

Unconscious Thinking on Political Judgment, Reasoning, and Behavior

We are told by the astrophysicist Michio Kaku that 6.4 percent of the universe is visible, with another 23 percent unseen but measurable, leaving much of the universe in the dark. It is much the same in our inner world, where most thinking occurs outside of awareness, available to neither introspection nor direct observation. Humans are designed to process rapidly and *implicitly* enormous quantities of environmental and internal data. But our ability to focus *explicit* thought is severely limited. By and large, the social sciences are not well prepared to understand this duality of cognition, and political science is no exception. Grounded in an Enlightenment view of Rational Man, political science has been dominated by models of conscious control and deliberative democracy. Rational and intentional reasoning, in this conventional view, *causes* political behavior.

This is a book about unconscious thinking and its influence on political attitudes and behavior. It is a book about powerful affective and cognitive forces that motivate and direct deliberation and political action outside of conscious awareness and control. It is a book about rationalizing, rather than rational, citizens.

What people think, feel, say, and do is a direct function of the information that is momentarily accessible from memory – be it the recall of facts and feelings, the recollection of experiences, or the turning of goals into action. Political behavior and attitudes are very much a function of the unconscious mechanisms that govern memory accessibility. But we political scientists know very little about the processes that underwrite individual variation in beliefs and behavior. We know about variation in public opinion as indicated by verbal self reports. We routinely ask respondents for their party and candidate preferences, their approval of policy proposals, and how warmly they feel toward one or another group, and we are often able to relate these explicit measures through sophisticated multivariate analyses that we interpret as revealing

underlying causal processes. There has also been considerable growth in the use of controlled experiments to determine causality, but most of these also rely on overt verbal responses that may not reveal an underlying implicit process. This reliance on direct, explicit measures of political beliefs and attitudes is intensely problematic, assuming as it does that people have accessible beliefs and attitudes, that they are willing and able to voice them, and that these self-reports are causally related to their political behaviors.

Though it has gone largely unnoticed in political science, we are witnessing a revolution in thinking about thinking. Three decades of research in the cognitive sciences, backed by hundreds of well-crafted behavioral studies in social psychology and now evidence from the neurosciences, posit *affect-driven, dual-process modes* of thinking and reasoning that directly challenge the way we political scientists think about, measure, and interpret political beliefs and attitudes. Central to such dual-process models is the distinction between the unconscious (“System 1,” “implicit”) and conscious (“System 2,” “explicit”) processing of judgments, preferences, and decisions. System 1 processes are spontaneous, fast, effortless, and operate below conscious awareness, whereas System 2 processes are slow, deliberative, effortful, and self-aware.

Given the serious real-time limitations of conscious processing, we humans have evolved compensatory heuristics, including a System 1 *likeability heuristic* that automatically links positive and/or negative affect to familiar social objects in long-term memory. Once associated, this felt positivity or negativity strongly influences downstream thinking and reasoning. What especially attracts our interest as political scientists to such dual-process models is the finding that unconscious processes are continually at work, with effects that appear to be most influential when the most knowledgeable among us think hard about an issue and carefully weigh the pros and cons when forming opinions and making choices.

The Ubiquity of Unconscious Thinking

Cognitive scientists estimate that the human capacity for processing sensory experience is about 11 million bits per second (Norretranders, 1998). The visual system takes up about 90 percent of this total capacity, processing roughly 10 million bits of visual information per second. No more than 40 bits per second of this visual information enters conscious working memory, so we become aware of only 1/250,000 of what we see! Similarly, a healthy human brain processes 1 million bits of tactile information and 100,000 bits of auditory information, while we at best become aware of just 5 bits of tactile and 30 bits of auditory information per second. When we read (with or without moving our lips) we process a maximum of 45 bits per second. More limited still is our capacity to consciously think and reason, where we are able to keep in the focus of attention only about 7 ± 2 chunks of information (Miller, 1956).

About 98 percent of what we experience, our very connection to the outside world, are whispers that come and go unnoticed.

What are the consequences of this colossal difference between conscious and unconscious experiences for thought and action? What types of information activate unconsciously when citizens watch a candidate debate, see a campaign ad, argue politics with friends, ruminate about a political issue, answer a pollster's question, or enter the voting booth? Where, when, and why will conscious and unconscious processes reinforce one another? What happens when unconscious influences are at odds with conscious control? When and how can unconscious influences be overridden (Bodenhausen and Todd, 2010)?

Research across the cognitive and neurosciences demonstrates the profound impact of unconscious processing on the content of our thoughts, how we reason, and consequently the choices we make (Ferguson and Porter, 2010; Hassin, Uleman, and Bargh, 2005; Perugini, Richetin, and Zogmaister, 2010). To place this empirical literature in perspective, and reassure readers that the "unconscious" explored here and in the contemporary psychological literature is not the subterranean id, ego, or superego of Freud, or the psychoanalytic analyses popular in the mid-twentieth century (Erikson, 1950; George and George, 1956; Lasswell, 1930), let us operationalize the unconscious in terms of objective and subjective thresholds of perception.

An objective threshold, as can be measured by brain-wave patterns, must be passed for an external stimulus event to enter one of the sensory systems. A subjective threshold is passed if the stimulus event enters conscious awareness. There are three possibilities:

- If the objective threshold is not passed, perception does not occur and there is no registration of the event on the senses. Essentially, a nonevent with no impact on information processing.
- If the objective threshold is passed but the subjective is not, we have unconscious perception – a sensory experience passes objective thresholds without ever entering conscious awareness. Such *Consciously Unnoticed Events* (Type 1 CUEs or interchangeably called Type 1 primes) escape notice; seen, registered, but consciously unnoticed. An objectively perceived stimulus may not reach conscious awareness for many reasons: because it occurred too rapidly or too peripherally to be noticed, or one is momentarily distracted.
- If the subjective threshold is passed, we have explicit conscious perception, the stuff of everyday experience. But – this very common – we may "see" the stimulus without realizing its influence on our thoughts, feelings, preferences, and choices. For such *Consciously Unappreciated Events* (Type 2 CUEs or interchangeably Type 2 Primes), the individual is consciously aware of the stimulus, say the American flag in the background of a candidate's speech, but its impact on thought, reasoning, and choice is not seen as being influential.

Unconscious primes are ubiquitous in the real world (Bargh, 1997), the playthings of advertisers selling detergents and presidential candidates, where the men and women in beer and car commercials are unusually attractive and fun loving; the smokers in cigarette ads look preternaturally healthy; the men touting erectile dysfunction medications appear uncommonly virile. Laugh tracks in situational TV comedies, although widely bemoaned, nonetheless enhance audience enjoyment. Worse yet, all types of humor, whether real or feigned, are commonly used to mask deceptive advertising (Shabbir and Thwaites, 2007). And as we will show in multiple experimental demonstrations, such “incidental,” more-often-than-not diagnostically irrelevant Type 1 and Type 2 primes prove to be powerful influences on how people think about and evaluate political leaders, groups, and issues.

Unconscious events and processes can drive political behavior in two ways: they may directly trigger a snap judgment or response entirely out of awareness, or they may indirectly drive behavior through their influence on conscious thought processes. A great deal of psychological research has demonstrated the direct causal process, but there has been comparatively little research on the mediated impact of implicit processes.

Implicit Cues in the Real World and in the Laboratory

Because citizens are confronted with more information than they can consciously handle, it should come as no surprise that they take mental shortcuts to arrive at their vote decisions, including endorsements, opinion polls, physical attractiveness, elite opinion, and feelings toward social groups (Mondak, 1994) – and of course party identification (Bartels, 2000; Goren et al. 2009; Jackman and Sniderman, 2002; Lau and Redlawsk, 2006; Riggle et al., 1992; Sniderman, 2000; Sniderman, Brody, and Tetlock, 1991). Reliance on one or another heuristic seems a reasonable strategy to the extent that it helps align a candidate’s issue positions and attributes with the voter’s interests and values (Lau and Redlawsk, 2006) or more generally improves the quality of decisions (Kahneman, Slovic, and Tversky, 1982).

But we believe and hope to demonstrate another, even faster, more readily available and general heuristic exists that may provide quicker and “better” candidate evaluations: a System 1 *likeability heuristic* stored as an implicit attitude unconsciously guides preferences in accord with the citizen’s history of information processing. Implicit attitudes or feelings about individuals, social groups, and ideas can exist outside of subjective awareness, affective tallies capture the evaluative implications of prior conscious and unconscious thinking about these objects, and these feelings come spontaneously to mind when their associated objects become targets of thought.

A great deal of psychological research shows the impact of implicit attitudes on a variety of social behaviors (Gawronski and Payne, 2010; Petty, Fazio, and Briñol, 2009), though the relationships among implicit and explicit attitudes

remain controversial (De Houwer, 2009). For example, implicit racial attitudes have been repeatedly shown to influence social behaviors, though they often diverge from explicit self-report measures of racial attitudes (Dovidio et al., 2009; Greenwald and Nosek, 2009; Nosek and Smyth, 2007). We believe that it would be a serious error to make a too-sharp distinction between implicit and explicit attitudes and we resist doing so (Sherman, 2009). Our view is that implicit and explicit attitudes are different responses from a single underlying memory system. Explicit attitudes are consciously considered responses for which one has the time and motivation to form a response. They will be influenced by myriad unnoticed factors, but somewhere in the decision stream will be an opportunity for control and consciously reasoned thought. Implicit attitudes are affective responses to stimuli that one cannot control or consciously reason about. It is more likely that an implicit response reflects affect stored directly with a memory object (what has been called an online tag in the research literature), but these too will be influenced by extraneous factors. It is a mistake to think of one as more “true” than another, and both are subject to bias, though of a different kind.

Is it possible to like someone or something without any conscious awareness of how or why this preference came to be? In his presidential address to the American Psychological Association, Robert Zajonc (1980) provides a simple experimental example for how “Preferences Need No Inferences.” A sample of non-Chinese Americans were briefly shown a number of Chinese ideographs and later asked to evaluate how aesthetically pleasing they were. The ideographs were shown zero, one, two, or three times, though participants were not aware of the multiple exposures and could not later identify which characters in a test set had been presented to them. Nevertheless, the more often they were shown a symbol the more they found it pleasing, a finding labeled the “mere exposure effect.” Preferences were altered without the objects even being recognized. In a final definitive demonstration that the mere exposure effect operates unconsciously, Murphy and Zajonc (1993) replicated the study using subliminal exposures to the ideographs (i.e., presentations too rapid for conscious perception).

Mere exposure can also influence other types of social judgments. Jacoby, Kelley, Brown, and Jasechko (1988) found that judgments of whether a name is that of a famous person (i.e., Is Sebastian Weisdorf famous?) are influenced by previous exposure to the name, even when it was presented on a list explicitly labeled Nonfamous People. Names were accurately judged to be nonfamous immediately after exposure to the list, but twenty-four hours later as recall of the source of information faded from memory, the residue memory trace was sufficient for many of those on the list to become famous overnight. Mere exposure, bolstered by this sleeper effect, changed the accessibility of names, making them appear more familiar and hence mistakenly identified as famous. This effect mimics what is routinely found in studies of persuasion where familiar arguments are judged more believable (Eagly and Chaiken, 1993),

where in advertising repetition builds brand name identification (Warshaw and Davis, 1985), and where candidate name recognition is, after money, the most critical step in winning an election (Kleinnijenhuis, van Hoof, and Oegema, 2006). Here again, conscious and unconscious processing may go their separate ways.

Unconsciously processed cues operating in the political realm can impact the evaluations of known candidates and their electoral success. The 1960 Nixon-Kennedy preelection debate is a well-known political example of noticed-but-unappreciated effects: seventy million people watched the first televised presidential debates in American history between Richard Nixon and John Kennedy. Nixon, recently out of the hospital, refused make-up; Kennedy had been campaigning in California and had the tan to show for it. Television viewers, apparently distracted by Nixon's pallid look and five-o'clock shadow, thought Nixon shifty and untrustworthy, while radio listeners, who had little to go on but the substance of the debates, thought Nixon the clear winner. The familiar version of this story is used to illustrate how image can dominate substance in politics; in our terms, how System 1 implicit processing can lead voters astray from the solid moorings of conscious deliberation. But as Malcolm Gladwell (2005) points out, the familiar version of the story has it backwards: Nixon did indeed turn out to be shifty and untrustworthy. Viewers' implicit, affective responses to the candidates' appearances proved to be more accurate than judgments based presumably on a less-biased, more careful consideration of issue positions and policies.

Similarly, facial expressions of news broadcasters influence the political judgments of viewers. In coverage of the 1976 presidential election campaign, Friedman, DiMatteo, and Mertz (1980) found discernable differences in the perceived positivity of broadcasters' facial expressions when they uttered different candidates' names. Mullen and colleagues (1986) replicated this result with the 1984 presidential election and demonstrated further that a broadcaster's facial expressions influenced voters' political preferences. Specifically, voters came to favor the candidate for whom the broadcaster exhibited more positive facial expressions. The same effect in a different modality: Gregory and Gallagher (2002), analyzing the voice frequencies of candidates in nineteen nationally televised American presidential debates, found that this auditory cue signaled a candidate's relative social dominance within a debate and predicted his vote share in the election. Media effects without message – more accurately, media effects through implicit rather than explicit channels of communication.

Babad (1999, 2005) obtained similar noticed-but-unappreciated results in the domain of political interviews. She found, not only that TV newscast interviewers exhibited differential levels of positive and negative nonverbal behaviors toward the politicians they were interviewing, but that an interviewer's nonverbal behavior impacted the viewers' perceptions of the politician. In particular, a politician's image suffered when the interviewer appeared hostile rather than friendly.

Here is an even more subtle effect of an unappreciated cue on choice: Berger, Meridith, and Wheeler (2008) showed that budgetary support for education varied as a function of where people voted – whether in schools, churches, or firehouses – with voters more likely to favor raising state taxes to support education when voting in schools, even controlling for their political views. Clearly, the voters knew what building they were in but were not consciously aware of its influence on their vote choice. Ballot order effects provide another political case in point, where being listed first increased the vote count for 80 percent of candidates (Schneider, Krosnick, Ofir, Milligan, and Tahk, 2008).

Some cues seem so obvious it is hard to imagine an implicit effect, but the inference is nevertheless made unconsciously. Race messages in campaign advertising, for example, are more effective when they remain covert. Tali Mendelberg demonstrates this effect in *The Race Card* (2001) via an experimental analysis of the infamous Willie Horton campaign ads, in which presidential candidate Michael Dukakis used pictures and sounds to implicitly associate African Americans with crime with. When the race cues are made fully explicit in Mendelberg's study (that is, when subjects are alerted to their presence) they lose their power to influence political judgments. Another case in point was a 2004 MoveOn.org TV ad that showed images of Hitler before a photo of Bush raising his hand to take the oath of office, accompanied by the voice over, "A nation warped by lies. Lies fuel fear. Fear fuels aggression. Invasion. Occupation. What were war crimes in 1945 is foreign policy in 2003." Republican groups and Jewish organizations expressed outrage over the ad, which was quickly removed from the MoveOn.org website. Research suggests, however, that subtle propaganda would be more effective; an implicit message more powerful still.

In the mid-1990s, Mayor Rudolph Giuliani of New York City adopted a "quality of life" campaign fashioned on James Q. Wilson and George Kelling's (1996) "broken windows theory." In this theory, signs of disorderly and petty criminal behavior signal neighborhood decay and deterioration, which trigger more disorderly and petty criminal behavior. Giuliani's change in policy had more cops walking beats, city work crews painting over graffiti, sweeping streets and cleaning subways, towing abandoned cars, ticketing jaywalkers, punishing vandals, and rousting the homeless from city streets and parks. After the introduction of the campaign, petty crime rates in New York City dropped dramatically and polls showed an uptick in perceived quality of city life (which became a major talking point for Giuliani's later political campaigns). A change in policy that was essentially cosmetic eventually had real effects on the compliance behavior of citizens, in our interpretation because of the replacement of implicit cues of neighborhood decay with cues of orderliness and civic control.

Political judgments can be directly affected by irrelevant, nonpolitical cues as well. While theories of retrospective voting suggest voters should reward or punish incumbents for the things they can control (in particular, wars and the

economy), it is hard to imagine why voters should hold politicians accountable for such “acts of God” as earthquakes or floods. And yet in their analysis of retrospective voting in Woodrow Wilson’s 1916 reelection, Achen and Bartels (2006) find that a string of shark attacks in the summer months before the 1916 election cost Wilson about ten percentage points in New Jersey beach communities, with no effect inland. Closer to home is the Healy, Malhotra, and Mo (2010) finding that local college basketball and football wins impacted the vote for Obama. Such findings are hard to square with conventional normative models of conscious deliberation, but are compatible with the implicit effects of affective cues on candidate preference.

A major area of research pointing to robust effects of unconscious influences on snap judgments is the effect of facial attractiveness on evaluations, attitudes, and behavior. Here, as in the stereotypic inferencing of traits from gender, age, and race, the face is rapidly registered and spontaneously triggers stereotypic assumptions about the individual’s character, attitudes, and behavior. Three large meta-analyses covering more than 1,000 peer-reviewed psychological studies of physical attractiveness confirm significant experimental and correlational effects on a broad range of social attitudes and behaviors (Eagly, Ashmore, Makhijini, and Longo, 1991; Feingold, 1992; Langlois, Kalakanis, Rubenstein, Larson, Hallam, and Smoot, 2000). Whether a person is seen as attractive or unattractive, assumptions are brought into play. Across cultures, what is beautiful is assumed to be good, and all manner of negative traits may be attributed to those less physically blessed. As Langlois and colleagues point out, this research shows that implicit responses debunk the descriptive if not the normative validity of three popular folk maxims:

Whereas it is said that *beauty is in the eye of the beholder*, the empirical evidence shows widespread consensus as to who is or is not attractive, with correlations suggesting near unanimity: within culture, $r = .90$; across ethnic groups, $r = .88$; and across cultures, $r = .94$. Such levels of agreement support the probability of rather uniform implicit responses to the appearances of political candidates or opinion leaders.

While we are admonished to *never judge a book by its cover*, hundreds of studies report stereotypical attributions advantaging attractive children in school and adults in their everyday lives and careers. It is routinely found that physical appearance exerts a strong influence on character perception, with scores of studies reporting a “beautiful-is-good” halo effect. The meta-analyses document that physically attractive people are perceived to be more sociable, dominant, extraverted, popular, and warm. Even among strangers a one second glance is enough to trigger an inference that an attractive man is more interesting, successful, intelligent, and virtuous. Strong correlations between attractiveness and particular attitudinal and behavioral characteristics have been found across cultures for both adults and young children, implying that a large part of this beauty-is-good projection effect is inborn and supplemented by nurture (Rhodes, 2006).

In general, a mere glance at an attractive face promotes a one-half standard deviation enhancement on positive personality traits, with about 64 percent of attractive people but only 36 percent of less attractive people perceived as having a better-than-average personality, the attractive seen as being more socially competent (70 percent vs. 30 percent), more worthy of attention (74 percent vs. 26 percent), more successful (68 percent vs. 32 percent), and if in need more likely to receive help (59 percent vs. 41 percent). Even in death the attractive are “advantaged,” their demise judged more tragic (Callan, Powell, and Ellard, 2007).

Finally, if it were true that *beauty is only skin deep*, there would not be a robust influence of self-rated attractiveness on measures of popularity, sociability, or objective measures of mental health. Physically attractive individuals have more sexual partners, find better-looking mates, become more professionally successful, make more than their fair share of decisions, and are happier than those of us below the median of physical good looks (Dion, Walster, and Berscheid, 1972). This “beauty premium” has been shown by Biddle and Hamermesh (1998) to positively impact attorneys’ wages, and – this unimaginable for elected office to political science associations – good-looking scholars are more likely to be voted into leadership positions of the *American Economics Association*.

The impact of physical appearance extends beyond attractiveness. A study by Mueller and Mazur (1996) found that ratings of facial dominance of West Point cadets (rectangular face, strong brow, square jaw) predicted later military rank. A follow up study (Little, Burriss, Jones, and Roberts, 2007) graphically manipulated facial dominance of alleged politicians and found that facial dominance affects voting decisions. Moreover, changing the context from peacetime to wartime promoted an even larger advantage for the dominant candidate.

What is important here is that physical appearance is registered but its inferential impact on character perceptions, evaluations, and behavior remains covert for those making the judgments. When this influence is pointed out, it is routinely denied. Given that facial appearance is one of the very first things we see in another person and that there are specific brain structures designed to detect and characterize faces, it is not surprising that attractive people prompt positive attributions which, entering the evaluation early, anchor and bias subsequent evaluations. Routinely, humans make positive attributions to attractive people without consciously realizing it, yet the magnitude of these effects is roughly the same as other variables in the social sciences (Eagly, 1996).

“Beautiful-is-good” stereotyping is alive in the political domain as well, where many of the same effects of attractiveness on snap judgments found in nonpolitical domains are matched in impressions of politicians, with attractive candidates seen as possessing more integrity, competence, likeability, and being better suited for public office (Rosenberg et al., 1986). For example, a

large-scale study of the 2003 parliamentary and 2004 municipal elections in Finland collected ratings by more than 10,000 web-survey respondents on a host of dispositional traits for a total of 1,900 facial photos of real political candidates. The finding: a one standard deviation increase in attractiveness was associated with a 20 percent increase in the number of votes over the average nonincumbent (Berggren, Jordahl, and Poutvaara, 2010). Similarly, in a study of the 2004 Australian election, where voting is compulsory and voters are handed a “How to Vote” card with pictures of the candidates, the more attractive of the two was associated with a 1.5 percent to 2 percent change in vote share, with this effect even larger in electorates with a higher share of apathetic voters (King and Leigh, 2010). Rosar, Klein, and Beckers (2008) found the same result for the state-wide elections in the largest German Bundesland, North Rhine-Westphalia, where campaign posters feature pictures of the candidates: attractive candidates – especially when their opponents are unattractive – garnered not only a larger vote share but also an increase in turnout.

While most of these studies have experimental participants view photos at their leisure in a contextually relevant frame, a great deal of information in addition to facial attractiveness can be gleaned in the blink of an eye (Gladwell, 2005). Here’s an “experiment” to try. On the next page are side-by-side photos of a pair of adult males, both candidates for the U.S. Senate (Figure 1.1). Turn the page, take no more than one second to scan the photos and return here.

Now which of the two candidates would you say is more competent?

In an important series of experiments reported in *Science*, Alex Todorov and his colleagues (2005; see also Olivola and Todorov, 2010) demonstrated that competence ratings based on a one-second exposure to paired photos of competing candidates predicted the 2004 House and Senate election outcomes at significantly better than chance levels (67.7 percent and 68.8 percent, respectively). Competence in the Todorov studies is modeled as a direct predictor of vote choice, and ratings were made of *unfamiliar* candidates by *naive* experimental participants *before* the 2004 congressional elections and the predictions are to the *actual* electoral outcomes, not vote intention. In other analyses, in addition to making competence judgments, participants evaluated the paired candidates on attractiveness, likeability, trustworthiness, and other dispositional judgments, all well-known to be important in the evaluation of political candidates (Kinder, Peters, Abelson, and Fiske, 1980; Funk, 1999). Now postdicting the 2000 and 2002 Senate races, Todorov and colleagues found what is also true in the National Election Studies: competence trumps the other trait assessments in accurately discriminating winners from losers. The inescapable implication of this research is that people can make substantively important attributions on a mere one second exposure to the facial photos of unfamiliar political candidates, and what is more, these snap judgments (typically taking little more than one second) discriminate winners from losers without any information or contextual cue other than being told the photos were of politicians. All this predictive power without party identification, ideological



FIGURE 1.1. A Pair of Senate Candidates from Todorov and Colleagues (2005)

proximity, or any of the traditional predictors of vote choice! Of course, it is possible that these more traditional levers of political judgment would be as or more influential on vote choice if they were available for respondents in these studies. But this fact does not overturn the importance of the finding that mere exposure to faces is sufficient to generate snap trait judgments and thereby alter vote choice.

A number of additional studies have replicated the general finding that appearance-based competence judgments predict election outcomes, while ruling out the alternative hypothesis that competence judgments simply reflect media-induced familiarity with the politicians. Lenz and Lawson (2007) asked American participants to make facial competence judgments of Mexican politicians. Their judgments predicted Mexican election outcomes and accounted for 18 percent of the variance in vote shares, though these participants were never exposed to the Mexican media. Experiments by Antonakis and Dalgas (2009) are especially revealing here because they address the possible confound between competence and incumbency and raise the question as to how facial appearance predicts vote choice. Judgments collected from a sample of 1,106 Swiss adults predicted the winner and runner-up from the run-off stages of the 2002 French parliamentary elections and their competence ratings predicted the margin of victory.

Antonakis and Dalgas pushed the research question deeper by asking 681 children aged 5 to 13 years to play a computer game simulating a voyage on a difficult seagoing mission in which they chose which person (from the paired

photos of French parliamentarians) they would want to captain the boat from Troy to Athens. The premise for this study dates back to Plato's *Republic* (2000: 153): "Imagine then a fleet or a ship in which there is a captain who is taller and stronger than any of the crew, but he is a little deaf and has a similar infirmity in sight, and his knowledge of navigation is not much better." Plato argues that the crew (voters) cannot select a competent captain (ruler) because the crew is beguiled by appearances. The children in Antonakis and Dalgas's experiment (mean age 10.3 years) predicted the French election outcome from their choice of ship captain with a correlation 0.71, which was indistinguishable from the adults' predictive success. These findings tell us that appearance-based trait inferences develop quite early and are surprisingly stable across age cohorts. Whatever the underlying process, both children and adults use facial cues rather than any in-depth processing.

Let's take the process one level deeper than cognitive deliberation can fathom. Social scientists may find it hard to believe but there are many experiments in developmental psychology that show the effects of attractiveness on infants and toddlers younger than the adolescents engaged in the sea-faring adventure of Antonakis and Dalgas (see Pascalis and Slater, 2003). Because infants cannot tell you what they find attractive or tell you much of anything, researchers use a "preferential-looking technique" in which two faces are shown side by side for ten-second exposures while a video camera records the time the infant spends gazing at each of the pictures. The consensual assumption is that the longer the fixation the more the infant is attracted to, or ostensibly "likes" the face. In one of many such experiments, Langlois and colleagues (1987) showed 6-month-olds images of female faces previously rated by college students as more to less attractive. For each pairing of faces (none were "drop-dead gorgeous" or "grotesque"), they found that the infants fixed their gaze longer on the more attractive face. Pushing the paradigm to its limits, the Langlois team (1991) next examined the preferences of 3-month-old infants to four types of faces – Black men and women, White men and women – all previously rated on attractiveness. Results confirm earlier, less-well controlled studies, in showing that preference for attractive faces holds across genders and races.

But what is it about the faces of politicians that causes people to perceive the winners as more competent than the losers? From our viewing of C-Span it is certainly not the case that the real-world competence or intelligence of politicians is reliably related to facial appearance. Perhaps there is a negative relationship. Todorov and colleagues (as well as other experiments from here and abroad) show that attractiveness and age, along with competence are proximate predictors of vote choice, but they do not rule out the possibility that competence simply mediates the causal effect of attractiveness and age on vote choice. Working from the "beautiful-is-good" literature, Verhulst, Lodge, and Lavine (2010) reconsidered the Todorov (Todorov et al., 2005; Olivola and Todorov, 2010) analyses to test the hypothesis that competence ratings are

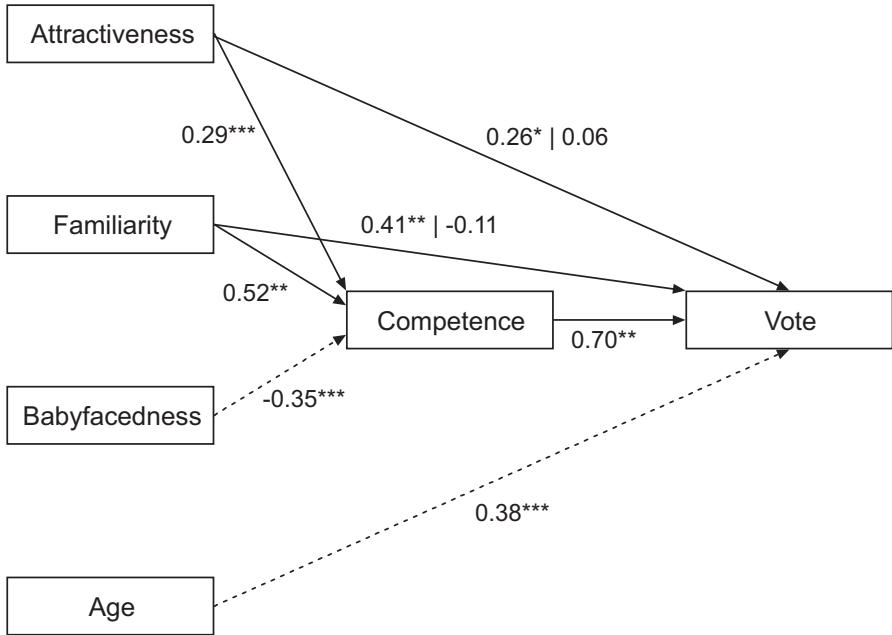


FIGURE 1.2. A Mediation Model of the Todorov and Colleagues (2005) Data

themselves derived from perceptions of facial attractiveness (as well as several other theoretically prior trait attributions).

Figure 1.2 reports the Todorov findings, rearranged into a mediational causal analysis to explain vote choice with four independent variables, three of which are mediated through competence attributions. Following the traditional mediational logic of Baron and Kenny (1986), Figure 1.2 shows three separate stages of regression analyses: first, we report the unmediated effect of each of the independent variables on vote choice, finding that attractiveness, familiarity, and perceived age all have a significant effect on vote choice, while babyfacedness does not have a direct effect; second, we report the effect of each independent variable on the mediator, finding that attractiveness, familiarity, and babyfacedness all significantly predict attributions of competence; finally, we report the effect of the mediator on the dependent variable while controlling for all four independent variables, finding that competence is the strongest predictor of vote choice, while the direct effects of attractiveness and familiarity drop out (the second coefficients reported for those paths in Figure 1.2). In short, Todorov’s data show that the causal pathways from attractiveness and familiarity to vote choice travel indirectly through the more proximate, causally later assessments of competence. In fact, 70 percent of the effect of attractiveness on vote choice, and 89 percent of the total effect of familiarity is mediated

through competence. Perceptions of candidate age exert a direct causal influence on vote choice without any indirect effect through competence, while babyfacedness has only an indirect influence.

Judgments of competence are clearly related to vote choice as Todorov and colleagues suggest (and as is shown repeatedly in the National Election Surveys), but the spontaneous process of making competence judgments appears to be preceded by an even earlier automatic assessment of attractiveness and familiarity. Given the emerging consensus that judgments of attractiveness have a biological basis, with specific brain structures engaged in the recognition of faces and facial expressions (Ekman, 2007), it is not surprising that these thin-sliced, one-second evaluations of political candidates are influenced by an even more primary evaluation of attractiveness. In addition to predicting higher levels of competence, physical attractiveness of politicians significantly predicts higher levels of likeability, integrity, and trust, all of which have also been repeatedly linked to the evaluation of political candidates and vote choice (Kinder, Peters, Abelson, and Fiske, 1980).

A cautionary note: neither we nor Todorov claim that the momentary effects of attractiveness on vote choice trump incumbency, party identification, issue proximity, or the many other factors known to predict congressional elections. Nor is anyone arguing that this bias cannot be corrected (Hart, Ottati, and Krundick, 2011), although not easily, requiring as it does the conjunction of cognitive capacity to recognize the influence of physical attractiveness on one's judgment, the belief that the bias is inappropriate, and the motivation to correct the evaluation downward for an attractive candidate and upward for an unattractive contender. Rather, the point is that a simple glance generates inferences that have political import. Not surprisingly, a Todorov-like study by Atkinson, Enos, and Hill (2009) shows that political parties running candidates in competitive congressional elections selectively choose challengers with "higher quality faces." Across the ninety-nine Senate elections the authors found a significant "face quality" effect for both independent and partisan voters, but no instance where face effects in competitive elections changed the electoral outcome.

The question asked for millennia but still a puzzle today is why we are predisposed to find attractive faces so interesting (it cannot be a familiarity or socialization effect) and why preschoolers, youngsters, teenagers, and adults go beyond attractiveness to infer "beauty is good" given that these inferences appear not to facilitate accurate social judgments. One possibility consistent with the existing empirical evidence is that such inferences are based on cues that have adaptive significance (Todorov et al., 2008; Zebrowitz, 2004; Zebrowitz and Montepare, 2008). There is a dark side to the attractiveness-competence relationship, of course, in that the intelligence of adults cannot be predicted from facial appearance (Zebrowitz, Hall, Murphy, and Rhodes, 2002), and – this is admittedly a leap of faith – some politicians may actually be more competent than others.

Nonverbal cues have impact even in situations where decisions are made thoughtfully with due deliberation: Zebrowitz and McDonald (1991), for example, found judicial decisions to be influenced by the facial features of defendants and plaintiffs: mature-looking defendants were required to pay larger penalties in small claims courts when the plaintiffs were babyfaced. The robust effects of attractiveness on perception and behavior lend credence to Blaise Pascal's claim in his *Pensees* (1660; 2010): "Cleopatra's nose, had it been shorter, the whole face of the world would have been changed" (180).

In addition to unconscious trait attributions and the pronounced halo effects of attractiveness, there are countless examples of even more "incidental" influences on political information processing. Here is a perfect example of what we see as a not-so-subtle attempt to manipulate political inferences. In a televised, thirty-second, 2007 Christmas message by presidential candidate Michael Huckabee to Iowans a week before the caucuses. A single frame of this campaign ad is presented on the next page (Figure 1.3). Glance at it quickly, and then come back here.

Did you notice the bookcase over Hucklebee's right shoulder? Did the bright white separators of the bookcase form a cross? Note that the bookcase/cross may or may not be noticed. Perhaps the bookcase-as-cross would be more likely noticed by evangelicals and register as positive, while for others the implications might be negative, perhaps seen as a right-cross jab at Mitt Romney's square jaw or a poke at his Mormon religion. There is also the possibility that the symbol would escape conscious awareness, but be registered unconsciously, and thereby not be open to critical appraisal.

Such "incidental" priming is of course commonplace in the world of commercial and campaign advertising and given the research demonstrating that even brief exposures can impact preferences, it was to be expected that "thin-sliced" exposures much too fast to be reliably noticed would find their way into advertising as "hidden persuaders" and then into the selling of the president.

In his prophetic novel 1984, George Orwell (1949/2003) foretold of a future in which our thoughts, attitudes, and behaviors would be controlled by government-directed media. This prophecy gained plausibility in the late 1950s after the advertising executive James Vicary reported significant increases in Coke and popcorn sales after flashing three-hundredth-of-a-second directives to "Drink Coke" and "Eat Popcorn" during a movie. The results seemed staggering: movie sales of Coke and popcorn increased 18 percent and 58 percent, respectively. People were understandably appalled at this insidious mind-control technique. If it could be used to persuade people to buy snacks and soft drinks, what other behaviors might be subliminally manipulated? There is a problem with the results of the study, however: it never actually took place. Vicary made it up as a publicity stunt to generate interest in his struggling advertising agency. Hoax or not, most people are fearful of the possibility of being influenced by subliminal messages (Wilson and Brekke, 1994), and many countries prohibit it in advertising.



FIGURE 1.3. Huckabee Campaign Ad Image (2007)

Of course, the fact that Vicary's claim was a hoax did not establish that subliminal messages do not influence attitudes. Karremans, Stroebe, and Claus (2006) conducted two experiments to examine whether subliminal priming of a drink can affect people's choices for the brand, and, importantly, whether this effect is moderated by individuals' feelings of thirst. Both studies demonstrated that subliminal priming of a brand name (here, Lipton Iced Tea) positively affected participants' choice for, and their intention to drink the primed brand, but only for participants who were already thirsty. "You can lead a horse to water but. . ."

As any self-respecting free marketeer would predict, the priming of hidden persuaders would find its way into the selling of the president. In the 2000 presidential election campaign, the Republican National Committee aired a TV ad nationwide attacking Gore's prescription drug plan 4,400 times, costing the RNC \$2,576,000. When the final segment of the ad is run in slow motion, we can see the word "RATS" pop out of the phrase "Bureaucrats Decide." At the exposure speed of one thirtieth of a second, "rats" has likely not crossed the borderline of subjective perception and should not consciously register. The ad's creator said it was not his intention to create a subliminal ad, but rather to make the ad more visually interesting by flashing part of the word "bureaucrats" on the screen. "It was," he said, "just a coincidence" that the letters popping centerscreen out of "bureaucrats" spelled out the negative prime "rats." Such denials notwithstanding, Weinberger and Westen's (2008) experimental test shows an "affective contagion" effect such that on exposure to the subliminal "rats" prime candidates are evaluated negatively. In a follow up experiment, a photo of Bill Clinton primed evaluations of Governor Gray Davis in his 2003 recall election, with Republicans evaluating Davis more

negatively than Democrats. Both inside the lab and in the real world, unconscious priming effects like these are proving to be influential in how information is encoded, retrieved, interpreted, evaluated, and acted upon.

While the use of subliminal primes (Type 1 CUEs) in the laboratory provides the strongest experimental control and clearest demonstration of the automaticity of beliefs and attitudes and allows the researcher to rigorously test for the causal effects of unconscious events on both implicit and explicit attitudes and behavior, our endorsement of subliminal priming stops at the lab door, not on the airwaves or the campaign trail. Moreover, the use of truly subliminal priming in advertising is undoubtedly exceedingly rare. But the effects of consciously noticed but unappreciated (supraliminal) primes (Type 2 CUEs) are common throughout the social world and most obviously manipulated in the advertising realm.

The Stream of Political Information Processing

In the following chapters we set forth our affect-driven, dual-process model of the architecture and mechanisms that account for when, how, and why thoughts, feelings, and behavioral intentions come to mind automatically to promote the rationalization of political beliefs and attitudes. At this juncture let us outline our model in broad strokes, leaving for Chapter 2 a detailed description of the architecture and processes that promote motivated reasoning. We take a constructionist approach whereby the content of one's thoughts and coloration of feelings change moment by moment in response to both noticed and unnoticed "priming" events that link changes in the immediate environment to changes in political beliefs, attitudes, and behaviors.

When an individual is exposed to a communication, the concepts in the message – whether consciously attended to or not – begin to activate the attendant concepts in *long-term memory*. Once a concept is activated, its activation spreads to all its related concepts (Collins and Loftus 1975), whether that connection is semantic or affective. As political communications generally involve a large number of concepts coming into perception in rapid succession (think of television ads combining still images, words, or video with a voice over narration, all of which would simultaneously activate associations in long-term memory), individual concepts become activated and reactivated in real time as they, and concepts related to them, are perceived. Then, in a matter of moments, the activation levels of current concepts and their associated concepts decrease to make ready for what information comes next.

At this point in the process, the second type of memory becomes relevant. In contrast with long-term memory, *working memory* has a severely limited capacity: only about seven concepts can coexist in working memory simultaneously (Barsalou, 1992; Rumelhart and Ortony, 1977; Simon, 1967). These concepts in working memory, in a very real sense, are what the individual is consciously thinking about at that time. Researchers have envisioned the

process of moving concepts from long-term memory to working memory through a pandemonium model (Larson, 1996; Neisser, 1967; Ratcliff and McKoon, 1996) in which activation is seen as a competition between all of the activated concepts, with those that are most activated, for whatever reason, being selected for further processing in working memory.

It is at this point that the parallel nature of the affective and semantic connections becomes critical. Those concepts that are most semantically implicated by the communication are of course likely to win the competition, and move into working memory. So, if an individual is reading a message about tax policy, the concept of taxes is going to be constantly activated and reactivated, as many of the concepts in the communication will either be about taxes directly, or about concepts closely related to taxes that will cause its further activation. However, the concepts related to taxes that are most likely to be brought into working memory, and therefore potentially enter the conscious awareness of the individual as relevant considerations, are those that are *both* semantically and affectively related to the concept. Suppose that taxes are viewed negatively, but there are an equal number of positively and negatively evaluated concepts that are semantically related to taxes (public works projects and tax refunds might be seen positively, while IRS audits and tax preparation might have a negative affective connection). Because the activation of the concept of taxes spreads both affectively and semantically, those concepts that are both semantically and affectively connected with the concept of taxes will most likely pop into working memory. So, when a message mentions taxes, a negatively viewed concept, the other associations that come into working memory are going to be biased in favor of other negatively viewed concepts. IRS audits rather than positively perceived public works projects are likely to win out.

Figure 1.4 presents an overview of our account of the stream of information processing from the initial unconscious registration of an event to the generation of an evaluative response. *The fundamental assumption driving our model is that both affective and cognitive reactions to external and internal events are triggered unconsciously, followed spontaneously by the spreading of activation through associative pathways which link thoughts to feelings, so that very early events, even those that remain invisible to conscious awareness, set the direction for all subsequent processing.* It is only at the tail end of this stream of processing that we become consciously aware of the associated thoughts and feelings generated moments earlier. It is at this moment that we experience what subjectively seems to be consciously initiated thinking and reasoning (Custers and Aarts, 2010; Libet, 1985).

Most of the key concepts and processes in our theory are represented in Figure 1.4, starting with the left to right causal directionality of processing through time. A stimulus event triggers the stream of processing, proceeding through affective and then cognitive mediators, and perhaps leading to the construction of evaluations of political objects and conscious deliberation. As a function of time, attention, and other factors, the likelihood of subjective

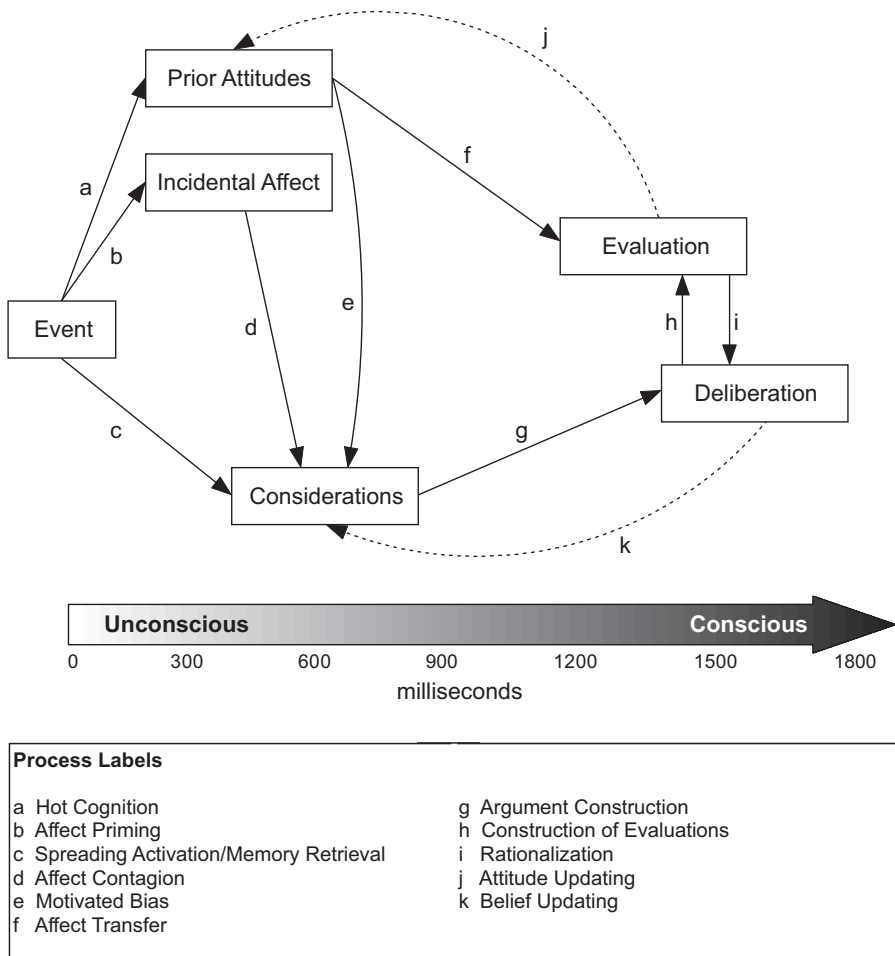


FIGURE 1.4. A Dual Process Model of Political Evaluation

awareness also increases left to right. Each arrow in the figure represents a theoretical process hypothesis. It is worth noting before we introduce these hypotheses that the conventional model of political reasoning involves only the c-g-h sequence in Figure 1.4: an event triggers the retrieval of cognitive considerations from memory, from which conscious deliberations are constructed, yielding reasoned evaluations.

While such controlled political cognition may sometimes occur, our dual process model claims that all thinking is suffused with feeling, and these feelings arise automatically within a few milliseconds (in our data as little as thirteen milliseconds) of exposure to a sociopolitical object or event. This is the *hot cognition* hypothesis that stands at the center of our theory of

motivated political reasoning. Affect is primary in our theory because it arises first in the stream of processing, is unintentional, and is difficult to control. Almost immediately, the decision stream becomes affectively charged, viscerally “hot,” and thereupon embodies our thoughts, providing proprioceptive feedback to mental processing (as shown, for example, by Damasio, 1994). Some of these feelings are attitudes that are intrinsic to the stimulus object (arrow a), while others are incidental or semantically unrelated to the stimulus (arrow b). Any subsequent considerations, deliberations, and evaluations are necessarily influenced by spontaneous affect. In terms of Figure 1.4, conventional political reasoning (causal path c-g-h) can occur only in the context of hot cognition.

Shortly after the arousal of positive and/or negative feelings, activation will spread along well-traveled associative pathways from, say, Obama to president to African-American to Democrat, thereby enriching our semantic understanding of the original stimulus. This is the *spreading activation* hypothesis (arrow c), well-established in cognitive psychology as the primary mechanism of memory retrieval. Note that many considerations may receive and send activation and thereby influence the stream of processing, but only a small number of highly activated considerations will reach conscious awareness – perhaps the 7 ± 2 chunks suggested in early psychological research (Miller, 1956).

In the context of just-aroused feelings, the retrieval of considerations will be biased in the direction of the valence of initial affect. This is the *affective contagion* hypothesis (arrow d) and the *motivated bias* hypothesis (arrow e). A flag, emotive music, an attractive candidate, or a celebrity spokesperson all influence the character of thought by favoring the retrieval of affectively congruent considerations while suppressing incongruent ones. Though it is possible for strongly associated concepts to reverse the direction of initial affect (as when initial positive affect triggered by a picture of John Edwards becomes strongly negative upon semantic recognition and retrieval of memories of his adulterous affair), it is more likely that initial feelings will “snowball” through the retrieval of increasingly congruent considerations, eventually driving deliberations and evaluations through indirect causal pathways. Spontaneous feelings can also cause evaluations directly through *affect transfer* (arrow f). A sunny day reliably drives more positive evaluations of life satisfaction (Schwartz and Clore, 1988). We have described how facial attractiveness directly drives positivity in addition to favoring the retrieval of more positive considerations. For evangelicals, Huckabee’s cross will promote a positive evaluation as well as prompting positive and more religious thoughts. The “rats ad” transferred negative affect directly onto evaluations of Al Gore. The twin influences of affect contagion and affect transfer are, we believe, among the most powerful and underappreciated sources of unexplained variation in studies of political evaluation.

With sufficient time and motivation, the retrieval of a set of considerations can trigger the construction of conscious deliberative reasoning given the motivation, opportunity, and cognitive wherewithal to query the immediate

affective response (Devine, 1989; Gawronski and Bodenhausen, 2007; Olson and Fazio, 2009). This process, labeled *argument construction* (arrow g) in Figure 1.4, will depend heavily on the earlier processes of hot cognition, spreading activation, and affect contagion. The central processes of motivated reasoning, including disconfirmation biases and the active counterarguing of counterattitudinal evidence, invoke these affective biases on memory retrieval (Taber, Cann, and Kucsova, 2009; Taber and Lodge, 2006). Conventional models of political thought view the conscious construction of arguments and reasoning as the foundations of public opinion and the guideposts to rational political behavior. We are skeptical.

Out of the grist of deliberation, citizens might *construct evaluations* (arrow h). That is, they might consciously build their evaluations of political figures, groups, or ideas from well-reasoned foundations, as in the conventional c-g-h model. In the context of hot cognition, affect contagion, and affect transfer, however, such cold evaluations will be exceedingly rare. The central place accorded to intentional rational evaluation in political science, a vestige of Enlightenment mythology in our view, continues to mislead our discipline, despite the valiant efforts of a few critics (David Sears and George Marcus come to mind).

Far more common, we believe, will be the reverse causal pathway from evaluation to deliberation. This *rationalization* hypothesis (arrow i) asserts that the causal pathways in Figure 1.4 that travel through unconscious affect, and in particular the affect-driven evaluation processes, cause most of our deliberation about politics. It is not our claim that citizens are incapable of rational thought in the traditional sense defined by links c-g-h. Evidence is accumulating, however, that attitudes and behavioral intentions – even behavior itself – arise from automatic, uncontrolled processes and are often set before we begin seriously “thinking” about them. This the case, deliberation serves to rationalize rather than cause.

The two dashed arrows in Figure 1.4 represent updating processes through which affect and considerations may be stored back to memory for future use. *Affect updating* (arrow j) allows the feelings and evaluations associated with current unconscious and conscious thought to be linked to objects in memory, where they can be the source of future hot cognition. For example, upon processing a newspaper story about Barack Obama’s handling of the BP Gulf oil spill, a citizen who was initially very positive about Obama may update her affect to be less positive or perhaps more ambivalent. *Belief updating* (arrow k) allows new beliefs or semantic associations to be stored in memory. This might include the creation of new memory objects (BP oil spill perhaps) or new linkages among objects (Obama and BP oil spill).

Notably absent from Figure 1.4 is any mention of emotions. In our theory, the appraisal of emotions follows and is directed by the arousal of valence affect and the motivating push of the concept’s somatic linkage. Appraised emotions (for a review of the appraisal literature, see Scherer, Shorr, and Johnstone,

2001) can be important mediators between aroused affect and subsequent processing, but for reasons detailed in Chapter 2 we will focus our attention on the causally prior processes of unconscious valence affect.

Most of this processing – the establishing of affect, meaning, and intentions – is subterranean, each process following one upon the other in about a second of time. An inkling of conscious awareness begins 300–400 milliseconds after stimulus exposure with a felt sense of positive and/or negative feeling, followed by a rudimentary semantic understanding of the concept, both of which are based entirely on prior unconscious processes. People can report simple like-dislike judgments in about 500–800 milliseconds and make simple semantic categorizations in 700–1,000 milliseconds, depending in part on whether the priming context for the categorization facilitates or inhibits comprehension. It takes somewhat longer (1,000–2,500 milliseconds) to provide a scaled response, and even longer to answer open-ended questions. Were we to ask a committed Republican to evaluate Secretary of State Clinton using a simple like/dislike button response, it would take about 700 milliseconds to press the dislike button. It would take significantly longer to report any cognitive associations to Hillary Clinton, that, for example, she is a woman, a Democrat, or mother. Affect precedes and contextualizes cognition.

Finally, given sufficient time and motivation, people may think self-consciously and reflectively about the object of evaluation and their own reactions. A point about conscious deliberation bears repeating: though deliberation will trigger new rounds of unconscious processing, it cannot go back and alter earlier processes and responses. In short, though we may feel we direct our thoughts and behaviors through conscious reasoning, deliberation is a product of unconsciously determined, affectively driven processes. Conscious deliberation and rumination is from this perspective the *rationalization* of multiple unconscious processes that recruit reasons to justify and explain beliefs, attitudes, and actions. It is possible, though difficult, to override implicit responses, as when we explicitly censor our socially unacceptable group stereotypes (Devine, 1989; Greenwald and Banaji, 1995), though it is not clear how fully we can control the “cognitive monster” of unconscious processing (Bargh, 1999). Our key argument and justification for the book title begins with, but then goes well beyond this primitive form of rationalization, to show how citizens’ snap judgments of likeability *as well as* their systematic thinking about political candidates and issues is motivated reasoning – a rationalization process driven by unconscious affective biases (for a parallel argument through the quite different lens of Affective Intelligence Theory, see Marcus, 2002). Emotions, like beliefs and attitudes, are reconstructed from what is made accessible to consciousness from unconscious memory processes, and in our model the positive and/or negative evaluative tally linked to an attitudinal object anchors the construction process.

For these and many more reasons, we are skeptical of the ability of citizens to reliably access or veridically report their beliefs and attitudes. Our

discipline's reliance on verbal self-report introduces a bushel basket of conceptual and measurement problems. In addition to well-known problems with the survey response (Tourengeau, Rips, and Rasinski, 2000), there is the obvious fact that the interview context, by design a sterile environment, is nothing like the immediate, situationally rich context that sparked the attitudinal response. In fact, it may well be the case that the simple act of asking questions promotes an intellectualization process that dampens the affective connection between thoughts and feelings (Epstein, 1972; 1992). These reasoned responses are no longer heartfelt, but affect negative *beliefs about the experience, not the experience itself*. Absent a somatosensory connection to the experience itself, the response is not embodied. Without a visceral boost the response is what Paula Niedenthal and her colleagues call a "cold, as-if emotional response" (Niedenthal, Halberstadt, and Setterlund, 1997; Niedenthal, Halberstadt, and Innes-Ker, 1999).

That the visceral experience need not be heart palpating is demonstrated in a series of experiments carried out by Risen and Critcher (2011) testing a "visceral fit" hypothesis, the prediction that one's current bodily state – warmth, thirst, hunger – that "fits" the evaluation of a worldly event – here specifically aspects of global warming – will be judged more credible and likely. So, for example, feeling hungry will strengthen your estimate of the likelihood of famine, being thirsty makes droughts more probable.

In Study 1 on the Cornell campus during the months of September and October (with outside temperatures ranging from 49° F to 89° F) participants were taken outdoors for a psychophysical experiment ostensibly to measure the perceived height of various campus landmarks, then responded to a series of issue questions on eleven point scales, chief among them a CNN Poll question: "Which of the following statements comes closest to your view of global warming?" with the scale ranging from "Global warming is a proven fact" to "Global warming is a theory that has not yet been proven." Next, they reported their party ID and ideological self-placement (combined into a left-right index), and finally checked those terms they believed applied to their current physical state: hungry, thirsty, warm, tired, and chilly, while the experimenter measured the ambient outside temperature. Regressing belief in global warming on the outside temperature, left-right index, and the interaction term, ambient temperature proved to be as strong a predictor of belief in the validity of global warming, $\beta = .24$, $t(63)$, as ideology, $\beta = .22$, $t(63)$, and was not qualified by an interaction, with both liberals and conservatives reporting greater belief on warmer days.

In Study 2, to break the obvious diagnosticity of outdoor temperature to global warming, participants were randomly assigned to complete the survey in either a small heated room (81° F) or in an identical nonheated room (73° F). As in Study 1, both liberals and conservatives in the warmer environment were significantly more likely to believe that global warming was a proven fact, again without an interaction with ideology, although here ideology was a stronger

predictor than room temperature, ostensibly because the temperature indoors was not as readily associated with the outside weather. In other studies in this project pictures on the computer screen of desert scenes or snowy weather produced the expected viscera-fit effects. The favored explanation for the effects is that the bodily response makes it easier for people to imagine and simulate the belief. These “embodiment” effects are subtle and not readily recognized as influential and easily misattributed (Payne et al., 2005).

The Rationalizing Voter

Before turning to the empirics supporting this opinionation-as-rationalization argument, let us flesh out our line of reasoning for seeing citizens as rationalizing voters. Our model asserts that motivated reasoning – the systematic biasing of judgments in favor of automatically activated, affectively congruent beliefs and feelings – is built into the basic architecture and information processing mechanisms of the brain (Gazzaniga, 1992; 1998). Because both the spreading of semantic associations and biases favoring the retrieval of affectively congruent thoughts and feelings operate below awareness, the conscious, systematic construction of beliefs, attitudes, and intentions is necessarily dependent on those considerations and feelings that have been made available through unconscious processes. When called on to make an evaluation, state a preference, recount or justify an opinion, conscious introspection will not have access to the operative unconscious causal processes or many of the considerations that entered the decision stream unconsciously. Respondents, if pressed to account for their beliefs or attitudes, will as natural storytellers generate rationales that are more plausible than veridical (Clore and Isbell, 2001).

While the general principles guiding the role of accessibility and retrieval of information are well-known (Anderson, 1983), the implicit versus explicit distinction goes to the heart of our discipline’s problems in accounting for how, when, and why citizens think, reason, and act as they do. We expect that people will routinely rely on their spontaneously generated thoughts and feelings to explain their responses and behaviors, unless confronted by irrefutable evidence, social pressure, challenges to self-image, or interviewer pressure. And even here they will only experience these challenges as filtered through preconscious processes that have a built-in capacity for motivated bias. The experimental literature presents clear evidence that automatic processes underlie *all* conscious processing and are especially powerful determinants of top-of-the-head evaluations when

- affectively charged cognitions are available and strong;
- explicit measures are tainted by social desirability, deceit, or prejudice;
- one is under time pressure;
- attentional resources are otherwise engaged or distracted;

- an environmental event is noticed but not recognized as being influential; and
- one's behavior is not so consequential as to trigger such questions as "why did I think, feel, say, or do that?"

These situational and contextual factors appear to characterize the world of politics for many of us most of the time, where, typically, the consequences of our political beliefs and attitudes are distant and indirect, where uncertainty reigns, rumination is rarely called for, where one is easily distracted by rapid-fire TV images, and via selective media attention we infuse our thoughts with congenial cues.

Sometimes, of course, there is a feeling of unease with the considerations that come to mind, or a sensed dissociation of implicit from explicit thoughts, feelings, and intentions. If consciously conflicted, one may make the effort to resolve the conflict among and between thoughts and feelings (Gawronski and Bodenhausen, 2007). But there is now reason to believe that spontaneous activations are difficult to correct, even when people are encouraged to stop, think, deliberate, or actively try to work their way through a problem (Eisen, Lodge, and Taber, 2008; Forgas, 1995; Wilson, 2002). When constructing a response, the sample of retrieved considerations will likely be skewed in favor of affectively congruent associations. Because we are but dimly aware of the reasons for the thoughts that come to mind, those recollections entering the decision stream feel right, cannot be directly fathomed, do not typically produce a sense of dissonance, and consequently are not readily open to disconfirmation unless directly challenged.

While this argument of cognition as rationalization may seem radical, it is hardly new (see Achen and Bartels, 2006; Russell, 2003; Zajonc, 2000). Pioneering experimental work by Benjamin Libet (1985; 1993; 2004) demonstrates how consciousness lags behind even the intention to act. In a series of experiments, participants were asked to watch a sweeping clock hand, and report the moment when they made the decision to move a finger, while the researcher recorded their brain waves. Analysis of the EEGs revealed that a "readiness potential" to move the finger began approximately half a second before the conscious intention to move, but – and here is where the illusion of control comes in – the subjects retroactively predated their conscious experience by almost the exact amount of time it took the decision to reach consciousness (Libet, 2004), making the illusion of conscious control over these actions compelling. If the conscious decision to perform a physical action comes well after the intention has been formed, the notion that an individual's considered opinion precedes an automatic process is as likely an "illusion of conscious will" (Wegner, 2002).

These same processes apply to judgments. Zajonc (1980, 1984) found that even when people are able to give a reason for their judgments, the reasons they

give are often not the ones that informed the decision. This can be seen in the aforementioned “mere exposure” effect, in which subjects are found to prefer Chinese ideograms to which they had been previously exposed, without realizing that they had seen them before. Familiarity breeds liking. For our purposes, the most interesting aspect of the mere exposure effect is that, just as Libet’s subjects mistook when they had consciously initiated a simple physical motion so as to match it with the onset of unconscious initiation, Zajonc’s participants were able to give sensible reasons for liking one ideogram over another. Though they were consciously unaware of having seen some of the ideograms more frequently than others, they readily misattributed their preferences to the aesthetic value of the more frequently presented ideograms, rather than to the mere exposure effect where familiarity itself spurred liking. People are experts at rationalizing unconscious judgments. Moreover, even when explicitly told that they have been primed to evaluate the images in a pro or con way, people were still unable to overcome their automatic affective response (Winkielman, Zajonc, and Schwarz, 1997).

These effects – broadly speaking, the unconscious linking of feelings to thoughts to preferences to behavioral intentions – conspire to promote our view of the individual as more rationalizer than rational decision maker. Treating the citizen as a motivated reasoner will require a revolution in how we think about and model citizens’ mental representations of the world and the processes involved in the formation and expression of their political beliefs, attitudes, and behavior. When we limit ourselves to equating cognition with conscious awareness and the expression of preferences with the conscious integration of costs and benefits, as is the practice in political behavior research, it proves impossible to understand contemporary social, cognitive, and neuropsychology, and consequently makes it impossible to understand how, when, and why citizens think, reason, and act as they do.

At this juncture, we are highly skeptical of the ability of citizens to reliably and veridically access the sources of their beliefs, the reasons for their attitudes, their past, present, future intentions, and actions. Much if not most of our experience takes place outside our conscious awareness, and as our recollections fade from memory they are replaced by socially constructed rationalizations about how and why we as well as others think and behave. What recollections are activated depends on the set of preconditions operative in the environment *at the moment* and what’s going on inside the individual’s head *at the moment*. The key here is that once triggered, once the extant attitude enters the decision stream, thoughts are linked to feelings, feelings to intentions, and intentions to choices without necessarily triggering conscious or deliberative guidance.

Looking Ahead

Chapter 2 will detail our affect-driven, dual-process theory of motivated reasoning, and ensuing chapters will show how, when, and why the automatic

activation of affect spontaneously impacts the way citizens evaluate political leaders, groups, issues, and events. A basic finding, demonstrated in multiple experiments, is that feelings enter the evaluative process before cognitive considerations and immediately influence what thoughts and preferences will enter the decision stream. As we have already argued, this finding challenges the way we political scientists conventionally model the relationship between beliefs and attitudes – for most people most of the time the causal arrow flies spontaneously from affect to cognition, from preferences to thinking, from feeling to action.

As is common to the human condition, this “affect heuristic” is both a benefit and a problem, sometimes working well, at others leading us astray: on the plus side the primacy of affect promotes coherent thinking and attitudinally consistent behavior, but at one and the same time it is responsible for deep-rooted processes that bias how we think and reason. Where, when, how, and for whom conscious processing will successfully override the automatic intuitive response is the critical unanswered question that goes to the heart of all discussions of human rationality and the meaning of a responsible electorate. We leave a discussion of this paradox to the Conclusion but must forewarn the reader that we see no obvious resolution to the dilemma and cannot in good faith counsel as to when to follow the dictates of the heart.