincent Hutchings, & Ismail White (2002). "Cues That Matter: How Political Ads Prime Racial Attitudes During Campaigns." *American Political Science Review* 96,1:91-110.
- Wilson, Timothy & Sara Hodges (1992). "Attitudes as Temporary Constructs." In Leonard Martin & Abraham Tesser (Eds.), *Construction of Social Judgments*. Hillsdale, NJ: Lawrence Erlbaum, pp. 37-65.
- Zanna, Mark. (1990). "Attitude Function: Is it Related to Attitude Structure?" *Advances in Consumer Research* 17: 98-100.
- Zajonc, Robert (1984). "On the Primacy of Affect." *American Psychologist* 39: 117-23.