



## Is Kate Winslet more American than Lucy Liu? The impact of construal processes on the implicit ascription of a national identity

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In four studies, we investigated the role of person construal on the implicit ascription of a national identity. Participants completed Implicit Association Tests (Studies 1 and 3) or Go/No-go Association Tasks (Studies 2 and 4) assessing the extent to which the concept *American* was linked to an Asian American celebrity (Lucy Liu) and to a White European celebrity (Kate Winslet). In contrast to explicit responses, the Asian American target was implicitly regarded as being less American than the White European target. This effect was more pronounced when targets were categorized based on their ethnic (rather than personal) identity (Studies 1 and 2) and when the exemplars draw attention to the ethnic identity of the Asian American target (Studies 3 and 4). These findings provide evidence for the flexibility of construal processes and the role of ethnicity in the implicit ascription of a national identity.

Although USA is a pluralist and multiethnic society, little research has been done on the extent to which the American identity is ascribed to members of different ethnic groups. Given that White Americans, as a group, have been immersed in American society for an extensive period of time and constitute a dominant majority, several theoretical frameworks would posit that they should be more likely to be thought of as prototypical of the category *American* than members of other ethnic groups (Sidanius, Feshbach, Levin, & Pratto, 1997; Smith & Zárate, 1992; Stroessner, 1996). Recently, Devos and Banaji (2005) provided direct evidence for the idea that Asian Americans and African-Americans were conceived of as being less American than White Americans (see also Cheryan & Monin, 2005). An important specificity of this work was to investigate how variations in the extent to which a national identity is linked to ethnic groups might be revealed through assessments of associations that cannot be consciously controlled.

Recent methodological developments have made it possible to study what lies within the individual minds in the form of thoughts or feelings about social groups that

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are not necessarily available to introspection or that are not always consciously controllable (Devos, 2008; Fazio & Olson, 2003; Greenwald & Banaji, 1995). The use of implicit techniques is particularly warranted when they reveal a different reality than responses based on more deliberate processes. In two studies, Devos and Banaji (2005) found striking dissociations between mean levels of explicit and implicit associations such that an ethnic minority was explicitly regarded to be more American than were White Americans, but implicit measures showed the reverse pattern. Thus, the American national identity is associated with the ethnic identity of being White – so much so, that even a deliberate, conscious rejection cannot alter this association. Extending this line of work, the goal of the present research was to examine how manipulating the construal of targets might influence the extent to which they were implicitly ascribed the American national identity. Capitalizing on theoretical and methodological advances in the study of implicit social cognition, our aim was to demonstrate the influence of ethnic identity on the ease or difficulty with which a national identity is linked with a target. For the first time, we sought to document that highly flexible construal processes determine the extent to which a target is viewed as prototypical of a national identity.

Most targets (object, person, or group) are represented in a multifaceted manner and the presence of particular cues is sufficient to influence which subset of associative knowledge is activated. Thus, the *same* target can be automatically perceived or evaluated differently as a function of the specific context in which it is encountered. For example, a Chinese woman using chopsticks will automatically activate ethnic stereotypes; the *same* target applying makeup will be construed through the lenses of gender stereotypes (Macrae, Bodenhausen, & Milne, 1995). Mitchell, Nosek, and Banaji (2003) have shown that subtly varying the race and gender composition of the context in which a particular social group is evaluated strongly affected implicit attitudes. More precisely, White women expressed a more negative attitude towards Black women when race (rather than gender) was the distinctive categorization criterion. On the other hand, highlighting gender (rather than race) elicited a more negative attitude towards White men. In a similar vein, cueing specific social roles moderates automatic racial bias (Barden, Maddux, Petty, & Brewer, 2004). In sum, performances on the measures of implicit associations are shaped by the frame through which targets are construed. Individuals may hold multiple sets of associations about a target and access these associations at different points in time based on accessible information.

Studies showing that exposure to different kinds of information prior to completing an implicit measure influences performance on this task can also be taken as evidence for the impact of construal processes on implicit measures (for reviews, see Blair, 2002; Gawronski & Bodenhausen, 2006). For instance, being exposed to admired Black individuals and disliked White individuals has been shown to reduce implicit prejudice towards Blacks (Dasgupta & Greenwald, 2001). After having watched a video clip of an African-American group at an outdoor barbecue, weaker implicit prejudice was exhibited than after having been exposed to a gang-related situation involving African-Americans (Wittenbrink, Judd, & Park, 2001). Similar findings have been obtained by having participants interact with a Black experimenter (Lowery, Hardin, & Sinclair, 2001; Richeson & Ambady, 2003), or listen to misogynous rap music (Rudman & Lee, 2002). In all these cases, it is likely that the knowledge contextually activated affects the construal of the target groups.

In contrast to the previous examples, the present series of studies did not pertain to variations in implicit attitudes or prejudices. Our goal was to document the impact of

construal processes on the extent to which a national identity might be linked with a target. More precisely, our aim was to examine how manipulating the construal of targets might influence the extent to which they were implicitly ascribed the attribute *American*. When individuals make sense of other people, they can rely on group memberships or on personal attributes. The distinction between group-based and person-based construals underlies several influential models of person perception (Brewer, 1988; Fiske & Neuberg, 1990). Debates surrounding these models often focus on distinctions between modes or levels of processing (Brewer & Feinstein, 1999; Fiske, Lin, & Neuberg, 1999). Some scholars have argued that group-based and personalized impressions do not necessarily involve distinct processing modes (Kunda & Thagard, 1996): the products of social categorization and individuation might be different, but the underlying cognitive mechanisms might be the same. Settling this debate is beyond the scope of the present research. It suffices to say that the *content* distinction (categorical vs. individuating information) crosscuts the *processing mode* distinction (top-down vs. bottom-up, heuristic vs. systematic, associative vs. rule-based processing) (Smith & DeCoster, 2000). The distinction between group-based and person-based construals also corresponds to the distinction between intergroup and interpersonal orientations in the social identity tradition (Brown & Turner, 1981; Oakes, Haslam, & Turner, 1994; Tajfel & Turner, 1986). Targets can be construed either as representatives of a social group (intergroup level) or as unique individuals (interpersonal level) (Brewer, Weber, & Carini, 1995).

In our research, we manipulated the extent to which perceivers' attention was drawn to specific identities of an Asian American person or a White European person. We selected two well-known celebrities ensuring participants were aware of the national identity of these targets. We expected responses reflecting controlled or deliberate processes would yield a pattern consistent with the actual national identity of these targets: the Asian American target should explicitly be regarded as being more American than the White European target. In line with previous research (Devos & Banaji, 2005), we predicted implicit assessments would reveal an effect in the opposite direction: the attribute *American* should be more strongly ascribed to the White European target than to the Asian American target. However, the cognitive construal of the targets should moderate this effect. If the attribute *American* is more or less readily ascribed to a person based on the ethnic group to which she belongs, factors leading perceivers to pay less attention to the target's ethnicity should reduce the dissociation between the implicit and explicit giving of the American identity. Shifting the construal of targets from a group-based level to a more personalized level should elicit different patterns of responses even in the relative absence of conscious control. This proposition was tested using two different techniques and two different manipulations. The Implicit Association Test (IAT, Greenwald, McGhee, & Schwartz, 1998) was used in Studies 1 and 3, whereas we relied on the Go/No-go Association Task (GNAT, Nosek & Banaji, 2001) for Studies 2 and 4. In Studies 1 and 2, we compared performances on implicit measures obtained when the targets were categorized based on their ethnic versus personal identity. In Studies 3 and 4, we manipulated the extent to which the exemplars themselves conveyed the ethnic identity of the targets. Implicit measures are often implemented to assess beliefs or attitudes about social groups or categories. An important contribution of the present research was to adapt the IAT and the GNAT to study the impact of construal processes on the extent to which the attribute *American* (relative to *foreign*) was automatically associated with two specific individuals.

## STUDY I

The IAT is a widely used technique to study implicit associations (Nosek, Greenwald, & Banaji, 2007). It is based on the assumption that the strength of associations between two pairs of concepts can be revealed by the ease with which participants discriminate (or combine) stimuli representing these concepts under different conditions. The technique does not require introspective access and minimizes the role of conscious control or intention (Nosek *et al.*, 2007). More precisely, individuals have much less control over their responses on the IAT than on self-report measures and the controllability of their responses on this task is minimal when they have limited experience with the technique and are not provided specific instructions on how to modify their IAT score (Kim, 2003; Steffens, 2004). This does not however imply that individuals lack conscious awareness of associations assessed using the IAT (Gawronski, Hofmann, & Wilbur, 2006). Several scholars have concluded that performances on the IAT are largely driven by the category labels used in the task (DeHouwer, 2001; Fazio & Olson, 2003). For example, Mitchell *et al.* (2003) compared the relative evaluations of targets that differed both in terms of race and occupation (White politicians vs. Black athletes). When the IAT required categorization based on race, the White politicians were evaluated more favourably than the Black athletes. When the targets were categorized based on their occupation, a bias favouring Black athletes relative to White politicians was obtained.

Using the same logic, we examined the extent to which the concept *American* was linked to two targets as a function of whether they were categorized based on their ethnic identity (Asian vs. White) or their personal identity (Lucy Liu vs. Kate Winslet). We predicted the attribute *American* would be more strongly associated with the White target than with the Asian target, but this effect would be reduced when the task focused participants on the interpersonal level. Given that the participants were required to categorize the targets along a well-defined dimension (ethnic or personal identities), it should lead them to construe the targets along that dimension and limit the relevance of other features or dimensions. It should be noted that examining the impact of group-based versus person-based categorizations necessitated a more narrow choice of stimulus targets than in previous research (Devos & Banaji, 2005).

## Method

### Participants

The participants were 53 female undergraduate students at a large southwestern university in the USA. The sample included 25 White Americans, 9 Latina Americans, 9 multiracial Americans, 8 Filipina Americans, 1 African-American, and 1 Asian American. Participants' ages ranged from 18 to 27 years; the median age was 19 years.

### Stimuli

The two targets were selected based on a pre-test showing a vast majority of undergraduate students were aware that Lucy Liu is American and Kate Winslet is not American. In addition, these targets were chosen to preclude an account of implicit associations with the concept *American* in terms of differences in attitude, perceived fame, identification, or familiarity (see Footnote 1). Six pictures were selected for each actress and were used as stimuli. Close-cropped head or bust shots were chosen and paired such that the Asian American (Lucy Liu) and White European (Kate Winslet)

targets were matched in expression and pose. Importantly, all pictures depicted the actresses in a non-ethnic specific manner. To represent the concepts *American* and *foreign*, stimuli were borrowed from previous research (Devos & Banaji, 2005). The six stimuli used to represent the concept *American* were pictures of the Capitol building, the Statue of Liberty, the Golden Gate Bridge, the US flag, the Bald eagle, and a map of USA (in blue). The six stimuli selected to represent the concept *foreign* included images of the Eiffel Tower, the Leaning Tower of Pisa, the Sphinx, the flag of Djibouti, a Flemish lion (emblem of region in Belgium), and a map of Luxembourg (rotated 90 degrees to the left, in green).

### **Procedure**

After giving their informed consent, participants completed implicit and explicit measures administered on PCs running Inquisit (Draine, 1998).

#### *Biographical sketches*

Participants first read biographical sketches of each actress, which emphasized the fact that Lucy Liu is American and Kate Winslet is British. These biographical sketches clearly communicated the respective country of origin and the current residence of each actress. In addition, they reminded participants of movies or TV shows each actress was cast in.

#### *Initial presentation of stimuli*

To acquaint participants with the symbols used to represent the concepts *American* and *foreign*, each stimulus appeared in the middle of the screen for 1,500 ms under the appropriate label. Participants were simply instructed to watch the stimuli carefully. The order of presentation of the six stimuli within category was randomized across participants.

#### *Implicit association tests*

Next, participants completed two IATs assessing the direction and the strength of the association between the targets (actresses) and the concept *American* (relative to *foreign*). Pictures appeared at the centre of the computer screen and participants were asked to categorize these pictures, as quickly as possible, using keys designated towards the right and left. Response times were measured from the onset of the stimulus (picture) to its correct classification. Incorrect classifications resulted in a red 'X' appearing below the stimulus, which remained until participants made the correct categorization. The inter-trial interval was 250 ms. Given that the different steps of an IAT have been described systematically in many publications (Greenwald *et al.*, 1998; Nosek *et al.*, 2007), the description provided below focuses on the double categorization blocks for each task. The words 'American' and 'Foreign' served as labels for the attribute dimension.

For the *Ethnic Identity* IAT, the targets were categorized based on their ethnic identity. The labels used were 'Asian' and 'White'. One block of trials assessed the strength of the American + Asian versus Foreign + White associations: participants were asked to categorize American symbols and pictures of Lucy Liu on one side and foreign symbols and pictures of Kate Winslet on the other side. The other block of trials

measured the strength of the American + White versus Foreign + Asian associations: participants were asked to categorize American symbols and pictures of Kate Winslet on one side and foreign symbols and pictures of Lucy Liu on the other side. For the *Personal Identity* IAT, the targets were categorized based on their personal identity. The labels used were 'Lucy Liu' and 'Kate Winslet'. In this case, one block of trials assessed the strength of the American + Lucy Liu versus Foreign + Kate Winslet associations. The other block of trials measured the strength of the American + Kate Winslet versus Foreign + Lucy Liu associations. It is important to stress that the two IATs were identical except that the labels appearing on the computer screen focused on the actresses' ethnic identity in one case and their personal identity in another case. The order of the two IATs and the order of the critical blocks were counterbalanced across participants. Each critical block included a total of 60 trials with a brief message appearing after the first 20 trials to remind participants to go fast.

#### *Explicit measure*

After the IATs, participants completed a series of explicit measures. Participants were asked to indicate to what extent they perceived Lucy Liu and Kate Winslet as being American. The exact wording of the instructions was: 'We are interested in the extent to which Lucy Liu and Kate Winslet are perceived as being part of America. That is, we are interested in the extent to which each of them is identified with America and all things American. Please indicate your opinion for each actress'. The question was: 'In your mind, how American is Lucy Liu/Kate Winslet?' Responses were provided on 7-point scales ranging from (1) 'Not at all American' to (7) 'Absolutely American'. The order of the two items was randomized across participants. It should be noted that the targets were being referred to based on their personal identity (first and last names); no mention of their ethnicity was made.<sup>1</sup>

#### *Demographic information*

Finally, participants provided demographic information including their ethnicity, gender, and age. Participants were then debriefed and thanked for their participation.

## **Results and discussion**

### ***Explicit measure***

On the explicit measure, participants indicated that they perceived Kate Winslet ( $M = 3.79$ ,  $SD = 1.63$ ) as less American than Lucy Liu ( $M = 5.57$ ,  $SD = 1.39$ ),  $t(52) = 5.45$ ,  $p < .001$ ,  $d = 1.17$ .

### ***Implicit association tests***

IAT data were analyzed following the algorithm recommended by Greenwald, Nosek, and Banaji (2003). For each IAT, the difference between the mean response latency for

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<sup>1</sup> In each study, participants completed self-report measures of attitude, perceived fame, identification, and familiarity with the targets. Across studies, Lucy Liu was rated slightly more favourably ( $d = 0.34$ ) and was perceived as being somewhat more famous ( $d = 0.27$ ) than Kate Winslet. In addition, participants tended to identify more with Lucy Liu than with Kate Winslet ( $d = 0.20$ ), and had seen more movies or TV series casting Lucy Liu than Kate Winslet ( $d = 0.81$ ). These data did not account for findings presented in this paper and, therefore, will not be further discussed.



the double categorization blocks, divided by its associated pooled standard deviation, was computed. This quotient was computed separately for the first 20 trials and the last 40 trials; the two values were then averaged. In the present case, this index (IAT D) reflects the extent to which the concept *American* was linked to the targets. A positive mean indicates the concept *American* was more strongly associated with the Asian American target (Lucy Liu) than with the White European target (Kate Winslet). A negative mean would suggest the concept *American* was more strongly linked with the White European target (Kate Winslet) than with the Asian American target (Lucy Liu).

The reliability of implicit measures is often far below typical standards (Bosson, Swann, & Pennebaker, 2000). For example, evaluative priming techniques show weak internal consistency (e.g. split-half  $r = .06$ , Olson & Fazio, 2003). The IAT has displayed greater internal consistency than other latency-based measures (Nosek *et al.*, 2007). Internal consistency estimates (split-half  $r$  or Cronbach's  $\alpha$ ) for the IAT tend to range from .70 to .90 (e.g. Perugini, 2005; Schmukle & Egloff, 2004). Different methods can be used to assess the internal consistency of an IAT. In the present paper, each block of trials was divided into six parcels (trials 1–10, 11–20, 21–30, 31–40, 41–50, 51–60). Average response latencies and IAT D effect were computed for each parcel and were used as items to calculate Cronbach's  $\alpha$  values. For each IAT, the Cronbach's  $\alpha$  values for response latencies on each block (Asian American target + American and White European target + American) and for the IAT D effect are reported in Table 1. The internal consistency estimates were somewhat lower than those reported for other IATs, but were relatively satisfactory for implicit measures.

A  $2 \times 2 \times 2$  analysis of variance was performed on the IAT D effect with Task as within-subjects factor, and Task Order and Block Order as between-subjects factors.<sup>2</sup> The main effect of Task was highly significant,  $F(1, 49) = 9.08$ ,  $p < .005$ ,  $\eta^2 = .16$ . On the *Ethnic Identity* IAT, the concept *American* was more strongly associated with the White European target than with the Asian American target,  $M = -0.25$ ,  $SD = 0.29$ ,  $t(52) = 6.25$ ,  $p < .001$ ,  $d = 0.87$ . This effect was significant, but less pronounced on the *Personal Identity* IAT,  $M = -0.10$ ,  $SD = 0.33$ ,  $t(52) = 2.23$ ,  $p < .04$ ,  $d = 0.31$ . The main effect of Task was not qualified by Task Order or Block Order,  $F$  values  $< 1.31$ .

### Comparing the effects

To compare the pattern of findings at the explicit and implicit levels, effect sizes (Cohen's  $d$ ) are reported in Figure 1 (left panel). A positive or negative sign was assigned to each effect size to reflect, respectively, that the concept *American* was more strongly associated with the Asian American target (Lucy Liu) or with the White European target (Kate Winslet). As expected, the two targets were differentiated in opposite directions at the explicit and implicit levels. When participants deliberately reflected on their perceptions of the two actresses, they rated Lucy Liu as being more American than Kate Winslet. However, this pattern was reversed on the IATs. When the targets were categorized based on their ethnic identity, the attribute *American* was more strongly linked to the White European target than to the Asian American target. An effect in the same direction was also obtained when the targets were categorized based on their personal identity, but it was much weaker. The fact that a reliable IAT effect was

<sup>2</sup> For each study, no reliable ( $p < .05$ ) differences as a function of participants' ethnicity were found. This factor, therefore, was not included in the analyses reported in this paper.

**Table 1.** Reliabilities of implicit measures and correlations between implicit and explicit measures, Studies 1–4

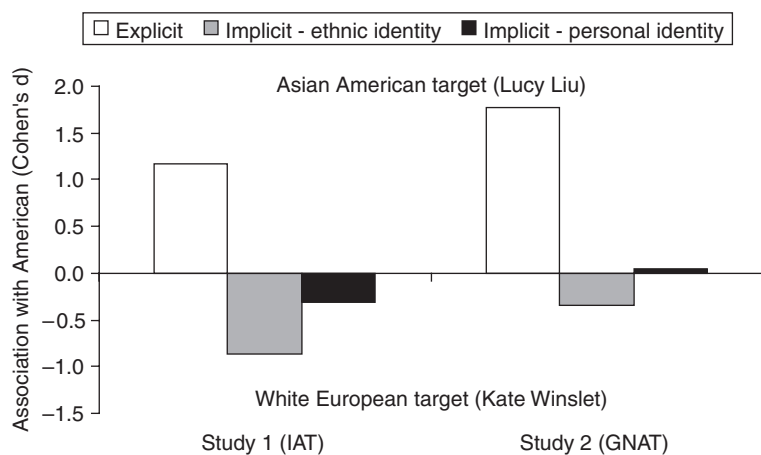
	$\alpha_{\text{AAT+American}}$	$\alpha_{\text{WET+American}}$	$\alpha_{\text{Dif.Score}}$	$r_{\text{I-E}}$	$r_{\text{I-I}}$
<b>Study 1</b>					
Ethnic identity IAT	.75	.69	.59	+.14	+.32*
Personal identity IAT	.68	.74	.60	+.29*	
<b>Study 2</b>					
Ethnic identity GNAT	.84	.69	.60	+.25	+.35*
Personal identity GNAT	.75	.70	.45	+.12	
<b>Study 3</b>					
Asian identity IAT	.85	.74	.59	+.21	+.40**
European identity IAT	.84	.72	.76	+.25	
<b>Study 4</b>					
Asian identity GNAT	.80	.78	.24	+.03	+.20
European identity GNAT	.83	.83	.41	+.15	

Note. Measures of internal reliability (Cronbach's  $\alpha$ ) are based on six parcels for the IAT (Studies 1 and 3) and four parcels for the GNAT (Studies 2 and 4). Reliabilities are reported for the critical blocks of trials (Asian American Target [AAT] + American and White European Target [WET] + American) and for difference scores (see Results section for further details).  $r_{\text{I-E}}$  is the correlation between implicit and explicit measures.  $r_{\text{I-I}}$  is the correlation between the two implicit measures.

\* $p < .05$ ; \*\* $p < .01$ .

obtained even when targets were categorized based on their personal identity could be taken as evidence for the potent influence of ethnicity on person construal. Given the ethnicity of each target was readily apparent and was conveyed in the actresses' names, group-based assumptions influenced performances on the IAT even when interpersonal categorizations were made. Alternatively, participants might automatically associate the attribute *American* to a greater extent to Kate Winslet than to Lucy Liu based on features or associative knowledge not related to ethnicity.

Up to this point, the analyses focused on comparing the direction and magnitude of effects obtained on implicit and explicit measures. Examining the correlations among



**Figure 1.** Strength of explicit and implicit associations with the concept *American* (Cohen's  $d$ ). Bar colours differentiate explicit and implicit measures, Study 1 (left panel) and Study 2 (right panel).



these measures might provide additional insights (Table 1). These correlations should be interpreted with caution because the reliabilities of the implicit measures were not very high and the small sample size prevented us from correcting for measurement error (Cunningham, Preacher, & Banaji, 2001). Correlations between the explicit and implicit assessments suggest that responses reflecting deliberate processes were distinct from responses produced when conscious control was relatively unavailable. The difference between the explicit ratings of the two targets was reliably correlated with the effect on the *Personal Identity* IAT,  $r = +.29$ ,  $p < .04$ , but not on the *Ethnic Identity* IAT,  $r = +.14$ , *ns*. The difference between these two correlations was not significant,  $Z = 0.94$ ,  $p > .30$ . The correlation between the two IATs was significant, but not very strong,  $r = +.32$ ,  $p < .02$ , suggesting that the targets elicited different responses as a function of the frame used to categorize the stimuli.

It should be noted that the processes that drive effects obtained on the IAT are not fully understood. The mechanisms that have received some attention include a random-walk model (Brendl, Markman, & Messner, 2001), a stimulus-response compatibility model (De Houwer, 2001), a task-set switching account (Mierke & Klauer, 2001, 2003), and a figure-ground asymmetry model (Rothermund & Wentura, 2001, 2004). The latter model deserves special attention here because it could easily account for the findings of Study 1. The core idea of the figure-ground model is that IAT effects can reflect differences in salience between the concepts used in the task. Figure-ground asymmetries between concepts can have many sources including familiarity and valence. Attentional effects of salience asymmetries have been well documented (Wolfe, 2001): unfamiliar or negative targets automatically attract or hold attention when compared with familiar or positive targets. There is no doubt that the concept *foreign* is less familiar and more negative, thus more salient, than the concept *American* for US college students. Given the numerical status of ethnic groups in USA and the ethnic make-up of our college sample, one would also expect the concept *Asian* to be less familiar and less positive, thus more salient, than the concept *White*. In this case, participants might find it easier to respond if the salient concepts on both dimensions (figures: *foreign* and *Asian*) were mapped on to one response and the non-salient concepts (backgrounds: *American* and *White*) were mapped on to the other response. In other words, the relative salience of the concepts would help discriminate between responses. When salience and response dimension are orthogonal (i.e. opposite pairing), no facilitative influence of salience should occur and, as a result, responses should be relatively slower. This would account for the effect obtained on the *Ethnic Identity* IAT. The figure-ground model can also account for the weakened effect on the *Personal Identity* IAT if we assume weaker salience asymmetries between the persons *Lucy Liu* and *Kate Winslet* based on the fact that participants were more familiar with the work of Lucy Liu and rated her more favourably than Kate Winslet (see Footnote 1). Thus, it was important to rule out an account of the present findings in terms of salience asymmetries.

## STUDY 2

Study 2 addressed several important limitations of Study 1. A dominant feature of the IAT is that it captures the relative associations between two pairs of concepts. Using a technique assessing relative associations is appropriate in many cases, in particular when the contrasting categories are carefully selected to operationalize a specific

theoretical construct. The goal of this research being to investigate the extent to which the concept *American* was implicitly associated with targets, it was appropriate to contrast it to the concept *foreign*. When the term 'foreign' is ascribed to a person, an object, or a behaviour, it implies that it differs from what is typical in 'America' in the present case. Thus, setting up the IAT as we did in Study 1 was a suitable approach. It was nevertheless of some interest to ask if the findings could be replicated by minimizing these contrasting comparisons. This was also important because the relative weak correlations between the explicit and implicit measures could reflect the fact that self-reports focused on the perceived Americanness of the targets, whereas the IAT measured the extent to which they were differentiated on a bipolar dimension (*American* vs. *foreign*).

Several techniques have been developed to provide more absolute assessments of associations (e.g. De Houwer, 2003b; Karpinski & Steinman, 2006; Nosek & Banaji, 2001). In Study 2, we used the GNAT (Nosek & Banaji, 2001). This technique is based on the same logic as the IAT: performance should be better when participants are required to make the same response to concepts that are strongly (rather than weakly) associated. The technique has been applied to show automatic attitudes towards ethnic groups were not only characterized by positive feelings towards White Americans, they were also driven by a negative evaluation of African-Americans (Nosek & Banaji, 2001). The GNAT has also been used successfully to demonstrate the flexibility of automatic responses (Blair, Ma, & Lenton, 2001; Mitchell *et al.*, 2003). In the present study, this technique was used to compare the extent to which the concept *American* was implicitly linked with two different targets. As in Study 1, the targets were categorized based on their ethnic or personal identities.

The GNAT is basically a search task: participants are instructed to search for stimuli belonging to activated concepts or categories and not to respond to other stimuli. Prior research suggests that specification of a search category by task instructions exerts an influence on attentional and search processes that can eliminate or invert pre-existing salience asymmetries (Wolfe, 1998; Yantis, 1998). Rothermund and Wentura (2004), who developed the figure-ground model, used a go/no-go task to manipulate category salience. Their data suggest that strong pre-existing salience asymmetries were overridden by search instructions. Once participants were instructed to search for specific categories of stimuli, these categories became extremely salient (figures) and other categories far less salient (backgrounds) irrespective of their pre-existing salience (see also Rothermund, Wentura, & De Houwer, 2005). In other words, searching for exemplars of a specific category establishes an attentional focus towards that category (Pashler, 1998; Yantis, 1998). Given the structural properties of the technique, it was unlikely that salience asymmetries between targets could account for the relative ease or difficulty to perform a GNAT.

## Method

### Participants

Participants were 40 undergraduate students (30 women and 10 men). The sample included 20 White Americans, 7 Latino/a Americans, 7 Filipino/a Americans, 5 multiracial Americans, and 1 individual identified as American. Participants' ages ranged from 19 to 41 years; the median age was 22 years.

### Procedure

As in Study 1, participants read short biographies of Lucy Liu and Kate Winslet. They were then acquainted with the stimuli used to represent the concept *American* and were shown the stimuli that would be intermixed with American symbols. Next, participants completed two GNATs assessing the direction and the strength of the association between two targets and the concept *American*. Stimuli were presented sequentially at the centre of the computer screen. The stimuli were the same as in Study 1. Participants were instructed to respond before a prescribed deadline (750 or 500 ms) to stimuli that fell into either of two concepts, using a single key (space bar), and simply to ignore any stimulus that did not belong to the activated concepts. For example, in one block of trials, participants were instructed to respond to stimuli representing the concepts *American* or *Lucy Liu* and to let go (not to respond to) all other stimuli (distracters). Correct answers (hits or correct rejections) were followed by the brief (300 ms) appearance of a green 'O' in the middle of the screen, whereas a red 'X' appeared briefly (300 ms) after wrong answers (misses or false alarms).

Each critical block included 60 trials. *American* was always one of the activated concepts. For the *Ethnic Identity* GNAT, the second concept was either *Asian* or *White*. One block of trials assessed the strength of the American + Asian association: participants were instructed to press the space bar when they saw an American symbol or a picture of Lucy Liu and not to respond to all other stimuli (i.e. foreign symbols or pictures of Kate Winslet). The other block of trials measured the strength of the American + White association: participants were asked to press the space bar when they saw an American symbol or a picture of Kate Winslet and not to respond to other stimuli (distracters). For the *Personal Identity* GNAT, the second activated concept was *Lucy Liu* or *Kate Winslet*. In this case, one block of trials assessed the strength of the American + Lucy Liu association. The other block of trials measured the strength of the American + Kate Winslet association. Stimuli were selected randomly, but the same number of stimuli was presented for each concept and pictures of actresses and national symbols were alternated.

Participants performed these blocks twice. The response deadline was 750 ms in the first set of four blocks and it was reduced to 500 ms in the second round of four blocks. As usual, the labels (Asian + American, White + American, Lucy Liu + American, and Kate Winslet + American) appeared at the top of the computer screen. At no point was the term 'foreign' used as a category label. The order of the two GNATs and the order of the critical blocks were counterbalanced across participants.

As in Study 1, participants completed a series of explicit measures and provided demographic information after the implicit measures.

## Results and discussion

### Explicit measure

In line with the findings of Study 1, participants perceived Kate Winslet ( $M = 3.15$ ,  $SD = 1.81$ ) as less American than Lucy Liu ( $M = 5.95$ ,  $SD = 1.32$ ),  $t(39) = 7.16$ ,  $p < .001$ ,  $d = 1.78$ .

### Go/no-go association tasks

In the GNAT, implicit associations are captured by assessing the degree to which participants are able to discriminate stimuli belonging to the activated concepts from

distracters (stimuli that do not belong to the activated concepts) (Nosek & Banaji, 2001). More precisely, the strength of association between the activated concepts is measured by Signal Detection Theory's estimate of sensitivity ( $d'$ ) (Green & Swets, 1966). This index reflects participants' ability to discriminate targets (signal) from distracters (noise) and, in the present context, measures the strength of the association between a target and the concept *American*. This index was computed separately for each block of trials (2 targets  $\times$  2 labels  $\times$  2 response deadlines). Although the GNAT provided a separate score ( $d'$ ) for each target, our interest was in examining the extent to which two targets differed in terms of their association with the concept *American*. Thus, paralleling analyses performed on the IAT, differences between  $d'$  obtained for the two targets were computed separately for the *Ethnic Identity* GNAT and the *Personal Identity* GNAT, and for the long (750 ms) and short (500 ms) response deadlines. Once again, a positive mean would suggest the concept *American* was more strongly associated with the Asian American target (Lucy Liu) than with the White European target (Kate Winslet), whereas a negative mean would indicate the opposite. Preliminary analyses revealed that the effect of interest was not qualified by the response deadline; the two difference scores, therefore, were averaged.

Less is known about the reliability of the GNAT compared to that of the IAT. Nosek and Banaji (2001) reported split-half reliabilities (calculated between blocks with different response deadlines) of  $r = .20$ . Steps similar to those described for the IATs were used to assess the internal consistency of the GNATs. Each block of trials was divided into two parcels (trials 1–30 and 31–60 for the long and short response deadlines). Estimates of sensitivity ( $d'$ ) and difference scores between these estimates were computed for the four parcels and were used as items to calculate Cronbach's  $\alpha$  values (Table 1). The internal consistency estimates were higher than those reported previously in the literature for the GNAT and in the same range as those obtained for the IAT in Study 1.

A  $2 \times 2 \times 2$  analysis of variance was performed on the difference score with Task as within-subjects factor, and Task Order and Block Order as between-subjects factors. The main effect of Task was significant,  $F(1, 36) = 5.09$ ,  $p < .04$ ,  $\eta^2 = .12$ . On the *Ethnic Identity* GNAT, the concept *American* was more strongly associated with the White European target than with the Asian American target,  $M = -0.26$ ,  $SD = 0.76$ ,  $t(39) = 2.13$ ,  $p < .04$ ,  $d = 0.34$ . The effect was not significant on the *Personal Identity* GNAT,  $M = 0.02$ ,  $SD = 0.58$ ,  $t(39) = -0.24$ ,  $ns$ ,  $d = 0.04$ . The main effect of Task was not qualified by Task Order or Block Order,  $F$  values  $< 1.17$ .

### Comparing the effects

Once again, to compare the pattern of findings at the explicit and implicit levels, effect sizes are reported in Figure 1 (right panel). As hypothesized and in line with the findings of Study 1, implicit associations elicited by the targets differed as a function of the way in which they were categorized. When the categorization task emphasized ethnic identities, the attribute *American* was more strongly associated with the White European target than with the Asian American target. However, when the categorization task required participants to focus on personal identities, the two targets were not reliably differentiated.

These findings provide convergent evidence for the impact of group-based versus person-based categorization on the implicit ascription of the American identity. In Study 2, we relied on a technique that minimized the comparison between concepts and the

role of pre-existing salience asymmetries. We implemented the GNAT to examine whether the concept *American* would be differentially attributed to the targets when it was not directly contrasted to the concept *foreign*. Even under these circumstances, the attribute *American* was less strongly linked to the Asian American target than to the White European target. Given the structural properties of the GNAT, this effect cannot easily be accounted for in terms of salience asymmetries. Indeed, searching for specific categories of stimuli establishes an attentional focus towards these categories irrespective of their pre-existing salience. It should be noted the effect obtained was stronger on the IAT ( $d = 0.87$ ) than on the GNAT ( $d = 0.34$ ). In addition, the effect remained significant when the targets were categorized based on personal identities with the IAT ( $d = 0.31$ ), but not with the GNAT ( $d = 0.04$ ). These differences will be discussed in the final section of this paper. For now, it suffices to stress the impact of the manipulation was consistent across studies. Once again, the pattern of means highlights clear discrepancies between the explicit and implicit ascription of the attribute *American*. Explicitly, Lucy Liu was rated as being more American than Kate Winslet. At the implicit level, mean differences were never in that direction. At best, the two targets were not reliably differentiated.

Correlations among measures are reported in Table 1. The difference between the explicit ratings was not reliably correlated with the effects obtained at the implicit level (*Personal Identity* GNAT:  $r = +.12$ , *ns*, and *Ethnic Identity* GNAT:  $r = +.25$ , *ns*). The correlation between the two GNATs was significant,  $r = +.35$ ,  $p < .03$ , but not very strong, suggesting that the targets produced distinct patterns of responses on the GNAT as a function of the categorization frame.

### STUDY 3

In the first two studies, target construal was manipulated by varying the categorization criteria participants were asked to rely on as they completed the implicit measures. In Study 3, we varied the exemplars (or stimuli) used to represent the target celebrities. Several researchers found clear evidence for the influence of stimuli on IAT effects. For example, changing the affective valence of the stimuli has been shown to moderate well-documented IAT effects (Govan & Williams, 2004): Evidence for a pro-White bias was eradicated when admired Black celebrities (movie stars, athletes) were contrasted to infamous White individuals (mass-murderers, etc.). In the same vein, Bluemke and Friesen (2006) obtained IAT effects ranging from a very strong in-group bias to a strong out-group bias by systematically manipulating the valence of target and attribute stimuli. More directly relevant to the present research, Devos and Banaji (2005) found that the American = White effect was stronger when Asian American celebrities were contrasted to White European celebrities rather than to White American celebrities. In sum, there is firm evidence that exemplars selected to represent concepts drive performances on the IAT (see also Mitchell *et al.*, 2003; Steffens & Plewe, 2001). In line with the aim of the present research, we varied the extent to which the stimuli would lead perceivers to construe the targets based on a specific social identity. For example, some stimuli would stress the Asian identity of Lucy Liu, while other stimuli would display her more neutrally.

Study 3 was designed to tackle another important issue. So far, we compared patterns of implicit associations obtained when both targets were construed based on their ethnic versus personal identities. Smith and Zárate (1992) coined the term of



*cultural default values* to capture the fact that certain attributes may come to be perceived as expected or default values within a culture. Accordingly, targets are more likely to be categorized or stereotyped as members of groups that differ from perceived cultural norms (Hegarty & Pratto, 2001; Stroessner, 1996; Zárate & Smith, 1990). Assuming the White ethnic identity serves as a cultural default in USA, ethnicity is more likely to influence target's construal in the case of an Asian person than in the case of a White person. This could account for the relative difficulty to ascribe the attribute *American* to the Asian American target. This person would first and foremost be construed based on her ethnic identity and, as a result, would not be attributed a characteristic that is weakly linked to her ethnic group. In Study 3, we contrasted two conditions that should, respectively, reinforce or counteract this effect: we examined whether pictorially stressing the Asian identity of Lucy Liu would yield a different pattern of responses than a situation emphasizing the European identity of Kate Winslet.

In Studies 1 and 2, self-reports suggested that Lucy Liu was viewed as being more American than Kate Winslet. This finding is not very surprising in particular considering the fact that participants received information about the national background of the two actresses at the beginning of the study. This being said, the explicit measure is tapping participants' perception of the targets rather than factual knowledge about the targets. There is a difference between knowing that a person is American (or not) and perceiving this person as American. For example, the fact that Kate Winslet has been cast in American movies or that Lucy Liu has been cast in stereotypical 'Asian characters' may affect the extent to which they are seen as American (even if participants are fully cognizant that Kate Winslet is not American and that Lucy Liu is a US citizen). In Study 3, participants did not read information about the actresses prior to completing the measures making the explicit assessments less trivial. The explicit ratings of the target persons in Studies 1 and 2 did not include a manipulation of person construal or salience of category membership. In Study 3, participants were asked to indicate for each stimuli used in the implicit tasks to what extent it depicted someone typically American. These ratings allowed us to examine the impact of construal processes on self-reports.

## Method

### Participants

The participants were 44 female undergraduate students. The sample included 16 White Americans, 7 multiracial Americans, 6 Latina Americans, 6 Asian Americans, 3 Filipina Americans, 2 African-Americans, 2 Middle Eastern Americans, and 2 individuals who did not specify their ethnicity. Participants' ages ranged from 18 to 22 years; the median age was 19 years.

### Stimuli

Eight pictures were selected for each actress and were used as stimuli. Four pictures stressed the culture of origin of the actress (Asian for Lucy Liu and European for Kate Winslet). These stimuli were still frame images from films in which the actresses played stereotypically looking characters. For example, several stimuli were taken from the movie *Kill Bill* (Bender, Thurman, & Tarantino, 2003, 2004) for Lucy Liu and *Sense and Sensibility* (Borg *et al.*, 1995) for Kate Winslet. These pictures were contrasted to four pictures showing the celebrities in more neutral or less culture specific clothing. The stimuli were matched such that the facial expressions of the two actresses were similar



and the cropping was the same. The stimuli used to represent the concepts *American* and *foreign* were identical to those used in Studies 1 and 2.

### **Procedure**

The procedure was similar to that described for Study 1 except that participants did not read biographical sketches of each actress. In this study, the targets were always categorized based on their personal identity ('Lucy Liu' vs. 'Kate Winslet' labels) because it was likely that the effect of stimuli sets would be undermined if the targets were categorized based on their ethnicity (Livingston & Brewer, 2002). The participants completed two IATs assessing the direction and the strength of the association with the concept *American* (relative to *foreign*). This time, the extent to which the stimuli conveyed the Asian or European identity of the target was manipulated. In the *Asian Identity* IAT, pictures highlighting the Asian identity of Lucy Liu were contrasted to the more neutral pictures of Kate Winslet. In the *European Identity* IAT, pictures stressing the European identity of Kate Winslet were contrasted to the more neutral pictures of Lucy Liu. In other words, the two IATs were identical except for the fact that the stimuli used to represent the targets varied. As usual, in one block of trials, participants were asked to pair, as quickly as possible, American symbols and pictures of Lucy Liu on one side and foreign symbols and pictures of Kate Winslet on the other side. In another block of trials, the opposite pairing was presented. This time, American symbols were combined with pictures of Kate Winslet and foreign symbols were grouped with pictures of Lucy Liu. The technical parameters of these tasks were identical to those described for Study 1. The order of the IATs and the order of the combined blocks were counterbalanced across participants.

In addition to the explicit measures included in Studies 1 and 2, the participants were asked to indicate 'to what extent the appearance of the actress was typical of an American?' for each photo. Each pictorial stimuli was rated on a 7-point scale ranging from (1) 'Not at all American' to (7) 'Absolutely American'. The order of presentation of the 16 pictures was randomized across participants.

## **Results and discussion**

### **Explicit measures**

The participants perceived Kate Winslet ( $M = 4.64$ ,  $SD = 1.88$ ) as less American than Lucy Liu ( $M = 5.34$ ,  $SD = 1.31$ ),  $t(43) = 2.21$ ,  $p < .001$ ,  $d = 0.43$ . This effect was weaker than that obtained in Studies 1 and 2 probably because participants did not read the biographical sketches stressing the nationality of the actresses prior to completing the measures. The average typicality ratings for the sets of four pictures contrasted in the IATs were compared. Pictures stressing the ethnic identity of Lucy Liu ( $\alpha = .93$ ,  $M = 1.61$ ,  $SD = 0.87$ ) were rated as less American than neutral pictures of Kate Winslet ( $\alpha = .89$ ,  $M = 6.40$ ,  $SD = 0.67$ ),  $t(43) = -24.86$ ,  $p < .001$ ,  $d = 6.22$ , whereas those stressing the European identity of Kate Winslet ( $\alpha = .91$ ,  $M = 3.34$ ,  $SD = 1.69$ ) were rated as less American than neutral pictures of Lucy Liu ( $\alpha = .76$ ,  $M = 5.95$ ,  $SD = 0.89$ ),  $t(43) = 8.92$ ,  $p < .001$ ,  $d = 1.94$ .

### **Implicit association tests**

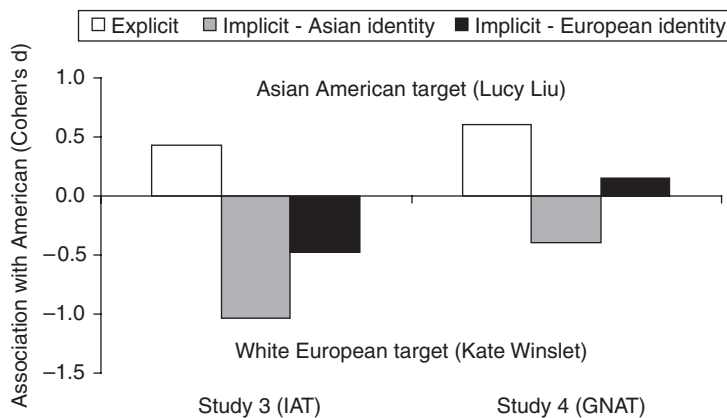
Implicit data were aggregated and analyzed following the steps described for Study 1. Steps similar to those described for Study 1 were used to assess the internal consistency

of the IATs (Table 1). A  $2 \times 2 \times 2$  analysis of variance was performed on the IAT D indexes with Task as within-subjects factor, and Task Order and Block Order as between-subjects factors. The main effect of Task was highly significant,  $F(1, 40) = 5.21$ ,  $p < .03$ ,  $\eta^2 = .12$ . On the *Asian Identity* IAT, the concept *American* was more strongly associated with the White European target than with the Asian American target,  $M = -0.33$ ,  $SD = 0.32$ ,  $t(43) = 6.88$ ,  $p < .001$ ,  $d = 1.04$ . This effect was significant, but less pronounced on the *European Identity* IAT,  $M = -0.20$ ,  $SD = 0.41$ ,  $t(43) = 3.19$ ,  $p < .004$ ,  $d = 0.48$ . The main effect of Task was not qualified by Task Order or Block Order,  $F$  values  $< 1.63$ .

### Comparing the effects

Effect sizes for explicit and implicit measures are reported in Figure 2 (left panel) and correlations among measures are reported in Table 1. When the exemplars emphasized the Asian identity of Lucy Liu and downplayed the European identity of Kate Winslet, the attribute *American* was more strongly linked to the White foreigner than to the Asian American person. A much less pronounced effect in the same direction emerged when the exemplars stressed the European identity of Kate Winslet and de-emphasized the Asian identity of Lucy Liu. In contrast to the procedure used in Studies 1 and 2, the data of Study 3 indicate the construal of targets can be manipulated in the absence of changes to the labels used for categorization task. Performances on the IAT varied as a function of the appearance of the exemplars representing the targets. Once again, the correlation between the two tasks was significant,  $r = +.40$ ,  $p < .008$ , but the overlap between these measures did not indicate that they were tapping the same set of associations twice.

At the explicit level, the overall ratings of Americanness indicated Lucy Liu was perceived as being more American than Kate Winslet. In this study, participants also reported to what extent the stimuli were typical of an American. These data show the two sets of stimuli contrasted in the IATs differentiated the targets in opposite direction. Lucy Liu was seen as less American than Kate Winslet when her Asian identity was emphasized, but she was seen as more American when the European identity of Kate Winslet was accented. Interestingly, although fluctuations were observed at the implicit



**Figure 2.** Strength of explicit and implicit associations with the concept *American* (Cohen's  $d$ ). Bar colours differentiate explicit and implicit measures, Study 3 (left panel) and Study 4 (right panel).

level, they were less dramatic. Even when the Asian identity of Lucy Liu was minimized and the European identity of Kate Winslet was highlighted, implicit responses were not aligned with explicit responses. Correlations between effects obtained at the implicit level and the overall rating of the two targets (*Asian Identity* IAT:  $r = +.21$ , *ns* and *European Identity* IAT:  $r = +.25$ , *ns*) or ratings of stimuli (*Asian Identity* IAT:  $r = +.11$ , *ns* and *European Identity* IAT:  $r = +.07$ , *ns*) did not reach the conventional significance level, lending further support to the distinction between these two levels.

## STUDY 4

As was the case with Study 1, the results of Study 3 could easily be accounted for using the figure-ground asymmetry model (Rothermund & Wentura, 2001, 2004). It could be argued that the stimuli manipulations affect the relative salience of the targets. The salience asymmetry between the two targets would be strengthened when the Asian identity of Lucy Liu was emphasized, but would be weakened when the European identity of Kate Winslet was stressed. Thus, for reasons outlined previously, we ran a replication of Study 3 using the GNAT. Once again, this technique was set up to minimize the contrast between the concepts *American* and *foreign*. Although foreign symbols were used as contrasting stimuli, the concept itself was never explicitly brought to participants' attention and participants were never asked to respond to foreign symbols.

## Method

### *Participants*

The participants were 49 undergraduate students (39 women and 10 men). The sample included 15 White Americans, 8 multiracial Americans, 6 Filipino/a Americans, 6 Latino/a Americans, 3 Middle Eastern Americans, 1 Asian American, 1 African-American, and 9 individuals who did not specify their ethnicity. Participants' ages ranged from 17 to 36 years; the median age was 19 years.

### *Procedure*

The procedure was similar to that described for Study 2 except that participants did not read biographical sketches of each actress and the targets were always categorized based on their personal identity. Participants completed two GNATs assessing the direction and the strength of the association between two targets and the concept *American*. Each block included 60 trials. *American* was always one of the activated concepts. Paralleling the procedure used in Study 3, the extent to which the stimuli stressed the Asian or European identity of the target was manipulated. In the *Asian Identity* GNAT, pictures stressing the Asian identity of Lucy Liu were contrasted to the more neutral pictures of Kate Winslet (distracters). In the *European Identity* GNAT, pictures stressing the European identity of Kate Winslet were contrasted to the more neutral pictures of Lucy Liu (distracters). The technical parameters of these tasks were identical to those described for Study 2 except that the response deadline was 600 ms (instead for 500 ms) for the second round of four blocks in order to make the task slightly less challenging. Once again, the effect of interest was not qualified by the response deadline and the two difference scores were averaged. The order of the two GNATs and the order of the critical

blocks were counterbalanced across participants. As in Study 3, participants indicated for each picture to what extent the appearance of the actress was typical of an American.

## Results and discussion

### Explicit measures

The participants perceived Kate Winslet ( $M = 4.51$ ,  $SD = 1.45$ ) as less American than Lucy Liu ( $M = 5.27$ ,  $SD = 1.07$ ),  $t(48) = 2.90$ ,  $p < .007$ ,  $d = 0.60$ . Explicit ratings of typicality revealed that pictures stressing the ethnic identity of Lucy Liu ( $\alpha = .87$ ,  $M = 1.69$ ,  $SD = 0.88$ ) were rated as less American than neutral pictures of Kate Winslet ( $\alpha = .83$ ,  $M = 6.09$ ,  $SD = 0.85$ ),  $t(48) = -21.04$ ,  $p < .001$ ,  $d = 5.07$ . Pictures stressing the European identity of Kate Winslet ( $\alpha = .93$ ,  $M = 3.41$ ,  $SD = 1.69$ ) were rated as less American than neutral pictures of Lucy Liu ( $\alpha = .87$ ,  $M = 5.56$ ,  $SD = 1.17$ ),  $t(48) = 6.23$ ,  $p < .001$ ,  $d = 1.50$ .

### Go/no-go association tasks

Implicit data were aggregated and analyzed following the steps described for Study 2. Steps similar to those described for Study 2 were used to assess the internal consistency of the GNATs (Table 1). It should be noted that the Cronbach's  $\alpha$  obtained for the difference score on the *Asian Identity* GNAT was low. A  $2 \times 2 \times 2$  analysis of variance was performed on the GNAT indexes with Task as within-subjects factor, and Task Order and Block Order as between-subjects factors. The main effect of Task was highly significant,  $F(1, 45) = 12.54$ ,  $p < .002$ ,  $\eta^2 = .22$ . On the *Asian Identity* GNAT, the concept *American* was more strongly associated with the White European target than with the Asian American target,  $M = -0.25$ ,  $SD = 0.61$ ,  $t(48) = 2.81$ ,  $p < .008$ ,  $d = 0.40$ . A non-significant effect in the opposite direction was obtained on the *European Identity* GNAT,  $M = 0.10$ ,  $SD = 0.65$ ,  $t(48) = 1.05$ ,  $p > .30$ ,  $d = 0.15$ . The three-way interaction between Task, Task Order, and Block Order was significant,  $F(1, 45) = 6.31$ ,  $p < .02$ ,  $\eta^2 = .12$ . The effect of Task was in the expected direction except when participants first completed the block of trials stressing the European identity of Kate Winslet. The theoretical implications of this three-way interaction are probably fairly limited.

### Comparing the effects

Effect sizes for explicit and implicit measures are reported in Figure 2 (right panel) and correlations among measures are reported in Table 1. Using a technique that provides more independent assessments of implicit associations and that is not likely to be influenced by salience asymmetries, Study 4 confirmed implicit associations evoked by a target were determined by the exemplars used to represent this target. If the exemplars draw perceiver's attention to the Asian identity of the Asian American target, they were less prone to ascribe the attribute *American* to her than to the White European target. However, when attention was primarily focused on the European identity of the White European target, this effect was not reliable. Particularly worthy of attention is the fact that even when the exemplars were counteracting the American = White assumption, implicit responses were not aligned with explicit responses. At the implicit level, the two targets were, at best, seen as equally American. Manipulating the exemplars produced distinct mental representations of the targets, as was also evidenced by the

non-significant correlation between the two tasks,  $r = +.20$ , *ns*.<sup>3</sup> Not surprisingly, correlations between effects obtained at the implicit level and the overall rating of the two targets (*Asian Identity* GNAT:  $r = +.03$ , *ns* and *European Identity* GNAT:  $r = +.15$ , *ns*) or the ratings of stimuli (*Asian Identity* GNAT:  $r = +.21$ , *ns* and *European Identity* GNAT:  $r = -.09$ , *ns*) were not significant.

## GENERAL DISCUSSION

These studies examined the impact of target construal on implicit responses evoked by two well-known celebrities who differed in terms of ethnic and national identities. We consistently found support for the idea that the extent to which the American identity was automatically attributed to the targets varied as a function of the frame through which they were construed. The Asian American person was implicitly conceived of as being less American than the White European person when the targets were categorized based on their ethnic identity (Studies 1 and 2) or when the exemplars draw attention to the ethnic identity of the Asian American person (Studies 3 and 4). This effect was reduced or eradicated when targets were categorized based on their personal identity or when the European identity of the other target was highlighted. These findings suggest that construal processes determine which particular subsets of associations are activated. As such, the present findings are consistent with a growing body of research revealing the impact of construal processes on tasks developed to measure implicit associations (for reviews, see Blair, 2002; Gawronski & Bodenhausen, 2006).

An important contribution of the present studies is to document the impact of factors emphasizing or downplaying group memberships on implicit measures. By manipulating the frame of reference and the exemplars activated, perceivers' focus of attention switched from group-based to person-based construals. In sum, implicit associations were moderated by the dimensions perceivers relied on to construe the targets. By and large, research on implicit social cognition has focused on implicit attitudes and prejudices. The present work highlights the usefulness of this paradigm to study the extent to which a national identity is ascribed to specific targets. As a whole, these studies demonstrate that the extent to which a national identity is psychologically ascribed is largely driven by associative knowledge about ethnic groups.

It is well established that perceivers often rely on group-based assumptions, but that the impact of these assumptions is lessened when perceivers adopt a more interpersonal orientation (Brewer & Feinstein, 1999; Fiske *et al.*, 1999). The present series of studies lends further support to this idea. Given that shifts in target's construal were obtained on measures tapping associations operating outside of conscious control, our work suggests group-based and person-based representations are not necessarily the outcomes of distinct processing modes. The techniques used in the present research are tapping associations that reflect a mix of automatic and controlled processes (Conrey, Sherman, Gawronski, Hugenberg, & Groom, 2005). Thus, it would be erroneous to conclude that the processes operating in the studies reported here are purely automatic. However, performances on these tasks do not require introspection on the part of the perceivers and are less consciously controllable than self-report measures. At least in the present case, it is not necessary to assume qualitatively distinct processes account for the product of group-based and person-based construals.

<sup>3</sup> This correlation was not reliably different from the correlation obtained in Study 3,  $Z = 1.03$ ,  $p > .30$ .



It is worth reviewing several features of the set of findings reported in this paper. First, the flexibility of construal processes was established using two different manipulations. Implicit associations are influenced by the categories into which the targets are classified and the exemplars used to represent these targets. As such, the findings confirm that effects obtained on techniques such as the IAT or the GNAT are determined by the category labels and the stimulus features (see also Nosek *et al.*, 2007). These techniques capture implicit responses that depend on both the contextual frame and the exemplars. The novelty of the present research is to show that category labels and stimulus features can affect the extent to which specific individuals are construed as prototypic of a national identity. Previous work had only examined the extent to which a larger set of individuals who shared a common group membership were linked to the concept *American* (Devos & Banaji, 2005). For the first time, we provide a direct evidence for the impact of construal processes on the ascription of a national identity. The impact of labels and stimulus features have been documented in previous research focusing on implicit attitudes or evaluations (e.g. Bluemke & Fries, 2006; Govan & Williams, 2004; Mitchell *et al.*, 2003), but the present work establishes that varying the categories into which two targets are classified or changing the exemplars used to represent these targets affect the ease or difficulty with which these targets are linked to the attribute *American*.

Second, targets' construal was manipulated using within-subject designs: the same participants completed two implicit measures that differ only on one particular aspect (e.g. labels used to categorize the stimuli or stimuli sets representing the targets) and the order of the tasks was counterbalanced. Thus, variations in the activation of particular subsets of associations were produced in a small period of time within an individual. Also, within a relatively brief time frame, perceivers displayed very distinct patterns of responses on implicit measures. Furthermore, participants easily switched between group-based and person-based construals. This reveals the impact of highly flexible construal processes on measures tapping implicit associations.

Third, convergent findings were obtained using two different techniques to assess implicit associations; this contributes to establish the generalizability of the findings. This being said, the IAT and the GNAT did not yield exactly the same patterns. Overall, smaller effect sizes were obtained on the GNAT (Studies 2 and 4) than on the IAT (Studies 1 and 3). There are at least three possible explanations for this finding. First, as mentioned earlier, the internal consistency of the GNAT is somewhat lower than the internal consistency of the IAT. Less reliable measures are less sensitive and thus typically produce weaker effects. Second, we cannot rule out that salience asymmetries partially account for IAT effects, whereas we have greater assurance that pre-existing salience asymmetries have little influence on GNAT performances. Thus, stronger effects are likely to be found when both associative knowledge and attentional asymmetries operate jointly as is the case with the IAT. Thus, further research is needed to disentangle the relative contributions of associations and salience asymmetries on indirect measures. Third, comparisons between concepts or targets are more salient with the IAT than with the GNAT. In Studies 2 and 4, we relied on the GNAT precisely to assess the strength of associations between targets and the concept *American*, while minimizing the contrast to the concept *foreign*. In addition, the way the GNAT was set up in these studies de-emphasizes the comparison between targets. That targets were less strongly differentiated on the GNAT than on the IAT suggests that tasks involving more direct comparisons are more likely to activate an intergroup (rather than interpersonal) orientation. Conversely, minimizing the comparative nature of the



context may reduce the differential attribution of the American identity. Further research is needed to elucidate the specific structural and psychometric properties of these techniques (De Houwer, 2003a).

Extending earlier work (Devos & Banaji, 2005), the present paper brings to the fore a fracture between the explicit and implicit ascription of a national identity. In each study, we found a dissociation between the mean levels of explicit and implicit responses such that an Asian American target was explicitly regarded to be more American than a White European target, but the reverse pattern emerged on an implicit measure. This illustrates a fundamental distinction between responses reflecting deliberate processes and responses produced when conscious control is limited. The weak positive correlations between explicit and implicit measures also lend support to the distinction between these two levels of responding. Of course, the fact that these correlations did not reach traditional significance levels could be attributed to the small sample sizes and the unreliability of the implicit measures. It is likely that with more power and more reliable measures, significant correlations between explicit and implicit assessments would emerge.

It should be noted that comparing the direction of effects obtained on self-reports and indirect measures assumes that the zero value on these measures is meaningful (Blanton & Jaccard, 2006). In the present research, our interest was in comparing the extent to which the attribute *American* was associated with two targets. At the explicit level, participants reported to what extent two targets were perceived as American. If the ratings of the targets differ reliably, it was taken as evidence that one target was viewed as being more American than the other. At the implicit level, participants completed a task (IAT or GNAT) measuring the strength of the associations between the concept *American* and the targets. Reliable variations in task performances were taken as evidence that the concept *American* was more strongly linked to one target than to the other. Both explicit and implicit measures were highly symmetrical in these studies. In line with common practices in the literature on opinions and attitudes, we assumed that comparing these ratings would be meaningful. As Blanton and Jaccard pointed out, the use of a measure (explicit or implicit) in difference form does not guarantee that the zero value is meaningful. Greenwald, Nosek, and Sriram (2006) provided some evidence for the meaningfulness of zero values for measures similar to those used in the present paper. When implicit and explicit assessments were expected to converge (e.g. attitudes towards political candidates), IAT scores mapped closely on to a difference score based on explicit ratings. For instance, participants who reported no explicit preference for George W. Bush relative to John F. Kerry showed no implicit preferences for these candidates on the IAT. In addition, Greenwald *et al.* (2002) found support for predictions about the interrelations among constructs (assessed using the IAT) that would have failed if the zero values on the IAT did not map the rational zero values. These considerations are far from settling this debate. The issue is not limited to implicit measures or even to the use of difference scores. The construction of an absolute scale in psychology requires systematic research grounded in basic measurement theory. This work would require establishing internal mathematical properties of the scale such as transitivity, consistency, or ordering. In the present context and without the systematic research needed, the assumption that difference scores between two separate metrics map reasonably well on to a zero value of a psychological construct could be challenged.

Although we recognize that the roles in which Lucy Liu and Kate Winslet play might contribute to the relative difficulty or ease with which they are linked to the concept *American*, these roles merely reflect a cultural milieu that reinforces the notion that

people of specific ethnic categories should be cast for parts along ethnic lines. The present findings would need to be generalized using a wider range of stimulus persons. For example, the implicit–explicit dissociations would be even more striking if we were to use an African-American target such as Oprah Winfrey given that African-Americans are explicitly more included in the American national identity than Asian Americans (Devos & Banaji, 2005). Given the paucity of research on this topic, we choose to focus on implicit associations about Asian Americans. The present research provides firm evidence for the flexibility of construal processes and the role of ethnicity in the implicit ascription of a national identity. The ease or difficulty with which the American identity is automatically ascribed to specific individuals is a function of the extent to which they are perceived through the lenses of ethnic identity. The present series of studies capitalized on previously documented effects of labels and stimulus sets on indirect measures (Devos, 2008; Gawronski & Bodenhausen, 2006). There is no doubt that more fine-grained analyses of the cognitive processes that account for the impact of labels or exemplars on IAT or GNAT performances are needed. By integrating the role of well-known construal processes and the current understanding of structural task properties, we do more than show that different tasks produce divergent outcomes. We begin to uncover important psychosocial dynamics that play a role in the extent to which concepts representing various identities (personal, ethnic, or national) can more or less easily be associated.

## Acknowledgements

The preparation of this paper was supported by a Faculty Grant-In-Aid for Research and the NIMH-MRISP Grant (1 R24 MH065515) at San Diego State University. This research was presented at the Seventh Annual Meeting of the Society for Personality and Social Psychology, Palm Springs, California, January 2006.

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