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*Published in:*  
Journal of Experimental Social Psychology

*Publication date:*  
2008

[Link to publication in Tilburg University Research Portal](#)

*Citation for published version (APA):*  
Wiekens, C. J., & Stapel, D. A. (2008). The mirror and I: When private opinions are in conflict with public norms. *Journal of Experimental Social Psychology*, 44(4), 1160-1166.

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# The Mirror and I: When private opinions are in conflict with public norms

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Received 16 April 2007; revised 23 January 2008  
Available online 26 February 2008

## Abstract

In two studies it is demonstrated that two self-saliency manipulations, often used interchangeably, can have profoundly different consequences. Whereas self-activation *increased* stereotyping in highly prejudiced participants, a mirror *decreased* stereotyping. Results show that this difference can be ascribed to the activation of specific self-aspects. Whereas a mirror increased both private *and* public self-awareness (and, hence, awareness of the social norm that stereotyping is bad), self-activation increased private self-awareness exclusively (and, hence, awareness of privately held negative stereotypes). The implications of these findings for the relation between self-awareness and conformity to social norms are discussed.

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*Keywords:* Public self-awareness; Private self-awareness; Mirror; Self-activation; Normative behavior; Stereotyping

What will you do when your private opinion is in conflict with a public norm? Will you stand up for your own values or will you yield to those of others? In the current article, we will argue that the answer to these questions depends on which aspects of the self are salient: solely your private thoughts, or how you appear to “the public” as well. More specifically, we will argue that when the salience of public self-aspects is increased (even when the salience of private self-aspects is increased as well), the tendency to “yield” to social norms will be stronger.

It may seem quite logical to assume that people whose private opinions are salient will act according to those private opinions, and that people whose public self-aspects are salient (and may start to worry about the image they are transferring), will tend to act according to social norms. However, this assumption is inconsistent with self-awareness studies showing that whenever the self is salient, pro-social and normative behavior will typically ensue (e.g., Diener & Wallbom, 1976; Kallgren, Reno, & Cialdi-

ni, 2000). Diener and Wallbom (1976), for example, demonstrated that confronting people with a reflection of themselves in a mirror, increased behavior consistent with the social norm against cheating on an intelligence test. Based on this finding, Diener and Wallbom (1976) argued that self-awareness promotes normative behavior.

But what were the participants in their study aware of? Was it, as Diener and Wallbom argued, the social norm against cheating, to which they consequently conformed? Or were these participants perhaps aware of the way they came across to other people, and did they conform to the social norm as a result of that? Or did a mirror activate their own, private, norm against cheating, and did they behave in accordance with this private norm? Because saliency of different self-aspects was not measured, we do not know what exactly instigated the anti-cheating norm.

A study by Gibbons and Wright (1983) suggests that it is important to specify what self-aspects are cognitively activated by self-awareness manipulations. Gibbons and Wright (1983) argued that for individuals who are confronted with an image of themselves in a mirror, the cognitive activation of both social norms *and* private opinions

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should increase. They performed a study in which participants received bogus results of a questionnaire showing that the attitude of their peers was opposite to the participants' private attitude. Participants who sat in front of a mirror adjusted their private attitude in the direction of their peers' attitude, whereas control participants did not. Although this result seems to suggest conformity to social norms, the correlation between the reported attitude and the pretest attitude-scores was higher in the mirror condition than in the control condition. In other words, whereas participants who sat in front of a mirror conformed more, they did not "deny" their private attitude altogether. Gibbons and Wright (1983) concluded from this result that the mirror-manipulation had increased the salience of both private opinions and public norms. But, again, as different aspects of the self were not measured directly, we do not know whether this conclusion is warranted.

Moreover, because in the Gibbons-Wright study the public standard (the attitude of participants' peers) was *given* to participants rather than spontaneously *activated* by the presence of a mirror, we are not sure whether a mirror could activate a social norm spontaneously. As a result, we do not know what would happen when both private opinions and public norms are internally activated. Moreover, we do not know whether the "externally" provided (bogus) feedback about the public norm was consistent with participants' "internally" available public norms. Perhaps, participants' internal notion of the public norm differed from the external public norm in such a way that their private opinion and their view of the general public norm resembled each other more closely, which could also explain why participants did not disregard their own, private opinion completely.

In summary, although a mirror has often been used to increase the salience of certain aspects of the self, it is unclear what aspects of the self are activated and how this may relate to behavior. Some researchers have argued that mirrors increase salience of private self-aspects (e.g., Scheier & Carver, 1977; Scheier & Carver, 1980; Scheier, Carver, & Gibbons, 1979), but others have argued that they increase salience of public self-aspects (Hofmann & Heinrichs, 2002). Since in the relevant studies, to date, the activation of public and private self-aspects has not been measured directly, in the current studies we did just that.

Because a mirror reflects those parts of the self that are publicly observable, we expect a mirror to activate public self-aspects. We also hypothesize that this will increase participants' conformity to public norms, even when private opinions are also activated. In recent studies on prejudice and self-presentation goals (e.g., Plant & Devine, 1998; Sechrist, Swim, & Stangor, 2004; Stangor, Swim, Van Allen, & Sechrist, 2002), it has been shown that in public reporting conditions (e.g., when an experimenter is listening to the participants), self-presentation goals are salient, which motivate participants to report a public opinion despite of having a different private opinion. Extending this research, we expect that the *activation* of public self-aspects (in the absence of a

real "public") will also motivate participants to convey a favorable (public) self-image. In short, we hypothesize that because mirrors activate public self-aspects, they will lead to behavior in line with public norms, even when these norms are inconsistent with a private opinion and when private opinions are activated as well.

Of course, people sometimes stand up for their own opinion when their private opinions are discrepant from public norms. We expect this to occur when only private self-aspects are salient. Self-activation manipulations that increase the salience of private thoughts and feelings without simultaneously increasing the salience of public self-aspects, may lead to behavior consistent with those private thoughts and feelings. One such self-activation manipulation may be "I-priming" by means of encircling words as "I", "me", and "mine" in a text (see Brewer & Gardner, 1996; Stapel & Koomen, 2001). We expect this method to increase saliency of private opinions, without necessarily activating public self-aspects. We expect the strong activation of private self-aspects to lead to behavior that is in line with private opinions.

In order to test these hypotheses and generate more insight into the differential effects of a mirror-manipulation and I-priming, in the first study we will examine the consequences of these manipulations for the activation of public and private self-aspects. We expect that a mirror will increase saliency of both public and private self-aspects, whereas I-priming will mainly increase the saliency of private self-aspects. In the second study, we will examine the behavioral consequences of a mirror and those of I-priming. We expect a mirror to induce behavior consistent with public norms, whereas we expect I-priming to induce behavior consistent with private opinions.

## Study 1

The main goal of this first study was to examine the specific consequences of a mirror-manipulation and I-priming for the activation of different self-aspects. To test our hypotheses, we used the "self-consciousness scales" of Fenigstein, Scheier, and Buss (1975). We expected a mirror to increase the saliency of both private and public self-aspects, and I-priming to only increase the saliency of private self-aspects.

### Method

#### Participants

A total of 164 undergraduate students were randomly assigned to the conditions of a 3-group (self-focus manipulation: mirror, I-priming, control) between subjects design. Participants received partial course credit for their participation.

#### Materials and procedure

On arrival in the laboratory, participants were seated in separate cubicles. All instructions were administered in

written form. In the mirror-condition, a mirror was placed at the end of the table in such a way that participants could see themselves while filling out the questionnaire. In the I-priming and control condition there were no mirrors.

### *I-priming*

The priming task was modeled after Brewer and Gardner (1996; see also Stapel & Koomen, 2001). Each participant received a task called “tracking”. In the I-priming condition, participants were instructed to circle, as part of a word search task, all first-person pronouns that appeared in a text. All of the pronouns referred to *I*, *me*, *my*, and *mine*. In the mirror- and control conditions these pronouns were replaced by the letter combinations *abc* and *xyz*.

### *Activation of public and private self-aspects*

To measure the activation of private and public self-aspects, we applied the public and private self-consciousness scales of Fenigstein et al. (1975). Participants indicated on 5-point scales (*1* = strongly disagree, *5* = strongly agree) their agreement with statements such as “I am trying to figure myself out” (private self-awareness, Cronbach’s  $\alpha = .75$ ) and “I am aware of my appearance” (public self-awareness, Cronbach’s  $\alpha = .73$ ).

### *Results and discussion*

#### *Activation of public and private self-aspects*

We conducted a 3 (self-focus: mirror, I-priming, control) between-subjects analysis of variance on the self-awareness scales.

This analysis showed a significant effect on *public* self-awareness,  $F(2, 161) = 9.47$ ,  $p < .001$ . Planned contrast analyses showed, as predicted, that participants who sat in front of a mirror were more aware of public self-aspects ( $M = 3.6$ ,  $SD = .65$ ) than participants in the control condition ( $M = 3.0$ ,  $SD = .54$ ),  $t(161) = -5.57$ ,  $p < .001$ , and participants in the I-priming condition, ( $M = 2.8$ ,  $SD = .59$ ),  $t(161) = -6.42$ ,  $p < .001$ . Participants in the control condition ( $M = 3.0$ ,  $SD = .54$ ) and I-priming condition ( $M = 2.8$ ,  $SD = .59$ ) did not differ significantly in public self-awareness,  $t(161) = 1.34$ , *ns* (see Table 1).

We also found a significant effect on *private* self-awareness,  $F(2, 161) = 26.31$ ,  $p < .001$ . Planned contrast analyses showed, consistent with our hypothesis, that participants in the I-priming condition were more aware of private self-aspects ( $M = 3.5$ ,  $SD = .83$ ) than both participants in the mirror condition ( $M = 3.1$ ,  $SD = .86$ ),  $t(161) = -3.09$ ,  $p < .01$ , and participants in the control condition ( $M = 3.0$ ,  $SD = .54$ ),  $t(161) = -3.24$ ,  $p < .01$ . Participants

in the mirror condition were also more aware of private self-aspects than participants in the control condition ( $M = 2.5$ ,  $SD = .41$ ),  $t(161) = -4.11$ ,  $p < .001$ .

To summarize, in the mirror-condition, both public and private self-awareness were increased, whereas, in the I-priming condition, only private self-awareness was increased. These self-focus manipulations thus affected self-awareness in a manner that is consistent with the proposed model: mirrors increase both private and public self-consciousness, whereas I-priming activates mainly private self-consciousness.

### **Study 2**

In order to determine whether participants would also behave in accordance with the activated public or private aspects of their self, a situation in which those aspects are contradictory is needed. One such situation may occur when personal values are in clear and unequivocal contradiction with social norms, as, for example, when one’s personal negative stereotypes of an ethnic minority are in conflict with the general norm that one should not judge others based on their social category. Highly prejudiced people may experience a discrepancy between their own negative views and the social norm against stereotyping. We expect that in this situation, one’s behavior will depend on the specific self-aspects that are activated. More concretely, we expect that highly prejudiced people will behave in a way that is consistent with their privately held negative stereotypes when personal self-aspects are activated (e.g., by I-priming), whereas they will conform to the social norm that it is inappropriate to stereotype when public self-aspects are activated as well (e.g., by a mirror).

In this study, we asked (Dutch) participants who were either high- or low-prejudiced against Surinamese people to judge the ambiguous behavior of a Surinamese or a Dutch male, either when confronted with a reflection of themselves in a mirror, or when the self was activated by I-priming. We expected highly prejudiced participants who are confronted with their public appearance to be more concerned about their public image, which should lead to conformance to the social norm against stereotyping (thus, seeing the Surinamese male in relatively positive terms). Conversely, we expected I-priming to increase the salience of highly prejudiced participants’ negative stereotypes (activation of private self-aspects), which should then increase behavior consistent with privately held convictions. In the I-priming conditions, we therefore expected highly prejudiced participants, in comparison with low-prejudiced participants, to see the behavior of the Surinamese male in relatively negative terms.

### *Method*

#### *Participants and experimental design*

One hundred and twenty-seven students participated in this experiment in return for partial course credit. The par-

Table 1  
Public and private self-awareness as a function of manipulation

Awareness	I-priming	Control	Mirror
Public	2.8	3.0	3.6
Private	3.5	2.5	3.1

ticipants were randomly assigned to the conditions of a 3 (self-focus: mirror, I-priming, control)  $\times$  2 (person description: Clarence, Erik) between subjects design.

#### *Procedure and materials*

On arrival in the laboratory, participants were seated in separate cubicles to fill out a questionnaire that measured prejudice. In these cubicles, no mirror was present. After filling out this questionnaire, all participants left their cubicle, were thanked for participating and were asked to take place in a different cubicle for another set of ostensibly unrelated studies. In the mirror-condition, a mirror was attached to the wall behind the table at which the participants took place. In the self-activation and control conditions, there were no mirrors.

*Measuring prejudice.* To measure the degree of prejudice, participants responded on 9-point scales ( $1 =$  totally disagree,  $9 =$  totally agree) to propositions concerning their past behavior towards Surinamese people. The propositions were based on the “would-questionnaire” of Monteith and Voils (1998), and contained items such as: “I sometimes have prejudiced thoughts about Surinamese people”, and “In the past, I have avoided people because they were Surinamese” (Cronbach’s  $\alpha = .81$ ). Research of Gordijn, Koomen, and Stapel (2001) showed that this is an effective way of measuring prejudice against Surinamese people in The Netherlands.

*I-priming.* The I-priming task was identical to the one used in the first experiment. In the I-priming condition, participants circled the words *I*, *me*, and *mine* in a text, in the other two conditions these words were replaced by *abc* and *xyz*.

*Manipulation checks.* After completing the tracking task, participants were asked to unscramble several neutral sentences. This was a filler-task to prevent participants from relating the tracking task with the following “language task” (participants indicated at debriefing that they had not seen any connection between the two tasks). To measure the degree of self-activation, we applied the Wezwe-task (see Stapel & Tesser, 2001). Each participant was told that earlier research had shown that people were sometimes able to guess the correct pronoun while reading a foreign language. They were presented with a short story that was supposedly written in “Wezwe”, a language spoken only in New Guinea. In the text, 20 pronouns were missing and participants were asked to list the correct pronoun. Our main interest was the number of first-person pronouns (I, me, my) participants would list. We expected participants in the I-priming and mirror condition to list more first-person pronouns because in these conditions, self-awareness should be higher than in the control condition. Whether self-awareness is mainly driven by public and/or private concerns should not matter for performance on the “Wezwe”-task: both the mirror and the I-priming

manipulations are expected to activate self-cognitions (see Davis & Brock, 1975; Gibbons & Wright, 1983; Stapel & Tesser, 2001). Next, participants completed the same public and private self-awareness scales (Fenigstein et al., 1975) we used in the first study.

*Stereotyping.* After filling out the public and private self-awareness questionnaire, participants received a story about either a Dutch male, “Eric” (control condition), or a Surinamese male, “Clarence”. Eric or Clarence displayed ambiguous behavior in the story. Pretests had shown that this story could be interpreted in terms of the positive Surinamese stereotype, as being “gezellig” (with no precise equivalent in English, it means something like sociable and easy-going) or in terms of the negative Surinamese stereotype, as being “irresponsible” (see Gordijn et al., 2001, and Otten & Stapel, 2007 on the content of the Surinamese stereotype). Participants had to judge the behavior of Clarence or Erik on 9-point scales ( $1 =$  sociable,  $9 =$  irresponsible).

#### *Results and discussion*

##### *Manipulation checks*

A 3 (self-focus: mirror, I-priming, control) between-subjects analysis of variance on the amount of first-person pronouns listed, showed a significant effect,  $F(2, 171) = 20.09$ ,  $p < .001$ . Planned contrast analyses showed, as expected, that participants in the mirror-condition ( $M = 6.8$ ,  $SD = 2.12$ ) and participants in the I-priming condition ( $M = 7.4$ ,  $SD = 2.24$ ) listed more first-person pronouns than participants in the control condition ( $M = 5.1$ ,  $SD = 1.79$ ), respectively  $t(171) = -4.47$ ,  $p < .001$  for the mirror-condition, and  $t(171) = -6.15$ ,  $p < .001$  for the I-priming condition. Participants in the I-priming and mirror-condition did not differ significantly,  $t(171) = 1.65$ , *ns*. This result shows that, as expected, the self was cognitively more accessible for participants in the I-priming condition and for participants in the mirror-condition.

We conducted a 3 (mirror, I-priming, control) between-subjects analysis of variance on the self-reported public (Cronbach’s  $\alpha = .71$ ) and private (Cronbach’s  $\alpha = .77$ ) self-awareness scales. This analysis showed a significant effect on *public* self-awareness,  $F(2, 171) = 26.63$ ,  $p < .001$ . Planned contrast analyses showed, consistent with our hypotheses, that participants who sat in front of a mirror were more aware of public self-aspects ( $M = 3.7$ ,  $SD = .58$ ) than participants in the control condition ( $M = 3.0$ ,  $SD = .55$ ),  $t(171) = -.67$ ,  $p < .001$  and participants in the I-priming condition ( $M = 3.1$ ,  $SD = .59$ ),  $t(171) = -.63$ ,  $p < .001$ . Participants in the control condition ( $M = 3.0$ ,  $SD = .55$ ) and I-priming condition ( $M = 3.1$ ,  $SD = .59$ ) did not differ significantly in public self-awareness,  $t(171) = -.98$ , *ns*.

The analysis of variance also showed a significant effect on *private* self-awareness,  $F(2, 171) = 47.58$ ,  $p < .001$ . Planned contrast analyses showed, consistent with the



Table 2  
Person judgment (sociable-irresponsible) as a function of identity target (Surinamese, Dutch) and prejudice level (–1 *SD* low, +1 *SD* high)

Target person and prejudice	Self-focus		
	Control	I-priming	Mirror
Low prejudice			
Surinamese Clarence	4.4	4.1	3.2
Dutch Erik	4.5	4.8	4.9
High prejudice			
Surinamese Clarence	5.1	6.7	3.4
Dutch Erik	3.6	3.4	4.8

Please note that higher scores indicate more negative (more irresponsible, less sociable) judgments.

hypothesis, that participants in the I-priming condition were more aware of private self-aspects ( $M = 3.0$ ,  $SD = .67$ ) than participants in the control condition ( $M = 2.5$ ,  $SD = .41$ ),  $t(171) = -4.5$ ,  $p < .001$ . Participants in the mirror-condition were also more aware of private self-aspects ( $M = 3.6$ ,  $SD = .72$ ) than participants in the control condition ( $M = 2.5$ ,  $SD = .41$ ),  $t(171) = -9.7$ ,  $p < .001$ . In addition, participants in the mirror condition were more aware of private self-aspects than participants in the I-priming condition were,  $t(171) = -5.2$ ,  $p < .001$ .

To summarize, our self-focus manipulations had the expected effects on the activation of different self-aspects. In the mirror-condition, private *and* public self-awareness were increased, whereas in the I-priming condition only private self-awareness was increased.

### Main analyses

We tested whether participants' level of prejudice against the Surinamese moderated the effects of the self-focus manipulation and the identity of the target person on the judgment of the target person. To be able to do this, first we computed the mean of the sixteen items that measured prejudice (Cronbach's  $\alpha = .81$ ) and the measure was standardized so that  $M = 0$  and  $SD = 1$ . Next, we analyzed the effects on target judgments with a model with self-focus and target identity as discrete variables and prejudice as a continuous variable.<sup>1</sup> Following Aiken and West (1991), we selected data points at one standard deviation above the mean (labeled high prejudice) and at one standard deviation below the mean (labeled low prejudice; see Table 2). The results revealed a main effect of prejudice,  $F(1, 162) = 10.23$ ,  $p < .01$ , a main effect of self-focus,  $F(2, 162) = 3.24$ ,  $p < .05$ , a target identity  $\times$  prejudice interaction,  $F(1, 162) = 25.58$ ,  $p < .01$ , a self-focus  $\times$  target interaction,  $F(2, 162) = 17.50$ ,  $p < .01$ , and the predicted prejudice  $\times$  target identity  $\times$  self-focus interaction,  $F(2, 162) = 8.50$ ,  $p < .01$  (other  $ps > .13$ ).

<sup>1</sup> We would like to note that including prejudice as a continuous variable in our analyses of the effects of our manipulations on the manipulation check measures (private self-consciousness, public self-consciousness, self-knowledge activation) did not yield a significant interaction or main effects ( $F_s < 1$ ).

As can be seen in Table 2, this three-way interaction indicates that, as predicted, in the control condition, high-prejudiced individuals rated Erik more positively ( $M = 3.6$ ) than Clarence ( $M = 5.1$ ),  $F(2, 162) = 8.49$ ,  $p < .01$ . This pattern was especially strong in the I-priming condition, where Erik was rated more positively ( $M = 3.4$ ) than Clarence ( $M = 6.7$ ),  $F(2, 162) = 37.94$ ,  $p < .01$ . In the mirror condition, however, this pattern was reversed and Clarence was judged more positively ( $M = 3.4$ ) than Erik ( $M = 4.8$ ),  $F(2, 162) = 6.43$ ,  $p < .05$ . For low prejudice individuals the pattern was different. These individuals judged Erik ( $M = 4.4$ ) and Clarence ( $M = 4.5$ ) similarly ( $F < 1$ ) in the control condition. However, in the I-priming condition, Clarence was judged more positively ( $M = 4.1$ ) than Erik ( $M = 4.8$ ),  $F(2, 162) = 4.26$ ,  $p < .01$ . This pattern was especially strong in the mirror condition, where Clarence was also rated more positively ( $M = 3.2$ ) than Erik ( $M = 4.9$ ),  $F(2, 162) = 5.98$ ,  $p < .01$ .

To further test our hypothesis that especially for highly prejudiced individuals, the ratings of the outgroup target (Surinamese Clarence) should be correlated with increased private (but not public) self-consciousness in the I-priming condition and vice versa in the mirror condition, we computed correlations and indeed found what our model suggests. In the I-priming condition, the correlation between private self-awareness and target judgment was positive (i.e., the more self-aware participants were, the more negatively they rated Clarence),  $r = .52$  ( $p < .01$ ); and the correlation between target judgment and public self-awareness was not significant,  $r = .03$  ( $p > .10$ ). Conversely, in the mirror-condition, the correlation between target judgment and private self-awareness was not significant,  $r = .13$  ( $p > .10$ ); and the correlation between target judgment and public self-awareness was negative (i.e., the more publicly-aware participants were, the more positively they rated Clarence),  $r = -.48$  ( $p < .01$ ). In the control condition, both the correlations between target judgment and private self-awareness ( $r = .14$ ) and the correlation between target judgment and public self-awareness ( $r = .16$ ) were not significant ( $p > .10$ ).

In conclusion, in the present study we found that although both a mirror and I-priming made private self-aspects more salient, these manipulations differed in the extent to which they activated public self-awareness. A mirror activated public *and* private self-awareness, whereas I-priming mainly activated private self-awareness. As a consequence, these manipulations had profoundly different consequences for behavior. In participants whose private opinions (negative stereotypes) were in conflict with the public norm (against stereotyping), a mirror induced normative behavior (e.g., less stereotyping), whereas I-priming induced behavior in accordance with private opinions (e.g., more stereotyping). Hence, when public (and private) self-aspects are activated, participants conform more to social norms, but when private (but not public) self-aspects are activated, participants behave more in line with their own, private opinions. The implication of this last finding is that prejudiced people stereotype more, rather than less,

when private self-awareness is high and public self-awareness is low.

### General discussion

What will you do when your private opinion is in conflict with a public norm? We demonstrated that the answer to this question depends on which aspects of the self are salient: are you just aware of your private thoughts, or are you also sensitive to your public self-aspects? More specifically, we showed that participants whose private opinions (negative stereotypes against Surinamese people) were inconsistent with a public norm (against stereotyping), conformed to the public norm (i.e., stereotyped *less*) when public and private self-aspects were activated by a mirror, whereas they behaved according to their private opinions (i.e., stereotyped *more*) when only private self-aspects were activated by “I-priming”.

These results point out two important issues. The first issue concerns the differential effects of self-activation manipulations. Although mirrors and I-priming have been used interchangeably in previous research (e.g., Macrae, Bodenhausen, & Milne, 1998), in the current studies they activated different aspects of the self, which induced different behavior. Therefore, when activating self-aspects, it seems important that we specify which aspects we intend to activate, and that we choose our manipulation carefully.

The second issue concerns the circumstances when people will stand up for their own convictions and when they will conform to those of others. The current results indicate that the activation of public self-aspects increases the tendency to conform to social norms, even when private self-aspects are activated as well. The finding that when private aspects are activated together with public aspects, people still conform to social norms, suggests that the activation of public aspects does not merely activate norms, but probably instigates a concern about how one comes across to other people, which, in this case, resulted in normative behavior. In other words, our results suggest that when both private and public selves are activated they do not cancel each other out when it concerns their input for normative behavior. Rather, public concerns “win” and people show more appropriate, norm-driven behavior.

The finding that public opinions ultimately “win” is consistent with earlier research on prejudice. Plant and Devine (1998) have shown that in the presence of a non-prejudiced person, prejudiced participants will not express their private opinions. As Plant and Devine (1998, p. 825) concluded: “It appears that for these participants, making their responses in public cued the potential evaluation of the external audience (i.e., the experimenter), and they strategically altered their responses to avoid revealing their true-prejudiced attitudes”. The current findings extend these results by showing that highly prejudiced participants do not even have to be confronted with a non-prejudiced audience. The mere activation of their public self-aspects is enough to promote non-prejudiced responses.

Although in the current study a mirror reduced stereotyping, we do not expect that it will always promote normative behavior. Whereas a mirror activates public self-aspects and probably instigates a concern about how one is seen by other people, we believe—consistent with Plant and Devine’s theorizing—that it promotes “impression management”. An interesting test would perhaps be to see what happens when participants are aware of public self-aspects and the norms of the people around them differ from a social norm. Confronted with a reflection of themselves in a mirror, will participants yield to a social norm or will they ignore that norm and try to impress the people around them? We expect, in this case, that the activation of public self-aspects increases the motivation to leave a favorable impression. This, of course, remains an interesting empirical question for future research.

### *Implications of the current results for the interpretation of previous research*

The present study has several implications for the interpretation of the evidence provided by previous studies on the effects of self-focus on normative behavior. One work in particular can be reinterpreted in light of the current results. Based on the results of several experiments on the effects of self-focus on the regulation of stereotypic thoughts, Macrae and colleagues (1998) argued that a heightened self-focus promotes the spontaneous suppression of negative social stereotypes. To test this hypothesis, they activated the self via subliminal priming of the participant’s name, and via mirrors. They demonstrated that an increase in self-focus caused by subliminal priming *decreased* the amount of stereotypic thoughts and behavior. This effect may seem to run counter to our finding that highly prejudiced participants stereotyped *more* when the self was activated by priming. However, Macrae and colleagues did not distinguish between high- and low-prejudiced participants, and they did not measure the activation of different self-aspects. As they explicitly stated, a characteristic of their sample was that participants endorsed the view that stereotyping is a generally inappropriate way of evaluating others. Therefore, it may be that their participants acted on *privately* held convictions that stereotyping is inappropriate. Even though the behavioral consequence may thus seem discrepant with our findings, the underlying process may be exactly the same (and similar to the results of our low-prejudiced participants).

Furthermore, in their mirror-study, Macrae and colleagues (1998) used a social group (politicians) for which some of their participants thought stereotyping was entirely appropriate, whereas others considered it to be inappropriate. They showed that participants who considered stereotyping politicians appropriate stereotyped more, whereas participants who considered stereotyping politicians inappropriate stereotyped less. This result may be interpreted as being discrepant with our findings, because it suggests that participants conformed to their private con-

victions (which is inconsistent with our argument that mirrors activate public self-aspects and therefore decrease stereotyping). However, it may be that Macrae et al.'s participants actually differed in their opinion of whether stereotyping politicians was *socially* appropriate. Highly prejudiced participants in their study may have believed that stereotyping politicians is socially acceptable and perhaps even a “desirable” activity (for example, because it is humorous, or perhaps because the stereotypes are considered to be reasonably accurate). Hence, when confronted with the public aspects of themselves, these participants stereotyped more because of applying this perceived *social* standard, which is consistent with our results.

Macrae and colleagues' general conclusion that an increase in self-focus (whether increased by I-priming or a mirror) *always* leads to behavior in accordance with social norms may thus have been premature. As our results show, reality is more nuanced: self-saliency will instigate pro-social behavior when public aspects of the self are activated or when private aspects of the self are activated and private convictions are consistent with the public norm. However, when private convictions are inconsistent with the public norm, increasing the relative salience of private self-aspects will not lead to pro-social behavior. Therefore, it is important to be precise when we talk about self-saliency and to specify exactly what type of self-saliency we are talking about. In this way, the consequences of self-activation will be easier to interpret and easier to predict.

### Acknowledgments

This research was supported by “PIONIER” grant “Making sense of hot cognition” from the Dutch Science Foundation (Nederlandse Organisatie voor Wetenschappelijk Onderzoek) and a research grant of Tilburg University awarded to the second author.

### References

- Aiken, L. S., & West, R. R. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Brewer, M. B., & Gardner, W. (1996). Who is this we? Levels of collective identity and self representations. *Journal of Personality and Social Psychology*, 71, 83–93.
- Davis, D., & Brock, T. C. (1975). Use of first-person pronouns as a function of increased objective self-awareness and performance feedback. *Journal of Experimental Social Psychology*, 11, 381–388.
- Diener, E., & Wallbom, M. (1976). Effects of self-awareness on antinormative behavior. *Journal of Research in Personality*, 10, 107–111.
- Fenigstein, A., Scheier, M. F., & Buss, A. H. (1975). Public and private self-consciousness: Assessment and theory. *Journal of Consulting and Clinical Psychology*, 43, 522–527.
- Gibbons, F. X., & Wright, R. A. (1983). Self-focused attention and reactions to conflicting standards. *Journal of Research in Personality*, 17, 263–273.
- Gordijn, E. H., Koomen, W., & Stapel, D. A. (2001). Level of prejudice in relation to knowledge of cultural stereotypes. *Journal of Experimental Social Psychology*, 37, 150–157.
- Hofmann, S. G., & Heinrichs, N. (2002). Disentangling self-descriptions and self-evaluations under conditions of high self-focused attention: Effects of mirror exposure. *Personality and Individual Differences*, 32, 611–620.
- Kallgren, C. A., Reno, R. R., & Cialdini, R. B. (2000). A focus on normative conduct: When do norms do and do not affect behavior. *Personality and Social Psychology Bulletin*, 26, 1002–1012.
- Macrae, C. N., Bodenhausen, G. V., & Milne, A. B. (1998). Saying no to unwanted thoughts: Self-focus and the regulation of mental life. *Journal of Personality and Social Psychology*, 74, 578–589.
- Monteith, M. J., & Voils, C. I. (1998). Proneness to prejudiced responses: Toward understanding the authenticity of self-reported discrepancies. *Journal of Personality and Social Psychology*, 75, 901–916.
- Otten, S., & Stapel, D. A. (2007). Who is this Donald? How social categorization affects aggression-priming effects. *European Journal of Social Psychology*, 37, 1000–1015.
- Plant, E. A., & Devine, P. G. (1998). Internal and external motivation to respond without prejudice. *Journal of Personality and Social Psychology*, 75, 811–832.
- Scheier, M. F., & Carver, C. S. (1977). Self-focused attention and the experience of emotion: Attraction, repulsion, elation, and depression. *Journal of Personality and Social Psychology*, 35, 625–636.
- Scheier, M. F., & Carver, C. S. (1980). Private and public self-attention, resistance to change, and dissonance reduction. *Journal of Personality and Social Psychology*, 39, 390–405.
- Scheier, M. F., Carver, C. S., & Gibbons, F. X. (1979). Self-directed attention, awareness of bodily states and suggestibility. *Journal of Personality and Social Psychology*, 37, 1576–1588.
- Sechrist, G. B., Swim, J. K., & Stangor, C. (2004). When do the stigmatized make attributions to discrimination occurring to the self and others? The roles of self-presentation and need for control. *Journal of Personality and Social Psychology*, 87, 111–122.
- Stangor, C., Swim, J. K., Van Allen, K. L., & Sechrist, G. B. (2002). Reporting discrimination in public and private contexts. *Journal of Personality and Social Psychology*, 82, 69–74.
- Stapel, D. A., & Koomen, W. (2001). I, we, and the effects of others on me: How self-construal moderates social comparison effects. *Journal of Personality and Social Psychology*, 80, 766–781.
- Stapel, D. A., & Tesser, A. (2001). Self-activation increases social comparison. *Journal of Personality and Social Psychology*, 81, 742–750.