

# *Conscious and Unconscious Attitudinal Processes*

## **SCHEDULE**

| <b>WEDNESDAY</b> |                     |
|------------------|---------------------|
| 7                | Welcoming Reception |
| 8:30             | Dinner              |

| <b>THURSDAY</b>  |                      |
|--|----------------------|
| 8:00-9:00  | Breakfast            |
| <b><u>EXPLICIT VS. IMPLICIT ATTITUDES: AN OVERVIEW</u></b> |                      |
| 9:00-9:40  | Greenwald            |
| 9:40-10:20   | Wilson               |
| 10:20-10:40  | BREAK                |
| 10:40-11:20  | Fazio                |
| 11:20-12:00  | Petty                |
| 12:00-12:20  | BREAK                |
| 12:20-13:00  | Banaji               |
| 13:00-13:20  | Discussion (Haddock) |
| 13:20-15:30  | LUNCH/SIESTA         |
| <b><u>IMPLICIT-EXPLICIT DISCREPANCIES</u></b>              |                      |
| 15:30-15:50  | Deutsch              |
| 15:50-16:10  | Marsh                |
| 16:10-16:30  | Olson                |
| 16:30-16:50  | BREAK                |
| 16:50-17:10  | Vargas               |
| 17:10-17:30  | Jordan               |
| 17:30-17:50  | DeLiver              |
| 17:50-18:10  | BREAK                |
| 18:10-18:40  | Sherman              |
| 18:40-19:00  | Discussion (Clore)   |
| 19:00-20:30  | BREAK                |
| 20:30  | DINNER               |

**FRIDAY**

|  |                      |
|--|----------------------|
| 8:00-9:00  | Breakfast            |
| <b><u>GROUP ATTITUDES</u></b>                        |                      |
| 09:00-09:20  | Payne                |
| 09:20-09:40  | Livingston           |
| 09:40-10:00  | Moya                 |
| 10:00-10:20  | Wittenbrink          |
| 10:20-10:40  | BREAK                |
| 10:40-11:00  | Gomez                |
| 11:00-11:20  | Henry                |
| 11:20-11:40  | Maio and Haddock     |
| 11:40-12:00  | BREAK                |
| 12:00-12:40  | Devine               |
| 12:40-13:00  | Discussion (Wheeler) |
| 13:00-15:30  | LUNCH/SIESTA         |
| <b><u>IMPLICIT ATTITUDE FORMATION AND CHANGE</u></b> |                      |
| 15:30-15:50  | Dijksterhuis         |
| 15:50-16:10  | Ferguson             |
| 16:10-16:30  | Wanke                |
| 16:30-16:50  | Plessner             |
| 16:50-17:10  | BREAK                |
| 17:10-17:30  | Gawronski            |
| 17:30-17:50  | Maison               |
| 17:50-18:10  | Holland              |
| 18:10-18:20  | BREAK (10 MIN)       |
| 18:20-19:00  | Briñol               |
| 19:00-19:20  | Discussion (Crano)   |
| 19:30  | BUS FOR DOWNTOWN     |

| <b>SATURDAY</b>  |                              |
|--|------------------------------|
| 8:30-10:00   | Breakfast                    |
| <b><u>METHODOLOGICAL ISSUES AND NEW DIRECTIONS</u></b> |                              |
| 10:00-10:20  | DeHouwer                     |
| 10:20-10:40  | Klauer                       |
| 10:40-11:00  | Brendl                       |
| 11:00-11:20  | BREAK                        |
| 11:20-11:40  | Perugini                     |
| 11:40-12:00  | Eiser                        |
| 12:00-12:20  | Discussion (Maio)            |
| 12:20-12:30  | Conference Summation (Petty) |
| 12:30-14:00  | LUNCH/SIESTA                 |
| 14:00  | BUS FOR HOTELS/AIRPORT       |

## ***ABSTRACTS***

### **THE NATURE OF IMPLICIT ATTITUDES**

**Anthony G. Greenwald**

**University of Washington**

#### **Implications of IAT findings for the definition of attitude**

Modern interest in the distinction between implicit and explicit attitudes raises long-dormant questions about conceptual definition of attitude. The once-dominant 3-component definition of attitude (based on the ancient affect-cognition-conation trichotomy) appears no longer to be guiding research. This presentation considers whether research fostered by the availability of implicit measures demands distinct conceptual definitions of attitudes for implicit and explicit measures. This definition question bears directly on theoretical understanding of the relation between implicit and explicit measures.

**Timothy D. Wilson**

**University of Virginia**

#### **Can Attitudes Be Unconscious?**

Although the concept of implicit attitudes is well-established, the issue of whether such attitudes can be unconscious is controversial. Some argue that people are always aware of implicit attitudes, but sometimes report other attitudes for self-presentational reasons. Others argue that

people can genuinely believe they hold one attitude while possessing another unconsciously. I will discuss this controversy from a theoretical, methodological, and historical perspective, discussing (a) a brief history of research on unconscious feelings; (b) theoretical obstacles to the idea that attitudes or feelings could be unconscious; and (c) methodological obstacles to the idea that attitudes or feelings could be unconscious. I will then outline the beginning of a theory that specifies why and when people might be unaware of their attitudes and emotions. Such an idea is more compelling now than ever before, though the methodological obstacles to establishing unconscious attitudes are formidable.

**Russell H. Fazio**

**Ohio State University**

### **Interpreting discrepancies between implicit and explicit measures: The perspective of the MODE model**

The perspective offered by the MODE model regarding implicit measures of attitude, and their possible discordance with explicit measures, will be highlighted. Explicitly-reported judgments are viewed as "downstream" consequences of automatically-activated attitudes and motivation to control prejudiced reactions. Evidence from a series of illustrative studies will be reviewed. The findings suggest that any discordance between implicit and explicit measures need not require reference to either unawareness or dual representations of attitudes.

**Richard E. Petty, Pablo Briñol, Zakary L. Tormala, S. Christian Wheeler, Blair Jarvis,**

**Ohio State University, Universidad Autónoma de Madrid, Indiana University, Stanford University, Empirisoft Research Software**

### **Potential Sources and Consequences of Implicit Ambivalence**

Can people be ambivalent about an attitude object and not know it? We report results from two lines of research in which people have cognitive discrepancies of which they appear to be consciously unaware. In each case, we assume that such discrepancies are aversive or unpleasant and thus people engage in information processing activity designed to reduce the discrepancy. In one paradigm we assess the discrepancies that can exist between people's implicit and explicit attitudes. For example, some people are congruent in their explicit and their implicit self-esteem, whereas others show inconsistencies. Our research shows that the greater the discrepancy between one's implicit and explicit self-concept, the more people engage in thinking about information relevant to the discrepancy. Thus, people appear to respond to implicit discrepancies in a manner that is similar to how they respond to explicit discrepancies. In a second paradigm, instead of examining discrepancies between explicit and implicit attitudes, we examine discrepancies between old attitudes and newer ones. The traditional assumption in the literature on persuasion is that when attitudes change, the old attitude is literally replaced with the newer attitude. In the present research, we argue that when attitudes change from one valence to another, the individual encodes an association with the rejected attitude that tags it as "false" or "wrong." Because this tag is not always accessible, however, people can have implicit conflict between their old and their new attitudes. As a result of this conflict, people who have changed their attitudes are more likely to engage in processing of attitude-relevant information than are people whose attitudes are the same, but have never changed.

**Mahzarin R. Banaji**

**Harvard University**

### **Implicit Social Cognition: Recent developments**

The most recent advances in understanding implicit social cognition (ISC) in our lab have come from studies that (a) explore ISC through traditional paradigms (e.g., dissonance), (b) use neuroimaging as the device to understand distinctions between social and nonsocial cognition and (c) cultivate developmental studies of young children's ISC. I will present examples of each line of work and discuss their unique role in providing a general understanding of implicit social cognition.

### **IMPLICIT-EXPLICIT DISCREPANCIES**

**Roland Deutsch and Fritz Strack**

**University of Würzburg**

### **Evaluative associations and evaluative judgments:**

### **Different worlds, different rules, different experiences.**

To what extent do conscious vs. unconscious evaluative responses and dispositions reflect common psychological mechanisms? Based on our recent theorizing (Strack & Deutsch, in press), we propose that many phenomena in the realm of evaluative responses echo either reflective evaluative judgments or impulsive responses moderated by evaluative associations. In this contribution, we will specify aspects of processing that are distinct with respect to the two types of evaluative responses. At the same time, we will focus on how evaluative judgments and associations differ in their capabilities of anticipating the future and of reversing the truth value of a proposition, i.e., of negating. In conclusion, we will suggest that the two types of evaluative responses are accompanied by different forms of consciousness (noetic vs. experiential) that relate to the process vs. the outcome of the mental operation.

**Kerry L. Marsh and Blair T. Johnson**

**University of Connecticut**

### **The role of implicit attitudes in relatively complex [potentially deliberate] behaviors**

Implicit attitude research has focused almost without exception on relatively simple attitudes and incidental behaviors assessed at very short intervals and with no consideration of what functions might be served. Yet implicit (and potentially unconscious) attitudes can drive behavior (a) at considerable delays, (b) that is potentially controllable yet often impulsive, and (c) that has more complex functional bases. Moreover (d), behavior prediction can be enhanced by assessing not only global positive versus negative affect but also specific functional bases. Across a series of studies that match these four criteria, we find relatively greater importance of implicit attitudes for behavior in impulsive contexts. For example, we find in our research examining unsafe sexual behavior that in less impulsive contexts behavior is predicted by conscious (explicit) attitudes, whereas in potentially impulsive contexts behavior is particularly

determined by implicit attitudes. Moreover, in the latter contexts, implicit and explicit attitudes have interactive effects on behavior. In addition, we examine the role of specific functional bases in unconscious attitudinal and behavioral processes using populations, naturalistic and experimental situations, and implicit measures (e.g., IAT, priming) for which affective and functional associations differ (e.g., sexual, pregnancy-prevention, relationship-threat, disease-associations in HIV-infected versus uninfected people).

**Michael A. Olson, Anthony D. Hermann, Russell H. Fazio**

**Ohio State University, Willamette University**

**Interpreting discrepancies between implicit and explicit measures of  
self-esteem: The role of pride and modesty**

A consensus has emerged in recent years that self-esteem, one's attitude toward the self, involves both implicit, unconscious aspects, and explicit, consciously accessible aspects that are relatively independent. The present work questions this fundamental assumption by providing evidence that dissociations between implicit and explicit measures can be accounted for by self-evaluative tendencies of which people are aware. In two studies, individuals whose explicitly-measured self esteem was more positive than would be expected on the basis of a modified self-esteem IAT described themselves as relatively more proud, and individuals whose explicitly-measured self esteem was more negative than would be expected on the basis of the IAT described themselves as relatively more modest. These results held for both the Rosenberg inventory and a feeling thermometer measure of explicit self-esteem. Thus, individuals with relatively high explicit and low implicit self-esteem appear to knowingly exaggerate their self-esteem on explicit measures. Analogously, our analysis provides a simple explanation for implicit-explicit discrepancies for the theoretically neglected group of individuals who are relatively high in implicit but low in explicit self-esteem: modesty. In sum, these results suggest that there may be no need to invoke "the unconscious" to reconcile discrepancies between implicit and explicit measures of self-esteem.

**Patrick Vargas**

**University of Illinois**

**Implicit and explicit measures of sexual orientation:**

**You may not be as straight as you think you are, and it's making you sick**

If strong, accessible attitudes promote health (Fazio & Powell, 1995), it follows that attitudinal ambivalence might undermine healthy functioning. Indeed, individuals who are ambivalent regarding certain personality traits (e.g., high extraversion, low need for affiliation) experience more intimacy low points, and more relationship dissatisfaction (Winter et al., 1998). The present research examines the effects of implicit-explicit ambivalence in the domain of preference for same- and opposite-sex erotic images (sexual orientation). Psychologists formerly referred to sexually ambivalent individuals as "ego-dystonic homosexuals," and counted them among those requiring clinical treatment. One obvious difficulty with assessing sexual preference is that homosexuality is generally socially undesirable, and individuals may

be unwilling and/or unable to admit their homosexuality to others or themselves - "closeted," or "repressed" homosexuals, in the vernacular. Implicit attitude measures obviate many problems in assessing attitudes toward socially undesirable topics (e.g., racial prejudice; Fazio et al., 1995). Two studies (to date) suggest that implicit preference for same- or opposite-sex erotic images is orthogonal to explicit sexual preference, and that individuals who show implicit-explicit ambivalence are more likely to suffer from a variety of somatic symptoms, and score lower on a number of measures of psychological well-being. Implications for the study of sexual orientation, and implicit-explicit attitudinal ambivalence will be discussed.

**Steven J. Spencer, Christian H. Jordan, and Mark P. Zanna**

**University of Waterloo**

### **Defensiveness and discrimination: How inconsistency between explicit and implicit self-esteem leads to prejudice**

Previous research (Fein & Spencer, 1997) has demonstrated that threats to self-esteem lead to prejudice and discrimination. Recently, we have demonstrated that people with high explicit self-esteem (HESE) and low implicit self-esteem (LISE) are especially defensive in response to threats (Jordan, et al., 2003). Given these findings we reasoned that, when threatened, people with HESE and LISE would discriminate more than people high HESE and HISE. Initial evidence supports this prediction. When recommending punishment for a transgressor those with HESE and LISE were more punitive toward a Native-Canadian than a White. Those with HESE and HISE were not.

**Yaël de Liver, Daniël Wigboldus, and Joop van der Pligt**

**University of Amsterdam**

### **Implicit association measures and ambivalent attitudes**

In the present studies we focus on the implicit associative structure underlying a specific type of attitudes: ambivalent attitudes. So far, studies on ambivalence have primarily investigated the structure of these attitudes at an explicit level. We supplement these studies by looking at the structure of ambivalent attitudes, using various implicit association measures. In a series of three studies we show that attitudes that are ambivalent at an explicit level, are also characterized by *simultaneous* (Study 1) and *strong* (Study 2) positive and negative implicit associations. The pattern of implicit associations for ambivalent attitudes differs from both non-ambivalent (Study 1) and neutral (Study 2) ones. In Study 3 we used a modified version of the Extrinsic Affective Simon Task (EAST, De Houwer, 2003) where the relatively strong positive and negative associations of ambivalent attitudes resulted in reaction times that were consistently faster than those for neutral attitude objects. Together these results help to shed light on the nature of ambivalent attitudes on both an explicit and implicit level. In addition, the new paradigms we used, may help our understanding of the mechanisms underlying implicit association effects in general.

**Jeff Sherman, Frederica Conrey, Bertram Gawronski, Kurt Hugenberg, & Carla Groom**

**Northwestern University**

### **Decomposing automatic and controlled processes: The quadruple process model**

We propose and test a model that estimates simultaneously the central components of automatic and controlled processes. The Quadruple Process Model measures two aspects of bias (the likelihood that bias is activated automatically and the likelihood that bias drives response in the absence of a known correct response) and two aspects of control (the likelihood that a correct response can be discriminated and the likelihood that an activated bias is overcome). The stochastic and construct validity of the model is validated in three studies. We show that the model predicts responses on both the IAT and explicit measures of prejudice better than extant models. Study 4 applies the model to shed new light on priming data published by Lambert et al. (2002). Specifically, we show that the observed increase in prejudicial responses in public results from a combination of increased attitude accessibility, increased attempts to overcome the attitude, and increased difficulty discriminating the correct answer in the task. The model provides a more nuanced understanding of the ongoing interplay of multiple processes than extant models of automatic and controlled processing.

### **GROUP ATTITUDES**

**Keith Payne**

**Ohio State University**

### **Affect Misattribution as an Implicit Measure of Attitudes**

Classic projective tests aim to measure psychological properties by the way that perceivers interpret ambiguous events. Projective tests such as the Rorschach Inkblot and the Thematic Apperception Test generated much excitement in the mid-twentieth century, but fell out of favor because of poor interpretability and reliability. I will introduce a new measure based on a procedure by Murphy & Zajonc (1993) that combines the precision and control of recent sequential priming procedures with the projective properties of classic tests. The result is the Affect Misattribution Procedure (AMP), an implicit measure of attitudes that exhibits large effect sizes, high reliability, and strong relationships with explicit attitude measures when self-presentation concerns are absent. The AMP is resistant to correction attempts and can be administered in less than five minutes.

**Robert W. Livingston**

**University of Wisconsin-Madison**

**Implicit controlled discrimination?: Exploring the intentionality and  
inevitability of racial bias in deliberative courtroom decisions**

To date, most social psychological research has argued that nonconscious attitudes influence “spontaneous” (e.g., nonverbal behaviors) but not “deliberative” behaviors (e.g., Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997). My research demonstrates that nonconscious attitudes can also influence deliberative behaviors, and explores the conditions under which such “crossover” effects may occur. Results from several studies using a mock juror paradigm showed that the IAT was significantly correlated with sentencing bias against minority defendants, independent of individual differences in motivation to control prejudice. Results further suggest that nonconscious attitudes affected highly controlled, deliberative behaviors only when: (1) there was a stereotypic match between target stereotype and target behavior, and (2) there was ambiguity with respect to what constitutes a “correct” or nonbiased response. When both conditions were present, efforts at bias correction failed despite: (1) participants’ awareness of the strong potential for bias, (2) participants’ motivation to avoid being biased, and (3) manipulations of accountability and fear of invalidity. Such findings may help to explain the paradox of widespread, systemic discrimination within societies that seem to candidly embrace egalitarian values.

**Miguel Moya and Susana Puertas**

**University of Granada, University of Jaén**

**The implicit stereotype of powerless and powerful individuals**

The Implicit Association Test (IAT) is a flexible instrument to measure the automatic associations underlying stereotypes and prejudice. In a five-studies serie we measured the implicit stereotypes associated to social groups that differ in their power (e.g., powerful versus powerless individuals, teachers versus students). Some previous research have shown some consistency in the content of these stereotypes: powerful groups or individuals are generally perceived as competent but no sociable whereas powerless groups or individuals are perceived as sociable but no competent. The results of our studies confirm this hypothesis concerning the automatic content of stereotypes about powerful and powerless individuals. However, when real groups were studied (e.g., teachers-students) this general finding was modulated by participants group membership (teacher or student) and by the valence of the stereotype (positive or negative). We also included in our studies explicit measures of the stereotype about powerful and powerless individuals. In general, low correlations between this kind of measures and IAT scores were found. We also tried to analyzed the relationship between IAT answers and other measures (e.g., “social dominance scale” or “beliefs in just world scale”) in order to study if IAT scores are related to the beliefs that maintain the “statu quo” and the social system.

**Bernd Wittenbrink**

**University of Chicago**

### **Prejudice, Stereotypes and Control as Determinants of Race Bias in Shooting Decisions**

Several studies have now documented that group attitudes and stereotypes can influence people's social perceptions and behaviors in an automatic fashion, outside of the individual's control. A particularly compelling illustration of the potential significance of such automatic influences comes from research on the unintended effects of race on weapon identification and rapid responses to armed targets (Correll et al., 2002, Greenwald et al., 2003; Payne, 2001). For example, in our own lab, we conducted a series of studies designed to simulate the situation of a police officer who is confronted with an ambiguous, but potentially hostile, target, and who must decide whether or not to shoot. In these studies, shoot/ don't shoot decisions are consistently made more quickly and with greater accuracy when the target is consistent with dominant social stereotypes (armed African Americans and unarmed Whites) than when the target is stereotype-inconsistent (armed Whites and unarmed African Americans). The effects occur although participants are incentivized for accuracy. We have found them in college and non-college samples, and among White as well as African-American participants. The present set of studies investigates how racial attitudes and stereotype accessibility contribute to this effect.

**Rosa Rodríguez-Bailón, Ángel Gómez, Susana Puertas & Inmaculada Valor**

**Universidad de Granada, Universidad Nacional de Educación a Distancia, Universidad de Jaén**

### **Effects of meta-stereotypes and value similarity on implicit outgroup evaluation**

Previous studies have shown the benefits of priming participants with positive meta-stereotypes of outgroups, and give information about the values they share with groups about which the ingroup has negative stereotypes. These studies have used explicit measures to test these effects on stereotypes and evaluations. The main goal of the current studies are to examine the role of priming a meta-stereotype and make salient value similarity as a strategies to improve implicit outgroup evaluation, and more specifically, the implicit component of the outgroup stereotype. A group of Andalusian undergraduate students were selected as ingroup, and another regional Spanish group (Catalans) as an outgroup. These two regional groups were selected given that traditionally Andalusians have reported to have a negative stereotype about Catalans. Each participant was randomly assigned to one of the different experimental conditions resulting of crossing the meta-stereotype (positive, negative or no information) and value similarity (high or low similarity) manipulations. The implicit effects of these independent variables on the evaluation of the outgroup stereotype using the Implicit Association Test (IAT; Greenwald, McGhee, and Schwartz, 1998) was examined. The IAT has been shown as a flexible measure of the automatic associations underlying implicit stereotypes and prejudice. Ingroup identification and public self-awareness of participants were also measured. The differences between the explicit and implicit effects of the meta-stereotype and value-similarity manipulations are analysed and discussed in the light of some current theoretical approaches about the topic.

**P.J. Henry, Curtis Hardin, and R. Shalhoub**

**UCSB, UCLA**

**Status asymmetries in the effects of intergroup contact on  
automatic expressions of prejudice**

Intergroup contact reduces explicit prejudicial attitudes when certain conditions of contact are met (Allport, 1954; Pettigrew, 2003). However, the effects of intergroup contact on implicit prejudice is less certain. Although establishing anti-prejudicial or positive-outgroup norms can attenuate implicit prejudice in the short term (Dasgupta & Greenwald, 2001; Lowery, Hardin, & Sinclair, 2001; Rudman, Ashmore, & Gary, 2001), virtually nothing is known about how chronic patterns of intergroup contact can affect implicit prejudicial attitudes. Two studies were conducted in Beirut, Lebanon, that examined prejudice between Christian and Muslim students, who acknowledged that Christians are higher in status than Muslims in Lebanese society. Consistent with contact theory, the findings show that an increase in reported intimate contact with the outgroup, as measured through number of friends and romantic partners, was associated with attenuated explicit prejudicial attitudes for both Christians and Muslims. However, increases in contact was associated with decreases in implicit prejudicial attitudes only for the lower-status group (the Muslims). These findings are discussed as evidence for the power of false consciousness and the resistance of implicit prejudicial attitudes to change even with intimate contact when societal norms do not favor lower-status groups, consistent with dual-process theories of prejudicial attitudes.

**Gregory R. Maio and Geoffrey Haddock**

**Cardiff University**

**Effects of Anti-Racism Messages on Implicit and Explicit Measures of Prejudice:  
The Moderating Role of Ambivalence**

The present studies tested whether the effects of anti-racism messages on intergroup attitudes are not as positive as they may seem, because of *negative* effects on people who are ambivalent toward ethnic minority people. This hypothesis received support from several experiments that examined the effects of anti-racism messages on explicit and implicit attitudes toward ethnic minorities. The experiments also revealed that measures of subjective ambivalence consistently moderated the impact of the messages on explicit attitudes, whereas measures of objective ambivalence consistently moderated the impact of the messages on implicit attitudes. Moreover, additional evidence supported our hypothesis that these effects are at least partly driven by the tendency for ambivalence to elicit increased message scrutiny.

**Patricia G. Devine, David M. Amodio, Eddie Harmon-Jones**

**University of Wisconsin**

**Neural signals for the detection of race bias: Implications for regulatory ability**

Despite egalitarian beliefs, many low-prejudice people often fail to regulate expressions of automatic race bias. We hypothesized that individual differences in regulatory ability may be

related to the sensitivity with which neural systems detect conflict between automatic race-bias and nonprejudiced intentions. On the basis of past research, regulatory ability was indexed by participants' levels of internal and external motivations to respond without prejudice. Good regulators (high internal/low external motivation), poor regulators (high internal/high external motivations), and non-regulators (low internal motivation) were compared. Participants completed a sequential priming task that induced race-biased responses on certain trials while EEG was recorded. The error-related negativity (ERN) component of the event-related potential was used to assess neural signals of conflict detection. Across participants, larger ERNs to race-biased responses predicted greater controlled processing on the behavioral task. However, only good regulators exhibited an increase in ERN amplitude when making a race-biased response, compared with other response types. Results suggest that good regulators, but not poor regulators, appraised the activation of racial stereotypes as conflicting with nonprejudiced intentions, thereby leading to greater control. Because poor regulators were less sensitive to this conflict, they were less likely than good regulators to exert control over race-biased response tendencies. Hence, our findings suggest that the ability to detect conflict between automatic race bias and nonprejudiced intentions in the early stages of a response is associated with effective race-bias regulation.

## **IMPLICIT ATTITUDE FORMATION AND CHANGE**

**Ap Dijksterhuis**

**University of Amsterdam**

### **When not to think: The role of unconscious and conscious processes in attitude formation and decision making**

It is a widely held belief that people should consciously think about the decisions they make. When faced with decisions such as whether to buy a house or not or whether to switch jobs or not, thorough conscious contemplation is generally expected to lead to the best decisions. I would like to challenge this notion. Although consciousness can be said to be “smart” and rational, it is also of very limited capacity. This means that when making decisions about rather complex, multifaceted issues, conscious thought can be maladaptive and lead to poor decisions. This conclusion is less sobering than it may seem, because it does not mean that people are poor decision makers: “Unconscious thought” (i.e., chewing on a problem without directed conscious thought) can lead to very sound decisions.

**Melissa Ferguson**

**Cornell University**

### **Effects of goal-pursuit on automatically activated attitudes**

Recent findings suggest that automatic attitudes reflect the situationally-specific goal relevance of the corresponding objects. In the first experiment, activities (e.g., *studying*) were automatically evaluated as positive only when they were activated contemporaneously with a goal representation for which they served as a strategy (e.g., *achieve*), versus a goal

representation for which they did not serve as a strategy (e.g., *celebrate*). In the second experiment, participants who were still engaged in goal-pursuit positively evaluated objects that were useful to the goal, compared to those who had completed the goal, and those who had never pursued the goal. In the third experiment, only those participants who had been induced into a thirsty state automatically evaluated as positive objects that could satisfy their thirst (e.g., water, juice), compared to non-thirsty participants. In the fourth experiment, only participants who strongly identified as athletes and who were made to feel incomplete by thinking about failure (vs. success) experiences in athletics automatically evaluated objects related to athleticism as highly positive. Further, there was a strong and significant correlation ( $r=.78$ ) between the positivity of these participants' automatic attitudes toward athleticism and their behavioral intentions to athletically train over the subsequent week. These findings suggest that automatic attitudes represent not simply the valence of recently activated, object-relevant memories, but also the perceiver's current motivational stance toward the objects.

**Michaela Wänke and Henning Plessner**

**Universität Basel, Universität Heidelberg**

### **Measuring Persuasion by the IAT**

While originally the IAT was proposed as a measure of relatively stable evaluative associations more recent research has provided evidence for the malleability of IAT scores by context. In line with this, we present two studies on the impact of a persuasive message on IAT scores. Study 1 showed that the IAT is sensitive to subjects' previous exposure to a persuasive pro vs. contra message. In Study 2 we used the IAT more specifically to measure specific aspects of attitude change. The persuasive message about consumption of fair trade products not only varied in direction (Pro vs. contra) but also in the content of the arguments (financial aspects vs. social responsibility). The evaluative items were chosen in a way that they related to either of these two concepts. While we found an overall persuasion effects this effects was considerably stronger on those items that matched the content of the persuasive message. We discuss the results from a methodological perspective regarding the choice of items in IAT and from a broader theoretical perspective addressing the conceptual implications regarding implicit attitudes.

**Henning Plessner and Thomas Haar**

**University of Heidelberg**

### **Directness of attitude measure and level of information processing**

#### **as constituents of consumer's attitude behavior correspondence**

In a recent paper, Vargas (in press) argued that implicit and explicit attitude measures can be differentiated on the basis of directness (indirect vs. direct) as well as on the level of information processing involved in the measure (spontaneous vs. deliberative). Therefore, the attitude-behavior correspondence would depend on the specific processing components tapped by the attitude measure under consideration. In the present study, we investigated the usefulness of this approach in the consumer domain, i.e. attitudes and behavior towards two German

newspapers. Additionally, we wanted to test whether deliberative consumer behavior can be predicted better by indirect-deliberative measures than by indirect-spontaneous measures as proposed by Vargas (in press). Participants completed two measures of each of four combinations of directness of attitude measure and level of information processing. Half of them were measures that are typically used in marketing research, the other half were standard social psychology tools. Factor analysis only slightly supported the assumed 4-factor solution. However, in contrast to indirect-spontaneous measures, indirect-deliberative measures explained deliberative consumer behavior over and above direct-deliberative measures.

**Bertram Gawronski**

**Northwestern University**

**The formation of explicit and implicit interpersonal attitudes: On  
associations, inferences, and cognitive balance**

Recent research has shown increasing interest in processes of implicit attitude change. The formation of implicit attitudes, however, has received relatively little attention so far. Drawing on a theoretical framework referring to the distinction between associative versus rule-based processes (e.g., Smith & DeCoster, 2000), results from three studies will be reported that investigated the role of cognitive balance in the formation of explicit and implicit interpersonal attitudes. Experiment 1 found evidence for balanced triads when participants first formed an attitude about one person, and then learned about this person's sentiment relation to another individual. Most interestingly, balanced triads were obtained for both explicit and implicit attitudes. In Experiment 2 the pattern of interpersonal attitudes did not result in a balanced triad, when participants first learned about the sentiment relation between two neutral individuals, and then received evaluative information about one of the two individuals. In this case, observed sentiment relations and evaluative information affected the formation of attitudes in an additive rather than interactive manner. Experiment 3 replicated these findings by manipulating valence, observed sentiment relations, and order of information presentation in a single study. Implications for explicit and implicit attitude formation are discussed.

**Dominika Maison**

**University of Warsaw**

**Implicit consumer ethnocentrism: An example of dissociation between conscious  
and unconscious attitudes toward own and foreign products**

Recent psychological research has shown that people possess conscious and controlled attitudes as well as unconscious and automatic attitudes that are difficult to control. Depending on the attitude object, these two levels can be correlated or dissociated. Such dissociation has primarily been observed in the area of stereotypes and prejudices, but it can be also observed in consumer attitudes. The goal of two studies was to explore the dissociation of explicit and implicit attitudes toward local vs. foreign products and relations to behavior. In many countries consumer ethnocentrism has been observed, which is consumers' conscious preference of their own country's products over foreign products. In economically developed countries consumer

ethnocentrism tends to be stronger than in under-developed countries, because of objective differences in the quality of the products. In the first study we measured attitudes toward Polish vs. foreign brands of cigarettes. On explicit measures, subjects preferred foreign brands, but on an implicit measure (the IAT) they preferred Polish cigarettes, even though they were smoking foreign brands. The second study investigated implicit consumer ethnocentrism toward multiple product categories. The results showed a pattern similar to those obtained in the first study: on explicit measures subjects preferred foreign products, but on implicit measures they preferred Polish products.

**Rob Holland, Berlinda Hermsen, and Ad van Knippenberg**

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### **From implicit attitudes to behavior: Mood matters**

Based on recent self-regulation theories (Kuhl, 2000; Van Knippenberg, Holland and van Baaren, 2003) it was predicted that, in a positive mood, people's responses and actions are based on automatically activated attitudes to a greater extent than in a negative mood. This general hypothesis was tested in three studies. Study 1 revealed that, as predicted, people in a positive mood showed stronger effects on a measure of implicit attitudes (IAT, Greenwald et al., 1998) than people in a less positive mood. Study 2 replicated and extended these findings using an experimental manipulation of mood and a different task to measure responses to automatic evaluations (EAST, de Houwer, 2002). In Study 3, the implicit preference towards two political parties was assessed in a preliminary session. Two weeks later, mood was manipulated and the participants' approach/avoidance tendencies were measured in terms of the participants' seating distance from posters of the two political parties displayed on opposite walls of the waiting room. It appeared that participants in the positive mood condition sat closer to the poster of their preferred party, while no such effect was observed in the negative mood condition. Implications for conscious and unconscious attitude-behavior relations are discussed.

**Pablo Briñol, Richard E. Petty, Javier Horcajo, Jamie Barden**

**Universidad Autónoma de Madrid, Ohio State University**

### **Consequences of Changing Automatic Attitudes with Persuasive Messages**

People can hold automatic attitudes of which they are relatively unaware. Traditionally, these implicit evaluations have been assumed to be more stable and resistant to change than explicit attitudes. However, recent research has suggested that implicit attitudes can be malleable and sensitive to a variety of contextual influences. Most prior research has suggested that automatic evaluation change is most likely with subtle situational factors and repeated presentations of simple stimuli as in classical conditioning. Extending this work, the present research shows that implicit evaluations might also be affected by thinking carefully about persuasive messages, even when explicit self-report measures of attitudes fail to evince any persuasive impact. Furthermore, when automatic evaluations are affected by extensive thinking, those changes might be consequential in terms of stability and resistance. In the present work, additional consequences of changes in automatic evaluations are examined by assessing the reorganization of other automatic associations between the attitude object and related constructs. For example, we predicted and found that the more change obtained on automatic attitudes, the stronger the automatic association became between the transformed attitude object and the self. Importantly,

because changes observed in automatic associations can be relatively independent of changes observed on more traditional self-report measures, such measures can be useful for assessing the psychological processes through which persuasion and resistance to change occurs.

## **METHODOLOGICAL ISSUES**

**Adriaan Spruyt, Jan De Houwer, & Dirk Hermans**

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### **Solving the puzzle of affective priming of pronunciation responses**

Initial studies on affective priming of pronunciation responses (Bargh et al., 1996; Hermans et al., 1994) showed that a target word can be read more quickly when it is preceded by a prime word of the same valence. In several subsequent studies (e.g., Klauer & Musch, 2001), such priming effects could not be replicated. Based on the model of Glaser and Glaser (1989), we predicted that significant and robust effects can be found provided that the targets are processed semantically. In support of this hypothesis, we found robust affective priming of pronunciation responses when (a) targets were degraded (De Houwer et al., 2001), (b) targets were pictures (Spruyt et al., 2002), and (c) only targets with a certain semantic feature had to be read (De Houwer & Randell, 2004). In two recent studies that were modelled after those of Karpinski and Hilton (2001), we found that affective priming effects in a picture-picture naming task can be used to predict behavioral choices.

**Karl Christoph Klauer, Jochen Musch, and Andreas Eder**

**Rheinische Friedrich-Wilhelms-Universität Bonn, Universität Mannheim**

### **Affective Priming: Nothing More than Priming of Responses?**

In the evaluative decision task, target stimuli are to be evaluated as positive or negative as quickly as possible. Affective priming is given if the evaluation of a target stimulus (e.g., sunshine) is facilitated when preceded by an evaluatively congruent (e.g., love) rather than incongruent prime stimulus (e.g., death). A prominent explanation is in terms of *response* priming: Primes acquire the capability to trigger an evaluative response, either the same one or a different one from that required by the target, thereby facilitating or inhibiting, respectively, the evaluative response to the target. The present work explored the possibility that a more central level of *attitude* priming is also involved; that is, primes might facilitate (inhibit) the activation of an evaluatively congruent (incongruent) target attitude. A new priming paradigm is used that permits a separate assessment of the sizes of response priming and attitude priming. The findings are that (1) response priming is stronger than attitude priming, that (2) response priming, but not attitude priming, increases with the amount of practice participants have in evaluating the prime stimuli, and (3) that both components of affective priming effects are significant even under masked priming conditions.

**Miguel Brendl, Arthur Markman, and Claude Messner**

**INSEAD, University of Texas, Universität Basel**

**Indirectly measuring evaluations of several attitude objects in  
relation to a neutral reference point**

A new response time measure of evaluations is presented, the Evaluative Movement Assessment (EMA). The measure has two novel attributes: (a) it allows multiple attitude objects to be mapped to a single scale, and (b) it can center that scale around a neutral point. Attribute (a) has implications when direct and indirect measures of attitudes have a low correlation because it allows increasing measurement sensitivity by exploiting within-subjects variability. A study using EMA as an indirect measure revealed a low correlation with self-reported attitudes when the correlation reflected between-subjects differences in preference for one attitude object to another. In contrast, when correlations from the same data reflected within-subjects preferences rank orders between multiple attitude objects, they were substantial (average  $r = .57$ ). This result suggests that the presence of low correlations between direct and indirect measures in previous studies may be a reflection of methodological aspects of the indirect attitude measurement techniques. Attribute (b) has implications for exploring theoretical questions that require assessing whether an evaluation is positive or negative (e.g., prejudice), because it allows such classifications in indirect measurement to be made for the first time.

**Marco Perugini**

**University of Essex**

**The interplay between implicit and explicit attitudes:**

**Methodological and theoretical considerations**

Explicit attitudes have long been assumed as key factors influencing behavior. A recent stream of studies has shown that implicit attitudes, typically measured with the Implicit Association Test (IAT), can also predict a significant range of behaviors. This contribution will be focused on two key points related to these issues. The first point is methodological. Often in social psychological research counterbalancing is used as an effective procedural means to enhance the internal validity of experiments in experimental situations whereby a dependent variable is used in turn as an independent variable to predict relevant criteria. An excellent example of this common situation is provided by research using the IAT. It is argued that, while counterbalancing enhances internal validity, it simultaneously diminishes predictive validity and henceforth it should not be used when the focus is in predicting relevant criteria. This problem will be illustrated with hypothetical and experimental data. The second point is theoretical. So far, the emphasis in recent research has been placed on showing evidence of discriminant and differential validity between implicit and explicit attitudes (double dissociation pattern). It is proposed that the focus should be shifted also on the interaction between implicit and explicit attitudes in influencing behavior. This hypothesis can be derived both if one assumes that there are two or one attitude systems. Two studies supporting this basic interactive hypothesis will be reported. The results will be discussed in light of the importance to focus on congruence instead than only on conflict when investigating the directive influence of implicit and explicit attitudes on behavior.

**J. Richard Eiser**

**University of Sheffield**

### **Consciousness and Automaticity**

**(Ask not what consciousness can do for attitudes, but what attitudes can do for consciousness)**

This paper will examine assumptions surrounding the concepts of consciousness and automaticity and their implications for attitude research. I shall argue that much confusion has been generated by treating the terms automatic, nonconscious and deterministic as essentially identical with each other. Much debate about consciousness concerns whether it is to be defined primarily in terms of subjective experience (What is it like to be conscious?), or in terms of its publicly observable manifestations in language and other behaviour (What is the function of consciousness?). For attitude research, these questions readily translate into “What is it like to have an attitude?” and “What is the function of attitudes?” I suggest that it is difficult to specify a clear function for attitudes, or consciousness, without also considering their experiential aspects, i.e. what actors are conscious *of*. Actors may be conscious of their higher order plans and goals, but often not of the lower order motor subroutines by which these are enacted. Hence, automaticity, awareness, and conscious control exist simultaneously within the same action, depending on the level at which that action is described. Consciousness and attitudes *have content* – they are *about* things. The *aboutness* of attitudes means that attitudes can be communicated and hence socially influenced and shared. Our experience is of the world, not just of the private contents of our own minds, and other people experience that world too. The fact that we can communicate our attitudes, and can be understood, leads to the following observation. Consciousness as we know it is the product of *social* psychological processes, since the forms of representation we use to interpret our world are acquired and/or tuned and/or validated through social interaction, whilst social interaction in its turn is shaped, at least partly, by communication of the contents of our conscious thoughts.