

# Knowledge Activation After Information Encoding: Implications of Trait Priming on Person Judgment

Davy Lerouge, Dirk Smeesters

### ▶ To cite this version:

Davy Lerouge, Dirk Smeesters. Knowledge Activation After Information Encoding: Implications of Trait Priming on Person Judgment. Journal of Experimental Social Psychology, 2008, 44 (2), pp.429. 10.1016/j.jesp.2007.01.004 . hal-00563503

## HAL Id: hal-00563503 https://hal.science/hal-00563503v1

Submitted on 6 Feb 2011

**HAL** is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers. L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

## Accepted Manuscript

Knowledge Activation After Information Encoding: Implications of Trait Priming on Person Judgment

Davy Lerouge, Dirk Smeesters

PII:S0022-1031(07)00006-6DOI:10.1016/j.jesp.2007.01.004Reference:YJESP 1956

To appear in: Journal of Experimental Social Psychology

Received Date:13 April 2006Revised Date:2 January 2007Accepted Date:4 January 2007



Please cite this article as: Lerouge, D., Smeesters, D., Knowledge Activation After Information Encoding: Implications of Trait Priming on Person Judgment, *Journal of Experimental Social Psychology* (2007), doi: 10.1016/j.jesp.2007.01.004

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

#### **POST-PRIMING EFFECTS 1**

Running Head: POST-PRIMING EFFECTS

### **Knowledge Activation After Information Encoding:**

**Implications of Trait Priming on Person Judgment** 

Davy Lerouge

**Dirk Smeesters** 

Tilburg University

Word count: 4979

We thank Luk Warlop, Siegfried Dewitte, John Skowronski and three anonymous reviewers for their insightful comments on earlier versions of this paper.

Correspondence concerning this article should be addressed to Davy Lerouge, Department of Marketing, Tilburg University, P.O. Box 90153, 5000 LE Tilburg, the Netherlands. E-mail: d.lerouge@uvt.nl, Phone: +31 13 466 8769, Fax: + 31 13 466 8354.

#### **POST-PRIMING EFFECTS 2**

#### Abstract

It is widely assumed that traits primed after the encoding of person information do not lead to assimilation effects on the judgment of that person. The authors challenge this view by providing evidence that post-encoding trait primes can result in assimilative person judgments under certain conditions. In Experiments 1 and 2, we identify the conditions under which these assimilation effects occur. Experiment 1 shows the importance of participants' goals during person information encoding: assimilation is observed when person information is encoded as part of a memorization goal (as opposed to an impression formation goal). The findings of Experiment 2 further reveal that the encoded person information should imply trait concepts rather than being merely vague with respect to the primed trait category. Finally, the results of Experiment 3 suggest that the obtained assimilation effect is driven by differential accessibility for prime-congruent person information.

Keywords: Trait priming, person judgment, encoding goal, memory-based judgment, online judgment, and assimilation.

#### **POST-PRIMING EFFECTS 3**

#### **Knowledge Activation After Information Encoding:**

#### **Implications of Trait Priming on Person Judgment**

There is strong evidence that person judgments are often a combination of the type of knowledge one possesses of that person and accessible cognitive concepts, such as traits (e.g., Stapel & Schwarz, 1998). Several studies have shown that trait concepts activated (e.g., through priming) before the encoding of person information often lead to assimilation effects on subsequent judgments of that person (e.g., Higgins, Rholes, & Jones, 1977; Srull & Wyer, 1979). That is, person judgments shift in a trait consistent manner because that person's information is interpreted and encoded in terms of the activated trait concept. Little is known about the effects of trait concepts primed *after* the encoding of person information on subsequent person judgments. Previous research suggests that post-encoding primes are unlikely to induce assimilation given that they cannot serve as an interpretation frame during encoding (Stapel, Koomen, & van der Pligt, 1997). This should be particularly true in the case of *vague* target information (i.e., behavioral information that does not clearly represent a personality trait), but not in the case of *mixed* target information (i.e., behavioral information that exemplifies opposing poles of a personality trait, e.g., kind and unkind). We predict that priming trait concepts after the encoding of mixed target information will still lead to assimilative person judgments when this information is encoded as part of a memorization goal (but not as part of an impression goal). We argue that this assimilation effect should occur due to selective accessibility of previously encoded person information congruent with the primed trait (cf., Winter & Uleman, 1984).

#### Activated Trait Concepts

The way accessible information exerts its influence on person judgment mainly follows two stages: an encoding and a judgment stage (Stapel et al., 1997). Trait concepts

#### **POST-PRIMING EFFECTS 4**

primed *before* encoding person information can influence the processing of that information. First, trait concepts activated at encoding can be used to interpret vague or ambiguous behavioral information. Priming hostility (kindness) concepts before individuals encode vaguely hostile person information induces more hostile (kind) judgments (Srull & Wyer, 1979). Also, when encoding ambiguous target information (i.e., information applying to at least two alternative concepts such as adventurous and reckless), individuals use previously activated and applicable concepts to characterize that person (Higgins et al., 1977). Second, priming a trait can result in selective processing of trait-congruent information during encoding (Sherman, Mackie, & Driscoll, 1990). Stapel and Schwarz (1998) showed that priming positive words before exposing individuals to positive and negative (i.e., mixed) person information resulted in more positive judgments compared to priming negative words. Thus, making trait concepts accessible before encoding person information generally leads to assimilation effects on person judgment.

What happens when trait concepts are primed *after* the encoding stage? The current belief is that priming trait concepts does not affect person judgment once person information has been encoded (Stapel et al., 1997; Stapel & Koomen, 2001; Stapel & Winkielman, 1998). It has been shown that priming hostility or kindness concepts after the encoding of vaguely hostile person information does not have any effect on subsequent person judgments (Srull & Wyer, 1980; Stapel et al., 1997). We agree that activated traits cannot serve as an interpretation frame for previously encoded, vague person information. However, we suggest that activated trait concepts can still affect person judgment when the encoded person information is, for instance, mixed in nature. Research illustrated that trait concepts serve as effective retrieval cues for behavioral information that implies this particular trait (e.g., Srull, 1983; Uleman & Moskowitz, 1994). Winter and Uleman (1984) showed that *helpful* served as a retrieval cue for the following behavioral instance:

#### **POST-PRIMING EFFECTS 5**

"The librarian carries the old woman's groceries across the street". Thus, it is very likely that priming a particular trait (e.g., kindness) makes previously encoded trait-congruent (e.g., kind) person information more accessible. As a result, if the encoded person information is mixed (e.g., containing both kind and unkind behavioral instances), then priming applicable trait concepts at the judgment stage should lead to an assimilation effect. Further, we argue that this assimilation effect will occur when individuals have the goal to memorize the mixed information, rather than the goal to form an impression of the target person.

#### Encoding Goal

Individuals who have an impression formation goal are likely to encode a person's behavioral information in terms of higher order trait impressions (Hastie & Park, 1986). In other words, when individuals encode behavioral information related to a target person's kindness as part of an impression formation goal, they will very likely form an on-line kindness judgment about that person. This has also been observed for mixed person information. Chartrand and Bargh (1996), for instance, found strong evidence that individuals who read a target person description consisting of both honest and dishonest behaviors make an on-line judgment about that person's honesty when an impression formation goal is activated. Once such an overall trait impression has been made, individuals are unlikely to use the original behavioral information during later judgment. Instead, they will simply retrieve the trait impression that was already formed during prior information encoding (Carlston, 1980; Ostrom, Lingle, Pryor, & Geva, 1980). As a result, priming trait concepts (kindness vs. unkindness) will not affect the judgment of a person whose behaviors have been encoded during an impression formation task.

What happens when individuals do *not* have an impression formation goal when encountering behavioral person information? Research on spontaneous trait inferences

#### **POST-PRIMING EFFECTS 6**

argues that even when no impression formation goal is activated, trait judgments are made on-line whenever one encodes person information (see Uleman, Newman, & Moskowitz, 1996, for a review). However, more recent studies challenged the notion that spontaneous on-line judgments are so pervasive and concluded that spontaneous trait inferences are unlikely to occur unless situational or chronic circumstances encourage spontaneous trait judgments (e.g., D'Agostino & Beegle, 1996; Tormala & Petty, 2001). For instance, individuals are typically found to spontaneously form trait impressions when the behavioral descriptions strongly imply one specific trait valence (Carlston & Skowronski, 1994; Moskowitz & Roman, 1992; Todorov & Uleman, 2004). However, if information is mixed and not encoded as part of an impression formation task, then judgments are found to be formed memory-based instead of on-line (e.g., Lichtenstein & Srull, 1987; Mackie & Asuncion, 1990). Indeed, Chartrand and Bargh (1996) observed that individuals switched from on-line to memory-based person judgments when a memorization goal (instead of an impression formation goal) was activated during the encoding of mixed honest and dishonest behavioral information.

In sum, when individuals encode mixed information about a person's kindness as part of a memorization task, they are not expected to spontaneously form an overall impression about that person's kindness. This implies that when individuals are asked to judge the person's kindness during a later judgment task, they cannot rely on a kindness judgment that is stored in memory. Instead, they need to rely on other instances of person information that are most accessible at that particular time. As discussed above, priming trait concepts can make previously encoded trait-congruent person information more accessible. Thus, if mixed (kind and unkind) behavioral instances are encoded during a memorization task, then priming the concept kindness (unkindness) during a later judgment task should make the kind (unkind) instances more accessible, resulting in more

#### **POST-PRIMING EFFECTS 7**

(less) positive kindness judgments of the target person. We will provide evidence for this process in three experiments.

#### Pretest

We constructed two different (i.e., mixed and vague) target person descriptions that provide behavioral information about a target person in six different situations. Although situations are identical for both descriptions, the behaviors that the target person manifests in these situations vary in terms of implied kindness. Specifically, the mixed target person is described as acting kind in three situations and unkind in the other three situations, while the vague target person exhibits behaviors that are vaguely related to kindness for all six situations. This implies that we needed three situations for which we have both a kind and vague behavioral description of the target person and three situations with both an unkind and vague behavior.

We compiled a set of 15 different situational descriptions (e.g., "Diederik is talking with a group of friends, when they see a girl hurry, stumble and fall. Diederik makes his friends aware of this."). For each situation, we constructed three different behavioral episodes: (1) a behavior that is vaguely related to kindness (e.g., "They see that the girl hurries back on her feet and they continue their conversation."), (2) a behavior implying kindness (e.g., "Diederik hurries to the girl, helps her back on her feet and asks if she has hurt herself."), and (3) a behavior implying unkindness ("And they all start laughing. Ashamed, the girl hurries up and leaves."). Seventy respondents randomly rated one behavioral description of each situation along a scale from 1 (*not at all kind*) to 7 (*extremely kind*). Based on these data, we selected six situational descriptions applying two criteria. First, the kindness rating of the vague behavior did not differ significantly from the neutral point on the scale (i.e., four), and second, the kindness rating of the vague behavior was significantly higher (lower) than its unkind (kind) variant. This resulted in

#### **POST-PRIMING EFFECTS 8**

three situations for which we obtained a vague (M = 4.09) and kind (M = 6.20) version, and three situations that had a vague (M = 3.67) and unkind (M = 1.81) version.

For a second pretest, we constructed a mixed target description containing the three kind and three unkind behaviors and a vague target description consisting of the six vague behaviors. Thirty-seven respondents provided a 7-point kindness rating of either the vague or mixed target person description. Respondents perceived the mixed target person (M = 3.85) not differently compared to the vague person (M = 3.86), F < 1. Further, the ratings of the mixed and the vague target person did not differ significantly from the scale's midpoint. The mixed target description was used in all three experiments, whereas the vague one was only used in Experiment 2.

#### Experiment 1

This experiment examined the effect of trait primes presented *after* the encoding of mixed person information (i.e., three kind and three unkind behavioral descriptions) on subsequent person judgment. Participants were instructed to encode the mixed person information as part of either a memorization goal or an impression formation goal. Priming a trait category before judgment should increase the accessibility of trait-congruent person information. However, individuals having an impression formation goal are expected to already form an impression about the target's kindness at the time of encoding. Therefore, priming a trait category should only result in an assimilation effect when person information was previously memorized.

#### Method

*Participants and Design*. Eighty-eight undergraduates (36 females, 52 males) participated to fulfill course requirements. The design consisted of two betweenparticipants factors: encoding goal (memorization vs. impression formation) and prime valence (kindness vs. unkindness). The dependent measure was the participants' kindness

#### **POST-PRIMING EFFECTS 9**

judgment of the target person.

*Procedure*. Participants were placed in individual cubicles. They were told that they would participate in several unrelated studies. At the end of the session, participants were probed for awareness and suspicion about any relatedness among the priming procedure and judgment task (cf., Chartrand & Bargh, 1996). None of the participants indicated any suspicion.

*Reading and filler task.* Participants received the mixed description of Diederik consisting of three kind and three unkind behavioral descriptions. Participants were either asked to memorize the behavioral instances or to form an impression of Diederik. All participants were asked to perform this task dedicatedly as they would receive questions about Diederik later in the session. After finishing this reading task, they handed in their booklet and proceeded to an unrelated filler task (i.e., counting backwards by threes from 90 to 0). This filler task was added to make the relation between the different phases of the experiment less ostensible.

*Subliminal priming procedure*. After participants finished the filler task, they were presented with a word-recognition task consisting of 14 trials. Half of these trials contained existing words<sup>1</sup>, the other half contained non-existing words. Participants had to decide as quickly as possible whether or not a string of letters was an existing word. Each word was preceded by subliminal primes. These primes were words that were presented for 17 ms and masked by a row of X's remaining on the screen for 225 ms. All participants were exposed to 7 different prime words, each used twice. The prime words were presented to the participants in Dutch. In the kindness priming condition the words were: liked, good-hearted, sympathetic, kind, polite, helpful and pleasant. In the unkindness priming condition the words were: disliked, evil-hearted, unsympathetic, unkind, impolite, unhelpful and unpleasant. Participants were randomly assigned to one

#### **POST-PRIMING EFFECTS 10**

of the two priming conditions.

*Judgment task.* Finally, participants were asked to judge Diederik on a 7-pointscale with respect to kindness. We embedded this rating in a questionnaire containing 11 personality judgments to make it less obvious that kindness was the focal trait. To minimize the effect of the other trait judgments on the kindness rating, it was second on the list, after the trait intelligence.

#### Results and Discussion

We performed a 2 (Encoding Goal: memorization vs. impression formation) x 2 (Prime Valence: kindness vs. unkindness) between-participants ANOVA on the kindness ratings. The data showed a marginally significant main effect of prime valence, F(1, 84) = 2.80, p < .10,  $\eta^2 = .03$ . The kindness judgments were more positive in the kindness condition (M = 4.21) than in the unkindness condition (M = 3.85). As expected, this main effect was qualified by an encoding goal × prime valence interaction, F(1, 84) = 7.39, p < .01,  $\eta^2 = .08$ . The means pertaining to this interaction are presented in Figure 1. In the memorization condition, kindness judgments were more positive when kindness was primed (M = 4.50) than when unkindness was primed (M = 3.54), F(1, 84) = 9.64, p < .01,  $\eta^2 = .10$ . In the impression formation condition, prime valence did not affect kindness judgments ( $M_{kind} = 3.90$  and  $M_{unkind} = 4.13$ ), F < 1.

As predicted, priming a trait category after mixed person information has been encoded resulted in an assimilation effect on the person's judgment, but only when participants memorized the behavioral instances. When participants formed an impression of the person at the time of encoding, they probably based their later kindness judgment on that particular impression. This on-line impression is based on both kind and unkind behaviors, resulting in a kindness judgment around the midpoint of the rating scale. On the other hand, participants who had a memorization goal probably did not form an on-line

#### **POST-PRIMING EFFECTS 11**

impression. Instead, they should rely on other encoded person information when making subsequent kindness judgments. Therefore, priming with kindness (unkindness) at the judgment stage should result in assimilative kindness judgments by making kind (unkind) behaviors more accessible.

#### Experiment 2

The aim of this experiment was to obtain further evidence that trait primes increase the accessibility of trait-congruent person information, and as such, lead to assimilation. This implies that if the encoded person information is vaguely related to a particular trait category, priming this trait category should not affect subsequent person judgments. In other words, assimilation should not occur when memorized behavioral descriptions about a target person do not imply the focal trait category. Therefore, post-encoding kindness (unkindness) primes should lead to more (less) positive kindness ratings when participants memorize mixed kind and unkind behaviors but not when it concerns behaviors vaguely related to kindness.

#### Method

Seventy-seven undergraduates (33 females, 44 males) took part in this experiment to fulfill course requirements. The experimental design included two between-participants factors: target person description (vague vs. mixed) and prime valence (kindness vs. unkindness). The participant's kindness judgment of the target person was the dependent measure.

First, participants were instructed to carefully read and memorize information that described the target person in six different situations. Participants were randomly assigned to the mixed or vague person description condition. In the mixed condition, the target person was described as acting kindly in three situations and unkindly in the remaining three situations. In the vague condition, the six behaviors were all vaguely

#### **POST-PRIMING EFFECTS 12**

related to kindness. Next, participants performed an unrelated filler task, followed by the same subliminal priming procedure and judgment task as in Experiment 1. Finally, a funneled debriefing procedure revealed that none of the participants retrieved any of the primes or were suspicious.

#### Results and Discussion

A 2 (Target Description: mixed vs. vague) x 2 (Prime Valence: kindness vs. unkindness) between-participants ANOVA was conducted on the kindness judgment of the target person. We obtained a significant main effect of prime valence, F(1, 73) = 5.02, p < .03,  $\eta^2 = .06$ . Kindness ratings were more positive in the kindness condition (M =4.29) than in the unkindness condition (M = 3.81). Prime valence interacted significantly with target description, F(1, 73) = 8.85, p < .01,  $\eta^2 = .10$  (see Figure 2). As predicted, we obtained an assimilation effect in the mixed person description condition: kindness judgments were more positive when kindness was primed (M = 4.59) than when unkindness was primed (M = 3.47), F(1, 73) = 13.67, p < .001,  $\eta^2 = .16$ . In the vague person description condition, no difference was obtained between the kindness and the unkindness priming condition ( $M_{kind} = 3.94$  and  $M_{unkind} = 4.11$ ), F < 1.

These findings confirm that priming a trait concept results in assimilation effects when participants memorized mixed information about the target person. Interestingly, no assimilation effect was observed when participants memorized person information that is only vaguely related to that trait category. This suggests that activated trait concepts cause assimilation effects at the judgment of a target person through selective accessibility of previously stored trait-congruent person information.

#### Experiment 3

In this final experiment, we provide more direct evidence for the underlying process that drives the observed assimilation effects. More specifically, we predict that

#### **POST-PRIMING EFFECTS 13**

encoding person information as part of a memorization instead of an impression formation task induces more memory-based (instead of on-line) target person judgments. To test this prediction, we will use two different measures, commonly applied in the literature: judgment episode-accessibility correlations (e.g., Hastie & Park, 1986; Lichtenstein & Srull, 1987; Tormala & Petty, 2001) and response latencies (e.g. Lingle & Ostrom, 1979; Mackie & Asuncion, 1990; Tormala & Petty, 2001). Given that individuals who have a memorization goal do not form on-line kindness impressions and need to retrieve stored behavioral episodes during later kindness ratings, we expect a strong and significant correlation between the valence of the most accessible episodes and the kindness judgments in the memorization condition. Individuals with an impression formation goal make on-line kindness impressions during the encoding of person information and rely on that impression during later kindness ratings. Therefore, we expect the judgment episodeaccessibility correlation to be weak or nonsignificant in the impression formation condition. We also predict larger response latencies on kindness judgments in the memorization condition than in the impression formation condition. Individuals having a memorization goal must retrieve behavioral episodes, evaluate this information, and compute an overall kindness judgment during the judgment task, whereas individuals with an impression formation goal already formed a kindness impression during encoding and simply need to retrieve it at judgment.

In the current experiment, we also investigate to what extent selective accessibility of prime-congruent episodes accounts for the priming effects in the memorization condition. If individuals with a memorization goal base their kindness judgments on accessible episodes in their memory, then the valence of these accessible episodes should mediate the effect of prime valence on kindness judgment. In other words, we test to what extent priming kindness (unkindness) results in increased accessibility of kind (unkind)

#### **POST-PRIMING EFFECTS 14**

episodes, which again leads to more (less) kind judgments in the memorization condition. Assuming that individuals with an impression formation goal do not rely on their memory for behavioral person information, no such mediation is expected in the impression formation condition.

#### Method

One hundred twenty-two undergraduates (50 females, 72 males) participated for €7 payment. The experimental design consisted of two between-participants factors: encoding goal (memorization vs. impression formation) and prime valence (kindness vs. unkindness). The procedure was similar to Experiment 1, with the following exceptions. First, we collected response latencies for the kindness judgment. In order to get undistorted response latencies, the kindness judgment was presented first followed by ten other trait ratings. Second, participants also performed a free recall task, in which they were asked to write down as many behavioral episodes as they could remember about Diederik. Participants were asked to be as detailed as possible. Following the recall task, participants were asked to return to each recalled episode and rate it with a "–" indicating unkind, "0" indicating neutral, or "+" indicating kind. All recalled items captured the essential meaning of the behavior episodes and were rated by the participants according to the trait valence they were assumed to imply.

#### Measurement of episode accessibility

Recall was very high (M = 5.20; 45% recalled all behaviors). Therefore, we decided to base our accessibility measurement only on the first three episodes recalled, given that the mixed person information consisted of three kind and three unkind behaviors and that more accessible episodes are recalled first (Taylor and Fiske, 1981). Thus, for each participant, we collected the first three recalled episodes and divided the number of behaviors implying kindness by the total number behaviors (e.g., Hastie &

#### **POST-PRIMING EFFECTS 15**

Park, 1986; Reyes, Thompson & Bower, 1980). This enables to create an accessibility measure of episodes implying kindness varying from 0 to 1. This means that if a person recalled the three kind instances before the three unkind instances, this person would get a score of 1.0, which means high accessibility of the kind instances. If a person recalled the three unkind instances before the three kind instances, then this person would get a score of 0.0, which means high accessibility of the unkind instances.

#### Results and Discussion

*Kindness ratings.* A 2 (Encoding Goal: memorization vs. impression formation) x 2 (Prime Valence: kindness vs. unkindness) between-participants ANOVA was conducted on the kindness ratings. We observed a marginally significant main effect of prime valence, F(1, 118) = 2.78, p < .10,  $\eta^2 = .02$ . The ratings for the kindness trait were higher in the kindness condition (M = 4.44) than in the unkindness condition (M = 4.08). As expected, this effect was qualified by a significant encoding goal × prime valence interaction, F(1, 118) = 4.63, p < .04,  $\eta^2 = .04$ . This interaction is presented in Figure 3. Prime valence had a significant effect on kindness judgments in the memorization condition ( $M_{kind} = 4.60$  and  $M_{unkind} = 3.81$ ), F(1, 118) = 7.41, p < .01,  $\eta^2 = .06$ , but not in the impression formation condition ( $M_{kind} = 4.27$  and  $M_{unkind} = 4.37$ ), F < 1.

*Judgment episode-accessibility relationship.* Simple correlation coefficients between episode accessibility and kindness judgments were computed to test if a relationship exists between memory and judgment (cf., Hastie & Park, 1986; Tormala & Petty, 2001). As predicted, the obtained correlation was positive and substantial (r = .42, p < .01) in the memorization condition, but nonsignificant in the kindness condition (r = .04, p = .74). The difference between both correlations reached significance (p = .03). These results already provide strong support for the assumption that participants, who were memorized the target person information, made memory-based kindness judgments.

#### **POST-PRIMING EFFECTS 16**

*Recall latencies*. To reduce the distorting effect of outliers, we removed response latencies that were at least three standard deviations above or below the mean. The reaction times were submitted to an ANOVA containing encoding goal and prime valence as between-participants variables<sup>2</sup>. As expected, participants in the memorization condition (M = 6.08 s) needed more time to rate Diederik's kindness than those in the impression formation condition (M = 2.68 s), F(1, 110) = 4.87, p = .03  $\eta^2 = .04$ .

*Mediation analyses.* The data of this experiment again confirm that kindness judgments assimilate towards the primed trait concepts in the memorization condition. Furthermore, judgment episode-accessibility correlations and response latencies both indicate that these assimilated judgments are formed memory-based rather than on-line. We wanted to further demonstrate that the observed effect of prime valence on kindness judgments was mediated by the selective accessibility of prime-congruent episodes in the memorization condition but not in the impression formation condition. Following Baron and Kenny (1986), we performed three regression analyses (prime valence was recoded as 0 = unkind and 1 = kind) for both the memorization and impression formation condition. The results for the analyses with accessibility as mediator are presented in Figure 4.

For the memorization condition, we observed that prime valence had a significant effect on kindness judgments,  $\beta = .32$ , t(60) = 2.60, p = .01. Next, we found that prime valence had a significant effect on episode accessibility,  $\beta = .34$ , t(60) = 2.76, p < .01. A third regression, including both prime valence and episode accessibility as predictors, revealed a significant effect of episode accessibility on the target judgment,  $\beta = .35$ , t(59) = 2.83, p < .01, whereas the effect of prime valence became nonsignificant,  $\beta = .20$ , t(59) = 1.62, *ns*. Moreover, using a bootstrap method as proposed by Preacher and Hayes (2004) we can conclude that the indirect effect of prime valence on kindness judgments via episode accessibility was significant (p < .05).

#### **POST-PRIMING EFFECTS 17**

In the impression formation condition, prime valence appeared not to predict kindness judgments,  $\beta = .13$ , t(58) = -.36, *ns*. We could already conclude that there was no mediation in the impression formation condition because prime valence did not affect the kindness judgments in the first place. Therefore, we did not need to perform any further mediation steps.

Together the results of the current experiment provide converging evidence that, when individuals memorize behavioral person information at encoding, they base personality judgments on behavioral episodes that, at that time, are most accessible in memory. Furthermore, given that activated trait concepts turn congruent episodes more accessible, this ultimately results in an assimilative shift of the trait judgments.

#### General Discussion

It is well accepted in the social cognition literature that accessible trait concepts only have an effect on encoding person information lacking evaluative clarity. Trait knowledge activated at the encoding stage leads to either disambiguating vague behavioral descriptions or selective processing of mixed person information (Stapel & Schwarz, 1998), both resulting in an assimilation effect on subsequent person judgments. Beyond the encoding stage, accessible trait knowledge should not affect person judgments (e.g., interpretation/comparison model of Stapel et al., 1997). The current results, however, show that accessible trait concepts can have an assimilation effect after the encoding stage. Three experiments demonstrate that trait concepts primed after the memorization of mixed person information lead to an assimilative person judgment. First, participants memorized kind and unkind behavioral descriptions about a target person. Before judging this person, they were primed with either kindness or unkindness concepts. It was consistently found that participants perceived the target person to be more kind (unkind) when kind (unkind) related trait concepts were activated. These findings were *not* obtained when mixed

#### **POST-PRIMING EFFECTS 18**

person information was encoded as part of an impression formation goal (Experiment 1) or when person information was vaguely related to the activated trait concepts (Experiment 2). The results of Experiment 3 demonstrate that the assimilation effect can be explained by higher accessibility of previously encoded person information congruent with the primed trait.

Why would primed trait concepts make trait-congruent person information more accessible? At least three possible explanations can be distinguished. First, it is possible that individuals having a memorization goal simply encode the behavioral descriptions without making any inference about the personality traits that these behaviors imply. Priming trait concepts may affect subsequent person judgments by activating semantically related concepts that are embedded in the encoded behaviors. Thus, priming "kindness" at judgment may activate concepts like "helping" and "friendly" and increase the accessibility of previously encoded behavioral descriptions that contain these activated concepts. Second, when individuals memorize behavioral descriptions, they may spontaneously interpret the behaviors in terms of applicable trait categories (e.g., Bassili, 1989; D'Agostino & Beegle, 1996). That is, readers use trait concepts to label the different behaviors (e.g., this is a kind act) without directly assigning this trait to the target person. This implies that in case of the mixed person description some of the encoded behaviors are directly linked to the trait "kindness" and others to "unkindness". Consequently, priming a trait category at judgment (e.g., kindness) will make behaviors that are directly associated with this particular trait (e.g., kind behaviors) more accessible and assimilation will occur. Finally, some researchers argue that individuals who are exposed to behavioral information spontaneously make trait impressions about the target person (Uleman et al., 1996). Some theorists even speculated that individuals when encountering behavioral person information also infer spontaneous trait impressions that

#### **POST-PRIMING EFFECTS 19**

are mutually inconsistent (e.g., Diederik is kind and Diederik is unkind) (e.g., Ham & Vonk, 2003; Newman & Uleman, 1990; Uleman, 1999). Hence, priming a trait category (e.g., kindness) after mixed person information has been encoded may make the congruent trait impression (e.g., Diederik is kind) more accessible, which in turn favors the selective accessibility of congruent behavioral information (e.g., kind behaviors). Our study contributes to this ongoing debate by providing convincing evidence that if spontaneous personality impressions are formed based on mixed person information, they differ significantly from those that are made under an impression formation goal. Future research should shed further light on the existence and characteristics of spontaneous impressions, particularly in the case of mixed target person information.

MA

CEPTER

#### **POST-PRIMING EFFECTS 20**

#### References

- Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51, 1173-1182.
- Bassili, J. N. (1989). Trait encoding in behavior identification and dispositional inference. *Personality and Social Psychology Bulletin, 15*, 285-296.

Carlston, D. E. (1980). The recall and use of traits and events in social inference processes. *Journal of Experimental Social Psychology*, *16*, 303-328.

- Carlston, D. E., & Skowronski, J. J. (1994). Savings in the relearning of trait information as evidence for spontaneous inference generation. *Journal of Personality and Social Psychology*, 66, 840-856.
- Chartrand, T. L., & Bargh, J. A. (1996). Automatic activation of impression formation and memorization goals: Nonconscious goal priming reproduces effects of explicit task instructions. *Journal of Personality and Social Psychology*, 71, 464-478.
- D'Agostino, P. R., & Beegle, W. (1996). A reevaluation of the evidence for spontaneous trait inferences. *Journal of Experimental Social Psychology*, *32*, 153-164.
- Ham, J., & Vonk, R. (2003). Smart and easy: Co-occurring activation of spontaneous trait inferences and spontaneous situational inferences. *Journal of Experimental Social Psychology*, 39, 434-447.

Hastie, R., & Park, B. (1986). The relationship between memory and judgment depends on whether the judgment task is memory-based or on-line. *Psychological Review*, 93, 258-268.

Higgins, E. T., Rholes, W. S., & Jones, C. R. (1977). Category accessibility and impression formation. *Journal of Experimental Social Psychology*, 13, 141-154.

#### **POST-PRIMING EFFECTS 21**

Lichtenstein, M., & Srull, T. K. (1987). Processing objectives as a determinant of the relationship between recall and judgment. *Journal of Experimental Social Psychology*, 23, 93-118.

- Lingle, J. H., & Ostrom, T. M. (1979). Retrieval selectivity in memory-based impression judgments. *Journal of Personality and Social Psychology*, *37*, 180-194.
- Mackie, D. M., & Asuncion, A. G. (1990). On-line and memory-based modification of attitudes: Determinants of message recall-attitude change correspondence. *Journal* of Personality and Social Psychology, 59, 5-16.
- Moskowitz, G. B., & Roman, R. J. (1992). Spontaneous trait inferences as self-generated primes: Implications for conscious social judgment. *Journal of Personality and Social Psychology*, 62, 728-738.
- Newman, L. S., & Uleman, J. S. (1990). Assimilation and contrast effects in spontaneous trait inference. *Personality and Social Psychology Bulletin, 16*, 224-240.
- Ostrom, T. M., Lingle, J. H., Pryor, J. B., & Geva, N. (1980). Cognitive organization of person impressions. In R. Hastie & T. M. Ostrom & E. B. Ebbesen & R. S. Wyer & D. L. Hamilton & D. E. Carlston (Eds.), *Person memory: The cognitive basis of social perception* (pp. 55-88). Hillsdale, N.J.: Erlbaum.
- Preacher, K. J., & Hayes, A. F. (2004). SPSS and SAS procedures for estimating indirect effects in simple mediation models. *Behavior Research Methods, Instruments and Computers, 36*, 717-731.
- Reyes, R. M., Thompson, W. C., & Bower, G. H. (1980). Judgmental biases resulting from differing availabilities of arguments. *Journal of Personality and Social Psychology*, 39, 2-12.

#### **POST-PRIMING EFFECTS 22**

- Sherman, S. J., Mackie, D. M., & Driscoll, D. M. (1990). Priming and the differential use of dimensions in evaluation. *Personality and Social Psychology Bulletin*, 16, 405-418.
- Srull, T. K. (1983). Organizational and retrieval processes in person memory: An examination of processing objectives, presentation format, and the possible role of self-generated retrieval cues. *Journal of Personality and Social Psychology, 44*, 1157-1170.
- Srull, T. K., & Wyer, R. S. (1979). The role of category accessibility in the interpretation of information about persons: Some determinants and implications. *Journal of Personality and Social Psychology*, 37, 1660-1672.
- Srull, T. K., & Wyer, R. S. (1980). Category accessibility and social perception: Some implications for the study of person memory and interpersonal judgments. *Journal* of Personality and Social Psychology, 38, 841-856.
- Stapel, D. A., & Koomen, W. (2001). Let's not forget the past when we go to the future: On our knowledge of knowledge accessibility effects. In G. B. Moskowitz (Ed.), *Cognitive social psychology: The Princeton symposium on the legacy and future of social cognition* (pp. 229-246). Mahwah, NJ: Lawrence Erlbaum.
- Stapel, D. A., Koomen, W., & van der Plight, J. (1997). Categories of category accessibility: The impact of trait concept versus exemplar priming on person judgments. *Journal of Experimental Social Psychology*, 33, 47-76.
- Stapel, D. A., & Schwarz, N. (1998). Similarities and differences between the impact of traits and expectancies: What matters is whether the target stimulus is ambiguous or mixed. *Journal of Experimental Social Psychology*, 34, 227-245.

#### **POST-PRIMING EFFECTS 23**

- Stapel, D. A., & Winkielman, P. (1998). Assimilation and contrast as a function of context-target similarity, distinctness, and dimensional relevance. *Personality and Social Psychology Bulletin, 24*, 634-646.
- Taylor, S. E., & Fiske, S. T. (1981). Getting inside the head: Methodologies for process analysis. In J. Harvey, W. Ickes, & R. Kidd (Eds.), New directions in attribution research (Vol. 3, pp. 459-542). Hillsdale, NJ: Erlbaum.
- Todorov, A., & Uleman, J. S. (2004). The person reference process in spontaneous trait inferences. *Journal of Personality and Social Psychology*, 87, 482-493.
- Tormala, Z. L., & Petty, R. E. (2001). On-line versus memory-based processing: The role of "need to evaluate" in person perception. *Personality and Social Psychology Bulletin*, 27, 1599-1612.
- Uleman, J. S. (1999). Spontaneous versus intentional inferences in impression formation.
  In S. Chaiken & Y. Trope (Eds.), *Dual-process theories in social psychology* (pp. 141-160). New York: Guilford.
- Uleman, J. S., & Moskowitz, G. B. (1994). Unintended effects of goals on unintended inferences. *Journal of Personality and Social Psychology*, *66*, 490-501.
- Uleman, J. S., Newman, L. S., & Moskowitz, G. B. (1996). People as flexible interpreters:
  Evidence and issues from spontaneous trait inference. In M. P. Zanna (Ed.),
  Advances in experimental social psychology (Vol. 28, pp. 211-279). San Diego,
  CA: Academic Press.
- Winter, L., & Uleman, J. S. (1984). When are social judgments made? Evidence for the spontaneousness of trait inferences. *Journal of Personality and Social Psychology*, 47, 237-252. Also see correction in Journal of Personality and Social Psychology (1986), *50*, 1355.

#### **POST-PRIMING EFFECTS 24**

#### Footnote

<sup>1</sup>These words were Dutch translations of the following words: creamy, manure, occupation, quarry, rattle, already, and grand.

<sup>2</sup>We also performed the analyses on the log-transformed reaction times to correct for skewness, (Fazio, 1990). The inferential implications of these analyses were similar and, therefore, are not reported here.

Cottentin

#### **POST-PRIMING EFFECTS 25**

#### **Figure Captions**

*Figure 1*. Mean Kindness Judgment as a Function of Encoding Goal and Prime Valence (Experiment 1).

Figure 2. Mean Kindness Judgment as a Function of Target Person Description and Prime

Valence (Experiment 2).

Figure 3. Mean Kindness Judgment as a Function of Encoding Goal and Prime Valence

(Experiment 3).

Figure 4. Mediation analysis (Experiment 3).

### **POST-PRIMING EFFECTS 26**

### Figure 1

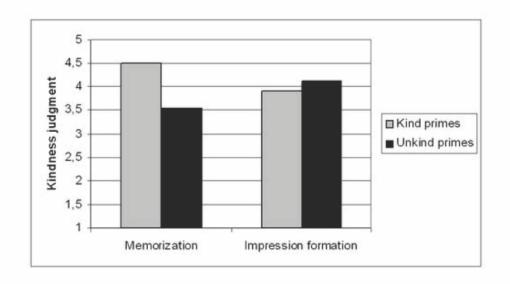
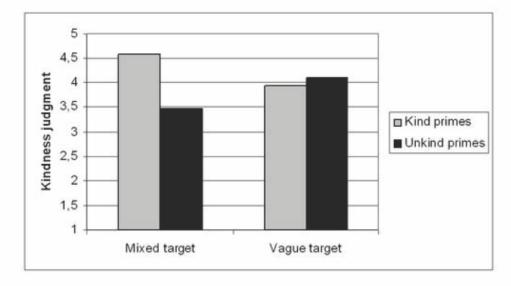


Figure 2





#### **POST-PRIMING EFFECTS 27**



