

AUTOMATIC NORMATIVE BEHAVIOR IN ENVIRONMENTS: THE MODERATING ROLE OF CONFORMITY IN ACTIVATING SITUATIONAL NORMS

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Previous research (Aarts & Dijksterhuis, 2003) has shown that mental representations of situational norms (e.g., behaving quietly in libraries) and corresponding overt behaviors are capable of being automatically activated. Two experiments extended this line of research by investigating the conditional role of the tendency to conform to social norms in these effects. Participants explored a picture of a library and were given the goal to visit this library or not. Accessibility of representations of normative behavior was assessed in a lexical decision task. In the first experiment, individual differences in conformity to social norms were measured, whereas in the second experiment conformity was primed. Results indicated that the goal to visit the environment caused participants to automatically access representations of normative behavior. Importantly, in both experiments conformity was shown to moderate these accessibility effects: Automatic access to representations of normative behavior emerged when conformity tendencies were active.

A long tradition of research on conformity and social influence indicates that human behavior is guided by social norms (Cialdini &

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Trost, 1998; Deutsch & Gerard, 1955; Zimbardo & Leippe, 1991). People tend to behave in ways that they believe other people approve of, and avoid those behaviors they think others disapprove of. This normative social influence is based on the fundamental human need to be liked and accepted by others. Furthermore, people's behavior can also be shaped by informational social influence. They go along with (observed or verbally communicated) normative ways of behaving because they see other people's behavior as a source of information to help them define social reality and maximize the effectiveness of their social behavior. Our thinking and doing, then, moves in the direction to what we believe other people expect from us. This tendency to conform to social norms forms an essential mechanism by which social behavior evolves (Birenbaum & Sagarin, 1976; Dewey, 1922; Pepitone, 1976; Sherif, 1936).

Many norms of conduct are situational or confined to specific environments. Behaving silently in a library or a church are examples of such norms. Such situational norms represent socially accepted beliefs about how to behave in particular social situations or environments and are learned by associating normative behavior to these environments. A situational norm, then, refers to knowledge or mental representations of appropriate behavior that can be accessed to guide behavior in a specific situation or environment. Thus, when we enter a library we may keep the level of noise down as much as possible. Given that situational norms are represented as associations between normative behaviors and environments—and thus can be stored in our mental system—one may wonder how these norms become active in directing everyday human action. In the present research we address this intriguing question by examining the cognitive processes underlying the activation of normative behavior by environments.

A fair amount of investigation has demonstrated that social norms direct human action in specific environments. For instance, several correlational studies within the framework of attitude-behavior models have shown that self-reported measures of social norms predict behavior over and above attitudes, particularly when the behavior occurs in social settings. Of importance, the influence of these norms is supposed to be mediated by intentions (see for reviews, e.g., Ajzen, 1991; Eagly & Chaiken, 1993). Thus, the mediating role of in-

tention indicates the deliberate influence of situational norms on individual action. It suggests that conforming to beliefs about normative behavior occurs intentionally and consciously. The broad purpose of this paper is to extend this body of research. More specifically, based on the notion that situational norms are behavioral guides that people access and apply readily in producing behavior (Schank & Abelson, 1977; see also Bargh, 1990), we propose here that situational norms can also direct social behavior automatically. By using the term "automatic" we do not necessarily mean that the influence of norms on actual behavior is uncontrollable and demands no attentional resources at all; we suggest this process to be able to occur without conscious intent and awareness (Bargh, 1994). But how may this happen?

In a recent paper, Aarts and Dijksterhuis (2003) tried to provide a first answer on this question by testing whether behavior representations of situational norms (and resulting actions) are activated automatically by environments. In their experiments participants were briefly exposed to a picture of an environment (e.g., a library which the research sample associated with the norm of behaving silently). Some participants received the goal to visit the displayed environment at a later point in time, whereas others only scrutinized the interior features of the environment. The dependent variable consisted of a measure of mental accessibility of behavior representations related to the norm under investigation (response latencies to words, such as quiet and whisper assessed in a lexical decision task) and actual behavior (voice intensity assessed in a pronunciation task).

The results of these experiments indicated that exposure to the environment enhanced the accessibility of behavior representation and decreased the loudness of the voice, and that the accessibility measure mediated effects on overt behavior (see e.g., Aarts & Dijksterhuis, 2002; Bargh, Chen, & Burrows, 1996; Dijksterhuis & Bargh, 2001; Jeannerod, 1997; for a discussion on the direct relation between accessible behavior representation and actual overt behavior). However, these accessibility effects only occurred when participants had the goal to visit the environment. Without this goal, the exposure to the environment did not activate the behavior representations and resulting action. Importantly, thorough debriefing revealed that participants were not aware of these effects, indicating

that participants accessed and enacted the situational norm without conscious intent.

These findings fit into the general notion that environments are capable of priming normative behaviors when the environment is of immediate behavioral relevance (Barker, 1968; Fuhrer, 1990; Leff, 1978). According to this view, for instance, there would be little point in reducing the volume of one's voice when one passes (and sees) a library on one's way to the cafeteria, because this normative behavior is not relevant to one's current goal. In taking this functional view on social behavior one step further, Aarts and Dijksterhuis (2003) posited that the goal to visit a (socially relevant) environment causes individuals to activate (albeit implicitly) thoughts about how one should behave in the environment, thereby triggering the normative behavior associated with the environment automatically. In other words, when participants have the goal to visit a library their tendency to conform to social norms renders the representations of behaving silently more accessible.

However, closer observation in daily life indicates that individuals do not always access and act on well-established situational norms. There is research to suggest that conforming to social norms is more likely to occur among particular people or under specific circumstances (Cialdini, Reno, & Kallgren, 1990; Epley & Gilovich, 1999; Miller & Grush, 1984; Quinn & Schlenker, 2002; Trafimow & Finlay, 1996). In theory, then, this means that automatic activation of (representations of) normative behavior in environments is expected to emerge when two conditions are met: (1) one should have the goal to do things in the environment, and (2) one should be inclined to conform to social norms.

As an important extension of previous work, in the present article we report two experiments that investigated the conditional role of the tendency to conform to social norms in the automatic activation of mental representations of normative behavior by the environment. Experiment 1 was designed to investigate enhanced accessibility of representations of normative behavior after instigation of the goal to visit an environment as a function of individual differences in conforming to social norms. It is very well possible that some people are more chronically inclined to conform to social norms, and hence automatically access thoughts about how one should behave in the

respective environment, while others may be less inclined to do so. According to the reasoning presented above, this individual difference in conformity should determine whether the goal to visit the library enhances the accessibility of behavior representations of the norm of being silent.

In Experiment 2 we aimed to test whether situationally enhanced tendencies to conform to norms activate representations of the normative behavior by either priming conformity or not before participants received the goal to visit an environment.

EXPERIMENT 1

In the first experiment, participants were exposed to a picture of a library and were given the goal to visit the library or not. Next, a lexical decision task was assessed to tap the accessibility of action concepts representing the social norm of being silent. Following previous work of this kind, it was assumed that the time taken to recognize the action concepts in this task would reflect relative accessibility of representations of normative behavior (e.g., Aarts & Dijksterhuis, 2000; 2003).

As an important addition to previous studies on the role of situational norms in guiding behavior we assessed individual differences in predispositions to conform. People differ in their chronic tendencies to conform to social norms, because of differences in educational background, values, profession and so on (e.g., Beins & Porter, 1989; Freixanet, 1991; Levine & Russo, 1987; Stein, 1963; see also Asch, 1956). That is, some people are more inclined to access normative behavioral expectations (or are more “normatively controlled” according to the terminology suggested by Trafimow & Finlay, 1996) when encountering a social situation than others. For instance, in a correlational design Trafimow and Finlay (1996) established that participants who are more normatively controlled tend to base their behavior more strongly on social norms (cf. Miller & Grush, 1984). This suggests that representations of situational norms are more likely to be facilitated automatically for people with strong tendencies to conform to social norms.

On the basis of our previous research, we expected that the goal to visit the library would enhance the accessibility of behavior representation of the norm of behaving silent (that is, faster responses the be-

havioral concepts referring to the situational norm) compared to conditions in which this goal is not given. However, these accessibility effects are expected to be more pronounced for participants who are inclined to conform to social norms. Thus, we predicted that the enhanced accessibility of the situational norm resulting from goal instigation is conditional on participants' tendency to conform to norms.

METHOD

Participants and Design

Seventy-one undergraduates at a Dutch University participated in the experiment receiving 6 Euros in return. They were randomly assigned to either a "no goal" or "goal" condition.

Experimental Task and Procedure

On arrival at the laboratory, participants were told that they would take part in research conducted by different research teams, and that they had to perform several tasks on a computer. The computer program provided the instructions. Participants worked in separate cubicles. After some general instructions and practice with the computer program, participants started with the first task of the experiment.

Goal Manipulation Task. The first task was announced as the "Picture Task." Participants learned that they were going to be briefly exposed to a picture of a certain environment for 30 seconds. As a cover story all participants were told that they had to examine the picture and to answer some questions about it later. One half of the participants also learned they had to visit the environment after the experiment. Next, they were exposed to a picture of a library, showing the interior design of it (hence, this condition is referred to as the *goal* condition). The other half of the participants were also exposed to the library picture. However, instead of anticipating a visit to the environment, they were merely asked to carefully scrutinize the picture. Because these participants were not instigated with the goal to visit the library, this condition is referred to as the *no goal*

condition. The picture did not display people in the environment. Furthermore, the name of the respective environment was not mentioned.

Accessibility of Situational Norm. Next, participants were confronted with the lexical decision task in which they had to respond to 24 words, 12 of the words were existing words and 12 were nonsense words. For every word appearing on the screen they were asked to decide as fast and as accurately as possible whether the word was an existing word or not. Participants pressed keys on the PC's keyboard marked *yes* or *no*. All words appeared at the same location on the screen, preceded by a fixation point for 500 ms. Response latencies were measured in milliseconds from the onset of the words to the time participants pressed a key. The time interval between word-trials was 2 seconds. The words were presented in random order, and were preceded by 4 practice trials. Among the existing words four target words represented the normative behavior (i.e., being silent) of interest: *silent, quiet, still, whisper* (translated from Dutch). The other eight existing words were neither relevant for the concept of being silent nor related to the environment: *large, small, middle, begin, weak, strong, proceed, little* (translated from Dutch). The length of the words was controlled for. That is, the mean length of the *silence* and *control* words was equal ($M=6.0$ letters).

Individual Differences in Tendency to Conform. After the lexical decision task participants received several unrelated filler tasks (e.g., decision making tasks on gambling) designed by other research teams of the department. These filler tasks required much mental effort and it took participants a rather long time to complete the tasks (approximately 30 minutes). Next, a short questionnaire was administered in which participants responded to various items dealing with all kind of issues in daily life. It was told that we wanted to obtain issues on which students differ a lot, and that these issues were allegedly needed for forthcoming research. The experimenter stressed the importance of providing "straight" answers and told that all answers would be treated confidentially. Among these items there were three questions embedded that assessed participants' tendency to conform to social norms in general, namely "How important is it to you to adhere to social norms?" "How readily do you comply with social

norms?" and "Do you always try to conform to social norms as much as possible?". These three questions were accompanied by a 10-point scale, ranging from *not at all* (1) to *very much* (10). Because this measurement procedure may trigger thoughts about conformity in all participants, we decided to measure the tendency to conform at the end of the experimental session, that is, after the goal manipulation task (see Bargh & Chartrand, 2000, on the subject of unwanted effects of priming). The conformity measure did not differ between the two (no goal and goal) conditions, $F(1,69) = 0.38$, *ns.*, indicating that participants' reports on their general tendency to conform to norms were not affected by the goal manipulation. Accordingly, by averaging the responses to these three items ($\alpha = .86$), and on the basis of a median split, participants were categorized as either relatively "weak" or "strong" concerning their tendency to conform to social norms.

After the experimental session participants were thoroughly debriefed. The funneled debriefing indicated that participants were unaware of the hypotheses under investigation. In addition, they did not perceive any connection between the different tasks. Thus, if the different conditions affect the speed of responding to the critical words, these effects occur outside of participants' conscious awareness (Bargh & Chartrand, 2000). Finally, participants were told that the goal instructions were given to test our hypotheses, thereby deactivating the goal to visit the environment.

RESULTS

The average response latency on the four silence words and eight control words were subjected to a 2 (Goal: no vs. yes) \times 2 (Tendency to conform: weak vs. strong) between-participants \times 2 (Type of word: silence vs. control) within participants ANOVA. Incorrect ("no") responses across these words were excluded from the analyses (1.0 % out of all responses). The analysis yielded a marginal significant main effect for type of words, $F(1,67) = 3.66$, $p = .06$. More importantly, the Goal \times Tendency to conform \times Type of word interaction effect was highly significant, $F(1,67) = 7.48$, $p = .01$. No other effects were reliable, $F_s < 1.61$. Figure 1 presents the means of each cell in the design.

To gain further insight in the three-way interaction effect we conducted several contrast analyses. First, within the goal condition the analyses showed that the strong conformity group responded faster to silence words than the weak conformity group, $F(1,67) = 4.64, p = .03$, whereas response latencies did not differ between the two conformity groups for control words, $F < 1$. Within the no goal condition however, there were no significant differences between the two conformity groups for silence words and control words, $F_s < 1$. Furthermore, within the weak conformity group analyses revealed that participants' responses to both silence words and control words did not differ between the goal condition and the no goal condition, $F_s < 1$. However, within the strong conformity group responses were faster to silence words in the goal condition compared to the no goal condition, $F(1,67) = 4.79, p = .03$, while the difference between the two goal conditions was not reliable for control words, $F < 1$.

These findings were corroborated in a multiple regression analysis, in which the difference score between latencies on silence and control words was predicted by goal prime, conformity, and the goal prime \times conformity interaction term. All variables were standardized before the cross-product was computed. This analysis showed that the difference score was significantly predicted by the interaction term, β -interaction = $-0.245, p = .04$, while the main effects of goal prime and conformity were non-significant, β -goal prime = $-0.140, ns$; β -conformity = $-0.155, ns$. Within the goal condition, the predicted effect of conformity on latencies was significant, $\beta = -0.458, p = .006$. Within the no goal condition, the effect of conformity was unreliable, $\beta = 0.070, ns$.

DISCUSSION

The results of Experiment 1 support our predictions. The goal to visit a library enhanced the speed of responding to concepts representing the normative behavior associated with that environment. However, these effects only emerged for participants who have a relatively strong tendency to conform to social norms. These findings indicate that the goal of doing things in a library heightens the accessibility of the behavior representation of the social norm of behaving silently,

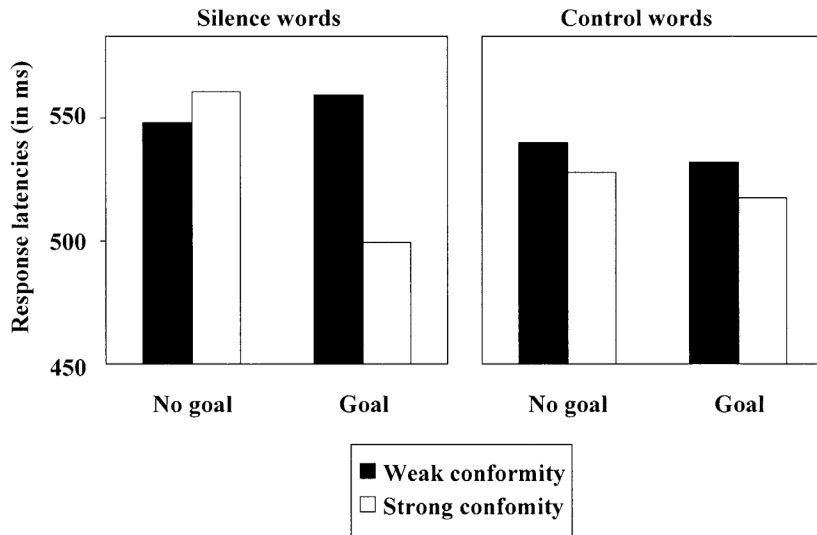


FIGURE 1. Response latencies as a function of goal, tendency to conform (based on a median split) and type of word (Experiment 1)

but mainly for those that have a habitual tendency to think in terms of how one should behave in a socially expected or normative way.

It may be argued that the measure of the tendency to conform is related to the endorsement of the situational norm at issue (behaving silently when entering a library), and hence, the obtained accessibility effects of conformity are due to differences in associative strength between the environment and normative behavior (see Dijksterhuis, Aarts, Bargh & van Knippenberg, 2000; Lepore & Brown, 1997; for a comparable idea in the realm of implicit social stereotypes). That is, people who are more inclined to conform to social norms may have more past experiences with accepting and enacting the norm of behaving silently in the library. As a consequence, they more readily access the norm upon visiting the environment. However, if the obtained effects on accessibility of representations of the situational norm are caused by differences in tendencies to conform to norms, as we hypothesize, and not by differences in associative strength, then these effects should also emerge if conformity would be temporarily enhanced. Accordingly, one way to rule out this account is to

demonstrate that the results obtained in Experiment 1 do occur if the tendency to conform is primed.

Recent research shows that participants' tendency to conform to normative behavioral expectations can be influenced by priming them with categories semantically related to conformity (Epley & Gilovich, 1999; Pendry & Carrick, 2001). For instance, Epley and Gilovich (1999) exposed their participants to words (e.g., adhere, comply, conform) related to conformity or not and then placed them in a social situation (overtly assessing the evaluation of a filler task in the present of a group of confederates). Results indicated that participants primed with the tendency to conform tended to go more along with the views expressed by the group compared to control participants. Importantly, participants were not aware of these effects. These results thus suggest that priming of conformity caused participants to automatically think about, and apply the behavioral norm pertaining to the situation at hand.

The automatic activation of situational norms (and corresponding behavior) should follow the same basic mechanism. Heightened accessibility of representations of normative behaviors associated with a specific situation or environment upon the goal to do things there will emerge if the tendency to conform to social norms is enhanced by priming. In that case, we hypothesize, people are more likely to automatically access knowledge about how one should behave in a normative way, thereby triggering the representations of the situational norm. A second experiment was designed to test this idea.

EXPERIMENT 2

In the second experiment participants were primed with either words related to conformity or words unrelated to conformity. Furthermore, because the previous experiment demonstrated the preconditional role of the goal to visit an environment in facilitating access to representations of normative behavior associated with this environment (see also, Aarts & Dijksterhuis, 2003; Experiments 1 and 2) in this experiment all participants received the goal of going to a library displayed on a picture. Finally, accessibility of mental representations of the normative behavior were assessed in a lexical decision task. Our prediction is straightforward: We expected that priming of conformity

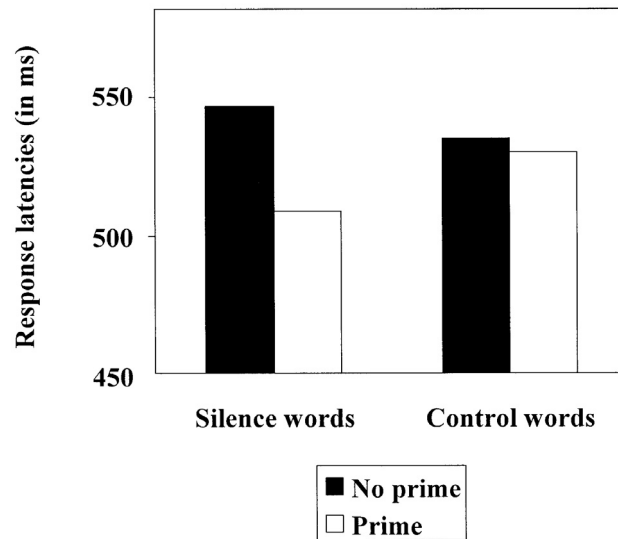


FIGURE 2. Response latencies as a function of conformity prime and type of word (Experiment 2)

would enhance the mental accessibility of words related to the behavioral norm of behaving silently, relative to no conformity priming.

METHOD

Participants and Design

Fifty undergraduates at a Dutch University participated in the experiment receiving 4 Euros in return. They were randomly assigned to either a conformity prime or no conformity prime condition.

Experimental Task and Procedure

On arrival at the laboratory, participants were told that they would take part in research conducted by different research teams, and that they had to perform several tasks on a computer. The computer program provided the instructions. Participants worked in separate cu-

bicles. After general instructions and some practice with the computer program, participants were confronted with the first task of the experiment.

Priming Conformity. The priming procedure consisted of a task in which participants were exposed to single words. For this task, participants were told that we were interested in the speed of reading words of different lengths on a computer screen, and that we would like to establish a database of words for upcoming research. Therefore, they were asked to read several words within 1 second. When they read the word they had to press a designated key on the keyboard. All words were erased after 1 second. In total, 16 words (including 4 practice trials) appeared on the screen. For one half of the participants six of these words were related to conformity (adapt, comply, obey, norms, conform, adhere; translated from Dutch; see also Epley & Gilovich, 1999). In the no conformity prime condition participants were not exposed to these words, but instead to words unrelated to conformity (deliver, consume, take, assist, apply, settle; translated from Dutch). The length of the words was controlled for. That is, the mean length of the related and unrelated words to conformity was equal ($M = 9.0$ letters). Response latencies (that is, reading time) on these words did not differ between the two conformity prime conditions, $F(1,48) = 0.49$, ns. ($M = 683$ ms).

Exposure to Environment. After the reading task participants were confronted with the "Picture Task" (see Experiment 1). All participants were told that they had to visit the environment after the experiment. After these instructions they were exposed to a picture of the library.

Accessibility of Situational Norm. Next, participants took the lexical decision task in which they had to respond to 24 words. Twelve of the words were existing words and 12 were nonsense words. The mean response latencies across the four silence words and eight control words served as the dependent variable (see Experiment 1).

After the experimental session participants were thoroughly debriefed. As in the previous study, the funneled debriefing indicated that participants were unaware of the hypotheses under investigation. Moreover, they did not perceive any connection between the three different tasks.

RESULTS AND DISCUSSION

The average response latency on the four silence words and eight control words were subjected to a 2 (Conformity prime: no vs. yes) between-participants \times 2 (type of word: silence vs. control) within-participants ANOVA. Incorrect (“no”) responses across these words were excluded from further analyses (1.2 % out of all responses). The main effects of conformity and type of words were not reliable, $F_s < 1.48$. However, the Conformity \times Type of word interaction effect was significant, $F(1,48) = 5.14, p = .03$. Means are presented in Table 2.

Simple effect analysis showed that response latencies differed between conformity prime conditions for silence words, $F(1,48) = 4.37, p = .04$, but not for control words, $F < 1$. These results replicate and extend the findings of Experiment 1: Priming conformity caused participants to access the representations of the environment-related behavioral norm upon the goal to visit the environment.

GENERAL DISCUSSION

In a recent reading of classic studies in social psychology, Wegner and Bargh (1998) propose that most situational influences on behavior observed in these studies might have occurred without conscious intent and awareness. For instance, “. . . in the Asch conformity paradigm, participants also show a lack of awareness of the influence that the situation has in determining their behavior” (Wegner & Bargh, 1998; p. 447). In most of these classic studies on social influence the empirical question as to whether conforming to social norms occurs automatically was not explicitly addressed. Expanding on previous work of automatic activation of normative behavior in social environments (Aarts & Dijksterhuis, 2003, see also Epley & Gilovich, 1999), in the present research we tested, and provided supportive evidence for this contention. Specifically, the results of two experiments suggest that people’s thinking and doing automatically can move in the direction to social norms associated with a particular goal-relevant (social) situation when chronic or temporarily primed tendencies to conform to norms are active.

An important point that warrants further clarification is how the tendency to conform modulates the automatic enactment of norma-

tive behaviors in social situations. One possibility is that conformity causes people to *use the norm* pertaining to the situation at issue. For instance, in the Epley and Gilovich (1999) studies, participants had no prior association between the situation and norm, and hence, the situational norm could not be directly accessed. Most likely, conformity primed participants in these studies automatically thought in terms of conforming to social norms and, once the situational norm was communicated and available, they readily applied that norm to guide their own behavior.

It may be questioned, though, whether conformity effects on normative behavior can result from differences in the activation rather than the application of the representation of the behavioral norm. In this respect, our studies indicated that conformity led to enhanced accessibility of the situational norm at encoding (assessed in a lexical decision paradigm). According to the present line of reasoning, under these conditions people are more likely to (albeit implicitly) think in terms of how one should behave when visiting a particular environment, thereby activating the representations of the behavioral norm associated with the environment. As previous research on this matter has clearly shown, these behavior representations provide the knowledge necessary for directly guiding one's own situationally appropriate behavior (Aarts & Dijksterhuis, 2003; see also Dijksterhuis, Aarts, & Smith, in press). This idea coincides with the perception–action link framework recently postulated to account for direct effects of social stereotype and trait activation on overt behavior (see for a review, Dijksterhuis & Bargh, 2001). Importantly, then, our analysis, as well as the results of two studies, suggest that automatic effects of conformity on normative behavior in social environment can be directly emerge from the *mere activation of the norm*.

In the introduction we discussed two ways in which social norms can affect behavior: through normative social influence and informational social influence. The difference between these two types of influence basically lies in the goals driving the effect of norm activation on behavior, namely the goal of social approval and the goal of effective action, respectively (see also, Cialdini & Trost, 1998). Because the tendency to conform may exemplify the operation of both types of goals, normative as well as informational influence may account for the present findings. It may be noted though that earlier research es-

tablished that the act of behaving silent in libraries is more strongly predicted by subjective norms (representing normative influence) than by descriptive norms (denoting informational influence), thus favoring a normative social influence account (Aarts & Dijksterhuis, 2003). However, because these data were correlational in nature, more research is needed to unravel the role of normative and informational influence in the automatic activation of situational norms and resultant behavior by environments.

In almost three decades of research several investigators on attitude-behavior models have taught us a lot about the role of conformity tendencies in enacting social norms. In general, studies in this area have posited and confirmed that the extent to which one complies with normative behavioral beliefs affects subsequent behavior intentionally and consciously (see e.g., Eagly & Chaiken, 1993). The present process-oriented approach on conformity and normative behavior extends this investigation in two major ways. First, our studies indicate that tendencies to conform to norms are capable of causing people to automatically access representations of the normative behavior related to the social situation at hand. Second, we showed that these accessibility effects can result from more chronic as well as temporarily activated tendencies to conform to norms. Taken together, then, our approach may be useful to understand and examine how and why normative behavior in particular social situations is more likely to occur among particular people and under specific circumstances without conscious intent.

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