Reducing Stereotype-based Judgments: The Impact of Habitual Stereotype Use

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The reported experiment investigated whether an individual's habitual use of social stereotypes influenced the impact of the presentation of stereotype-disconfirming information on stereotype-based beliefs. Participants were first categorized as either high or low users of stereotypes using a diary task. They were then presented with stereotype-disconfirming information about members of a specific target group and subsequently evaluated a member of the group about which disconfirming information had been presented and a member of each of two other stereotyped groups about which no information had been presented. Relative to control participants, low users of stereotypes made less stereotype-based judgments only for the member of the target group about which disconfirming information had been received whilst high users showed a generalized reduction in their use of stereotype-based judgments across all the targets. These differences were not due to differential processing of the presented information; neither reading time nor memory measures differentiated between high and low users. Results are discussed in terms of both the use of stereotypes and stereotype change in general.

There is now a large body of literature demonstrating that the presentation of stereotype-disconfirming information about members of a target group can lead perceivers to rely less on stereotypes in evaluating both individual members of that target group and the target group, in comparison to perceivers who receive no disconfirming information (e.g., Johnston & Hewstone, 1992; Kunda & Oleson, 1997; Seta & Seta, 1993; Weber & Crocker, 1983). Attention has been paid to identifying those conditions under which such reduction in stereotype-based beliefs is most likely to occur, considering factors such as the dispersion of the disconfirming information across target exemplars (e.g., Johnston & Hewstone, 1992; Hewstone, Hassebrauck, Wirth, & Waenke, 2000), and the perceived homogeneity of the target group (e.g., Hewstone, Johnston & Aird, 1992). Somewhat surprisingly, however, little attention has been paid to individual differences amongst perceivers. The present research investigates whether differences in perceivers' overt use of stereotypes influences the impact of stereotype-disconfirming information on stereotype-based beliefs.

Given the prevalence of strong social norms against the use of many social stereotypes (Gaertner & Dovidio, 1986; Heinemann, Pellander, Vogelbusch, & Wojtek, 1981; Yzerbyt, Leyens & Schadron, 1997; Yzerbyt, Schadron, Leyens, & Rocher, 1994), their overt use by perceivers in evaluating others is a strong statement. Individuals who publicly express stereotypic beliefs often risk disapproval and sanctions from others (Adler, Starr, Chideya, Wright, Wingert, & Haac, 1990), although individuals do differ in the extent to which they agree that applying a stereotype to members of a target group is acceptable (Pressly & Devine, 1997). Greater understanding of why perceivers differ in their overt use of stereotypes is needed. The focus of the present research, however, is on the impact of differences in perceivers' use of stereotypes on their response to the presentation of stereotype disconfirming information about specific targets and their subsequent endorsement of stereotype-based beliefs.

A non-stereotypic, or non-prejudiced, response may disguise different motivations to avoid stereotype use. It may reflect either compliance with, or internalization of, society's non-prejudiced values (Crosby, Bromley, & Saxe,1980; Dovidio & Gaertner, 1991). Plant and Devine (1998) identified both internal and external sources of motivation to respond without prejudice. Internal sources of motivation derive from internalized and personally important non-prejudiced standards whilst external motivations derive from social pressures to comply with non-prejudiced norms. Such different sources of motivation to respond in a non-prejudiced manner may lead to differential patterns of behavior. Indeed, Devine (1989) suggested that the overt use of stereotypes differentiated between high and low prejudiced individuals. Those motivated primarily by internal

factors should strive against prejudice and stereotyping in all situations whilst those motivated by external factors should be less prejudiced and rely less on stereotypes only in situations where there is potential external evaluation of their responses.

High prejudiced individuals monitor situations and their own behavior to produce responses in accordance with salient norms, even if these norms are less tolerant of prejudice than their own personal standards (Devine, Monteith, Zuwerink, & Elliot, 1991). Plant and Devine (1998) showed those with high external motivation not to be prejudiced to adjust their responses according to situational factors, using stereotypes more when responding in a private than a public setting. Those with high internal motivation not to be prejudiced, however, showed no difference in their endorsement of stereotypes in private and public settings. Similarly, Monteith, Deenan and Tooman (1996) also demonstrated the impact of salient social norms against prejudice use. When a social norm against stereotype use was made salient by a confederate, individuals' judgments were less stereotypic than when no such norm, or a norm promoting stereotype use, was made salient, regardless of the individuals' prejudice level. There was still, however, variability in the individuals' use of stereotype-based judgments in such settings suggesting that even when norms promoting stereotype use are salient, there are individual differences in the use of those stereotypes.

Low habitual users of stereotypes are, accordingly, predicted to be internally motivated to avoid using stereotypes and being prejudiced, as are low prejudiced individuals (Devine et al., 1991). As such the use of stereotypes by these individuals should not differ as a function of social norms. Such individuals should attend to, and internalize, relevant information that could increase the accuracy of their perceptions of others. Accordingly low users are predicted to lessen their stereotype-based beliefs in response to the presentation of stereotype-disconfirming information about a stereotyped group. Situational norms against stereotype use are unlikely to influence the responses of these individuals, however, since their internal motivation to avoid stereotype use is high. High habitual users of stereotypes, in contrast, are predicted not to be internally motivated to respond in a non-prejudiced manner. Such individuals are predicted, however, to be externally motivated to avoid social disapproval and sanctions and accordingly to be sensitive to situational factors that indicate the inappropriateness of stereotype use, as are high prejudiced individuals (Devine et al., 1991). High users of stereotypes are predicted to lessen their stereotype-based judgments in response to salient norms against stereotype use. Such individuals are not, however, motivated to attend to, and internalize, specific stereotype-disconfirming information. Reduction in the use of stereotypes by high users is, therefore, predicted to result from compliance with, rather than internalization, of non-prejudiced views.

In summary, high and low stereotype users are both predicted to demonstrate a reduction in stereotype-based judgments, but under different conditions. It is predicted that low users will be less stereotypic in their judgments in response to specific disconfirming information but not in response to a social norm not to use stereotypes. In contrast it is predicted that high users will be less stereotypic in their judgments in response to a salient norm against stereotype use but not in response to specific stereotype-disconfirming information.

All participants in the present research were first categorized as high or low users of stereotypes. Experimental participants were then presented with disconfirming information about a specific target group before evaluating a member of the group about which disconfirming information had been presented and a member of each of two other stereotyped groups about which no information had been presented. The extent to which these judgments are stereotyped-based is compared to control participants who received no disconfirming information.

Control participants were also categorized as high or low stereotype users; differences at baseline between high and low users render meaningless comparisons against non-categorized control participants. If, as predicted, high stereotype users' responses are primarily a function of situational norms regarding stereotype use, experimental participants should be less stereotypic than control participants about all targets, regardless of whether or not specific disconfirming information was presented, provided that the experimental situation is seen as one in which stereotype use is not appropriate. Similarly, if, as predicted, low stereotype users' responses are primarily a function of the specific information provided, then presentation of stereotype-disconfirming information about a specific target group should lead low users to conclude that their perceptions of this group are inaccurate and need to be adjusted through incorporation of the presented disconfirming information. Accordingly their evaluation of a member of this group will be less stereotype-based than that of control participants. In the absence of specific disconfirming information about the other target groups no differences between experimental and control participants in evaluations of members of these groups is predicted. Although aware of salient social norms, low users' responses are unlikely to be influenced by a norm not to use stereotypes given their own high motivation to avoid stereotype use.

Reading time and recall of the presented information were recorded in order to consider whether high users of stereotypes simply paid less attention to the presented information than did low users.

Central to the research hypotheses is the claim that the experimental set-up makes salient a norm against stereotype use. Previous research has suggested that the experimental set-up can indeed make salient social norms regarding stereotype use (Plant & Devine, 1998, Phase 3). Two pilot studies supported this suggestion for the present experimental set-up. In the first pilot study 9 participants were asked to what extent they thought it would be considered acceptable (1 = "not at all"; 7 – "extremely") to use their stereotypes in describing others in a variety of situations (with friends; with strangers; in a tutorial; taking part

in a social psychology experiment; at home; at work). Mean ratings were significantly lower for taking part in a social psychology experiment than any other condition ($F(5,40)$, = 4,48, $p<.01$; Ms = 1.78 vs. 4.67, 3.33, 2.78, 4.44 and 3.11). In the second pilot study 15 participants were asked to consider 5 situations (chatting to friends over coffee; at the pub; forming impressions of strangers in a social psychology experiment; at work; taking part in a social psychology experiment in which one is asked to describe a members of a social group after receiving disconfirming information about members of another social group) and rate whether the situation would impact on the use of stereotypes in describing others (-3 – "decrease stereotype use"; 0 – "no impact"; +3 – "increase stereotype use"). Importantly the final situation was very similar to the experimental design of the present research. Results demonstrated a significant effect of situation, $F(56)=14.82$, $p<.0001$, with lowest ratings given to the two social psychology experimental situations with the final situation (describing the current experimental set-up) being rated lowest (*Ms* = 1.07, 2.47, .553, 1.33 and -.886). Our pilot studies indicate that taking part in social psychology experiments, especially ones similar to the current research, do indeed evoke a norm against stereotype use.

Method

Participants

Two sets of participants volunteered to participant in studies investigating social perception in return for payment. All participants were undergraduate students at the same university. Participants were allocated to the control or experimental condition. There were 52 participants in the first study, 30 in the experimental group and 22 in the control group. There were 79 participants in the second study, 44 in the experimental group and 35 in the control group. Study 2 was a replication of Study 1 with the addition of two covert measures. The procedural differences between the studies - covert timing of the participants reading of the stimulus materials and a surprise recall task in Study 2 – could not have affected the critical responses to the targets. Accordingly data from the two studies have been pooled to increase statistical power.

Stimulus Materials

A diary task, based on similar measures employed in past research (e.g., Macrae, Milne, & Bodenhausen, 1994), was developed to categorize participants as habitual high or low users of stereotypes. Two pilot tests of this measure were conducted using targets from groups previously shown to have strong, easily identified, stereotypes (Hewstone et al., 1992; Johnston & Hewstone, 1992). For each target participants were given a page with the target's name at the top (eg., James, a skinhead) and the beginning of a diary entry, "Friday night was much the same as every other Friday night this year...." to complete. Nineteen students completed diary entries for *a chartered accountant, a motor mechanic, a schizophrenic* and *a skinhead* and 8 students for *a homosexual, a schizophrenic* and *a general practitioner.* Two coders[1] blind to the aims of the study independently rated each diary entry according to the extent to which it was based on the group stereotype (1 = 'not at all'; 7 = 'extremely'). Reliability across the two coders was high for each pilot test (r = .734 and .744) so a mean rating was calculated for each diary entry. Participants stereotypicality ratings were similar for each target's diary entry (Cronbach's alpha = .736 and .753); those participants who used stereotypes in describing a member of one target group also used stereotypes in describing members of other groups. This consistency across stereotyped targets allows participants to be categorized as high or low stereotype users without having to include the specific target group of interest and hence alerting participants to the focus of the study.

The target group about which stereotypic information was presented, *people with schizophrenia,* was one with an easily identifiable negative stereotype (Johnston, 1996; Neuberg & Fiske, 1987). Behaviors illustrating each of 4 stereotypic (e.g., threatening, anxious), 4 counter-stereotypic (e.g., sociable, assertive) and 4 neutral traits about members of this group were combined into a letter, allegedly written by a psychiatrist, describing life for men living in a local residential home for individuals with schizophrenia (Johnston, 1996). For the 4 stereotypic and counter-stereotypic traits, two of the behaviors were stereotype-consistent and two stereotype-inconsistent.

Procedure

Participants were recruited to take part in a project investigating perceptions of groups in society and were tested individually. Each participants first completed the initial diary task which included entries for *a chartered accountant, a skinhead* and *a motor mechanic.* Instructions given to participants emphasized that the researchers were interested in their thoughts about the activities of members of the target groups and that there were no correct or incorrect responses. Anonymity of responses was also emphasized. The completed diaries were removed by an experimenter. Experimental participants were then given the information about members of the target group, *individuals with schizophrenia,* and were told that they would be asked some questions about the material they read. After reading the information participants were indeed asked some questions about the material read. Control participants were given no information to read, but rather completed an unrelated filler task. For the second group of experimental participants (n=44) reading time for the presented material was covertly recorded by the experimenter. All participants, in both the experimental and control conditions, subsequently completed the second diary task that included entries for *a homosexual, a general practitioner* and, importantly, *an individual with schizophrenia.* Finally, the second set of experimental participants were given a surprise recall task for the presented information. After completion of the dependent measures, participants were probed for suspicion that the diary task and the impression task were related. No participants reported any such suspicions. Participants were then fully debriefed.

Results

Categorization as High and Low Stereotype Users

Participants were categorized as high or low stereotype users on the basis of their responses on the first diary task. Two coders blind to experimental conditions independently rated each diary entry according to the extent to which it was based on the stereotype of the target group. Inter-coder reliability was high (alpha=.756). A mean rating across the three targets was therefore calculated for each participant and a median split of these means used to categorize participants as high (N=52) or low (N=72) stereotype users. This median split resulted in unequal numbers of high and low users as a result of a number of participants having the median score. In consultation with the coders it was decided that these median score participants should be categorized as low users of stereotypes to reflect the feeling that overall the diary entries were not extremely stereotypic in tone.

A 2 (study:1/2) x 2 (use: high/low) x 2 (condition: control/experimental) between-subjects ANOVA on the mean scores revealed main effects of study, $F(1,123)= 4.79$, $p<.01$, and use, $F(1,123)=185.72$, $p<.0001$. As expected, high users relied more on stereotypes than did low users (*M*s = 5.51 vs. 4.32). Participants in study 2 were slightly more stereotypic in their diary entries than were participants in study 1 (*M*s = 5.03 vs. 4.79) but there were no interactions between study and other factors. Importantly also, there were no differences in ratings across experimental conditions; any subsequent differences can then be attributed to the presentation of stereotype-disconfirming information.

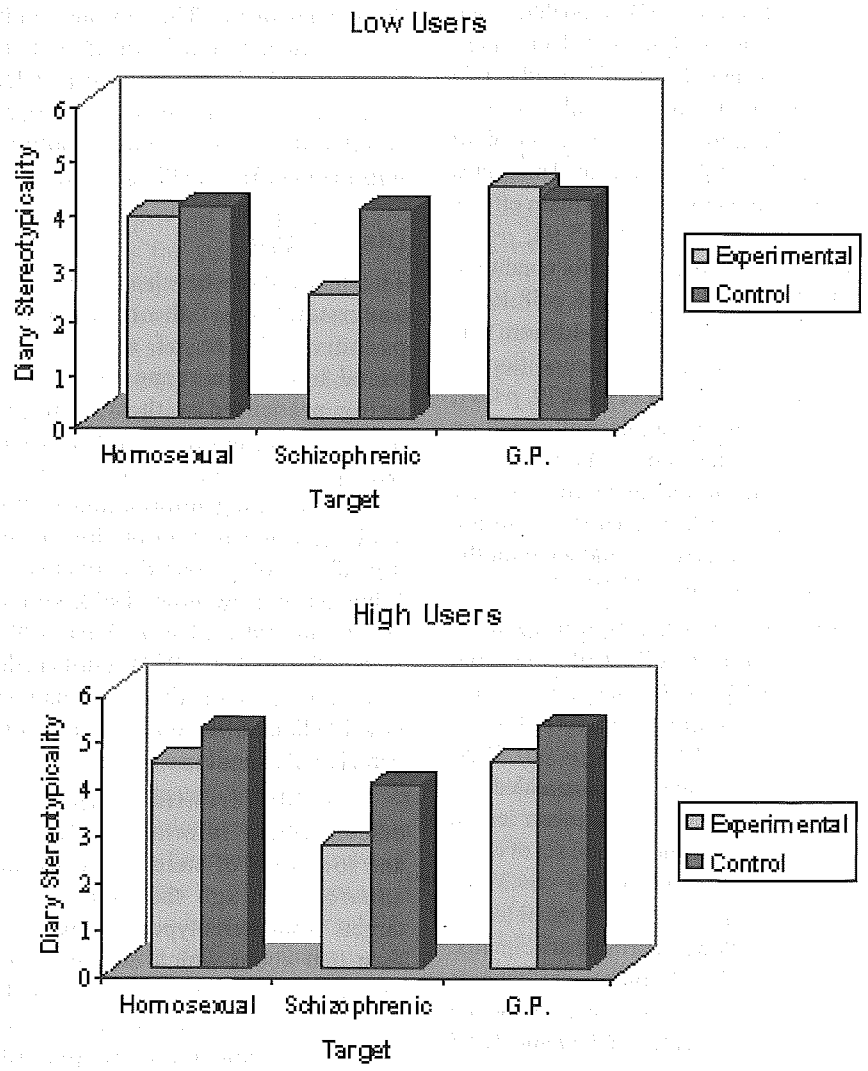
Stereotype-based Judgments

A 2 (study: 1/2) x 2 (use: high/low) x 2 (condition: control/experimental) x 3 (target: schizophrenic/G.P./ homosexual) ANOVA with repeated measures on the final factor revealed main effects of study, $F(1,122)=8.58$, $p<.05$ (*M*s = 3.79 vs. 4.27), use, $F(1,122)=9.87$, $p<.01$ (*M*s = 4.28 vs. 3.77), condition, $F(1,122)=19.47$, $p<.0001$ (*M*s = 4.39 vs. 3.67) and target, $F(2,244)=59.44$, $p<.0001$ (*M*s = 4.34, 3.21 and 4.53). These effects were qualified by a significant 2-way condition by target interaction and a marginally significant 3-way condition by use by target interaction, $F(2,244)=2.97$, $p=.053$. To examine this 3-way interaction further separate 2 (condition: control/experimental) x 3 (target: schizophrenic/G.P./ homosexual) ANOVAs with repeated measures on the second factor were conducted for the high and low stereotype users. Results are shown in Figure 1.

High Users: A 2 (condition: control/ experimental) x 3 (target: schizophrenic/ G.P./ homosexual) ANOVA with repeated measures on the final factor revealed main effects of condition, $F(1,56)=13.19$, $p<.001$, and target, $F(2,112)=39.04$, $p<.0001$. Importantly, however, there was no interaction between condition and target. The diary entries from the experimental participants were less stereotypic than those from the control participants (*M*s = 3.89 vs. 4.74; schizophrenic: *M*s = 2.64 vs. 3.92; G.P.: *M*s = 4.45 vs. 5.18; homosexual: *M*s = 4.40 vs. 5.12). Diary entries for the schizophrenic target were lower than those for the G.P. and the homosexual, which did not differ from one another (*M*s = 3.31 vs. 4.79 and 4.86).

Low Users: A 2 (condition: control/experimental) x 3 (target: schizophrenic/G.P./ homosexual) ANOVA with repeated measures on

Figure 1. Stereotypicality of Diary Entries as a function of Stereotype Use, Experimental Condition and Target.



the final factor revealed main effects of condition, F(1,70)=3.83, p=.05, and target, F(2,140)=23.29, p<.0001, that were qualified by a significant condition by target interaction, $F(2,140)=13.22$, $p<.0001$. Post-hoc tests (Tukey, $p<.05$) revealed a significant difference between the control and experimental conditions for the schizophrenic target (*M*s = 3.94 vs. 2.34) but not for either the G.P. (*M*s = 4.15 vs. 4.35) or the homosexual (*M*s = 4.01 vs. 3.83) targets. There was no difference in the ratings between the target groups for the control participants (*M*s = 3.94, 4.15 and 4.01) but for experimental participants ratings for the schizophrenic target were lower than those for the G.P. and homosexual which did not differ from one another (*M*s = 2.34 vs. 4.35 and 3.83).

Diary length

In addition to the stereotypicality of each diary entry, diary length was also considered. For each participant a mean word length for the first set (Cronbach's alpha = .863) and the second set (Cronbach's alpha = .888) of diary entries was calculated. A 2 (study: 1/2) x 2 (condition: experimental/control) x 2 (use: high/low) x 2 (diary set: first/second) ANOVA with repeated measures on the final factor revealed main effects of experiment, $F(1,121)=5.94$, $p<.05$ (*M*s = 73.96 vs. 61.77), and for condition, $F(1,121)=14.94$, $p<.001$ (*M*s = 58.19 vs. 77.54). The effect of condition was qualified by a significant condition by set interaction, $F(1,121)=10.79$, $p<.01$, and a marginally significant condition by use by set interaction, $F(1,121)=3.53$, $p=.06$. To investigate this 3-way interaction further separate condition by set ANOVAs were conducted for the high and low users.

High users: For the high users there was a significant effect of condition, $F(1,54)=10.34$, $p<.01$, that was qualified by a significant condition by set interaction, $F(1,54)=12.56$, $p<.001$. Post-hoc analysis (Tukey, $p<.05$) revealed that there was a difference in mean length between the first and second set of diary entries for experimental (*M*s = 64.37 vs. 50.99 words) but not for control (*M*s = 71.85 and 79.37 words) participants. Experimental and control participants did not differ on mean length for the first set of diaries (*M*s = 64.37 and 71.85 words) but for the second set of diaries, entries were significant shorter in the experimental than control condition (*M*s = 50.99 vs. 79.37).

Low users: For the low users there was a significant effect of condition only, $F(1,71)=7.82$, $p<.01$. Participants in the control condition wrote longer diary entries than did participants in the experimental condition (*M*s = 76.75 vs. 56.01).

Reading time

A single factor (use: high/low) between-subjects ANOVA revealed no significant effect (*M*s = 193.29 vs. 167.09 seconds for the low and high users).

Recall

The proportion of stereotypic and counter-stereotypic items recalled from the presented information was calculated for each participant and subjected to a 2 (use: high/low) x 2 (recall: stereotypic/counter-stereotypic) ANOVA with repeated measures on the second factor. This revealed only a main effect of recall, $F(1,42)=4.66$, $p<.05$. Both high and low users recalled a higher proportion of the presented counter-stereotypic than stereotypic information (*M*s = .638 vs. .538).

Discussion

The present research extends our understanding of the reduction in perceivers' use of stereotype-based beliefs in response to their being presented with stereotype-disconfirming information. Consistent with past research, the presentation of disconfirming information in this study resulted in a reduction in the use of stereotype-based beliefs (e.g., Johnston & Hewstone, 1992; Kunda & Oleson, 1997; Seta & Seta, 1993; Weber & Crocker, 1983). Further, the pattern of this reduction in stereotype-based beliefs differed as a function of perceivers' overall use of stereotypes.

The differential impact of disconfirming information on high and low users of stereotypes became apparent through the inclusion of targets from stereotyped groups other than that about which disconfirming information had been presented. If, as in previous research, participants had only been asked to provide judgments of a target from the group about which disconfirming information had been presented *(individuals with schizophrenia)*, no differences between the high and low users would have been seen. Both high and low users evaluated this target less stereotypically than did matched controls who received no disconfirming information. For the other targets there were differences between the high and low stereotype users. High users showed less stereotype-based evaluations of *all* the targets relative to matched controls. Low users showed no differences between experimental and control participants in the reliance on stereotypes in evaluations of these additional targets.

The observed differences between the high and low stereotype users are consistent with differences in the motivation of these perceivers to use stereotypes and with differential forces, both internal and external, leading to less reliance on stereotype-based beliefs (Plant & Devine, 1998). High stereotype users reduction in stereotype-based judgments for all of the targets, relative to control participants, is consistent with compliance to external forces not to stereotype, such as a salient situational norm, evoked by the experimental set-up, not to use stereotypes. In contrast low users only reduced their stereotype use for the target from the group about which disconfirming information was presented. Such a response is consistent with low users being internally motivated not to use stereotypes in describing others, such that activation of a norm against stereotyping did not influence their judgments, but to be responsive to specific stereotype-relevant information.

It is worth noting that in this study the categorization of participants as high or low users of stereotypes took place within the same experimental setting as the presentation of the stereotype disconfirming information[2]. Our pilot studies indicated that the strongest norms against stereotype-use would be in situations where stereotype-disconfirming information was being presented – that is, in the experimental phase of our study – but that merely being in an experimental situation would still evoke norms against stereotype use in comparison to many other everyday

situations. Accordingly, we can speculate that the use of stereotypes in the first diary task, used to categorize participants as high or low users of stereotypes, was lower than in everyday situations, at least for the high stereotype users since these individuals would already have been reducing their typical endorsement of stereotypes as a consequence of being in an experimental paradigm. There was, however, still considerable variation in the endorsement of stereotypes in this first phase of the study (Monteith et al., 1996), and the median split was used to categorize our participants will likely have captured the differences between high and low stereotype endorsers, even if the absolute use of stereotypes was reduced in this setting.

Perhaps more noteworthy, given this initial impact of the experimental setting, is the fact that there was any further reduction in the use of stereotypes, relative to control participants, for our high users of stereotypes. One might have predicted that simply being in the experimental setting made salient norms against stereotype use (as indicated by our pilot studies) and accordingly reduced the use of stereotypes, for all targets, by the high stereotype endorsers. Accordingly, there would have been no difference in the stereotypicality of the second set of diaries between the high stereotype users in the experimental and control conditions. That there was indeed a difference between these groups suggests that presenting stereotype-disconfirming information about a specific target group did indeed further make salient the situational norm against stereotype use for our high stereotype users, again consistent with our pilot study data. In addition, it also demonstrates the potential extent to which stereotype use can be reduced by this group.

Neither of the process measures (reading time; recall) differentiated between the high and low users. It is difficult to draw strong conclusions from this null finding, especially given the relatively low number of participants for whom the process measures were included. However, the lack of difference does not offer any support for the hypothesis that the differential pattern of findings for the high and low users was the result of differential processing of the presented information (Johnston & Coolen, 1995).

Both high and low stereotype users showed a reduction in stereotype-based judgments after the presentation of disconfirming information but the different processes underlying that reduction may have important social implications, for example with respect to the longevity of the effects. Attitude change research has shown greater persistence if change is brought about under informative rather than compliance conditions (e.g., Cook & Flay, 1978). In the present research high users appeared to be responding under compliance to social norms whilst low users were responding to the specific information presented. Accordingly it would be predicted that the reduction in the use of stereotypes would be longer lasting for the low than the high users. In addition, if high users were simply suppressing stereotype use in their evaluation of others, as might be indicated by their shorter, and less stereotype-based, diary entries, then these individuals may be prone to rebound effects (Macrae, Bodenhausen, Milne & Jetten, 1994) and greater use of stereotypes once the situational norms opposing stereotype use are removed.

The reported findings have implications for stereotype use and stereotype change. Identifying individual differences in the responsiveness of perceivers to stereotype-disconfirming information may be of practical use to researchers and social legislators. Monteith, Zuwerink and Devine (1994) suggested that stereotype change strategies were often ineffective because they were not targeted appropriately for their specific audiences. Understanding the influence of individual differences on perceivers' responses to stereotype-disconfirming information may enable the development of more effective stereotype change strategies targeted at specific perceivers. The present research demonstrated that the impact of stereotype-disconfirming information may differ as a function of perceivers' habitual stereotype use. Further research is needed to understand more fully why perceivers differ in their use of stereotypes and the impact of such differences on stereotype use and stereotype change.

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Notes

1. A pool of five coders was employed. To eliminate the possibility that coders formed impressions of participants based on one diary entry and generalized that impression to subsequent diary entries hence resulting in consistency of ratings across targets for each participant, sets of diaries were rated by target rather than by participant. In addition, no two diary entries from the same participant were coded successively.
2. I am grateful to an anonymous reviewer for bringing this point to my attention.

Acknowledgement
This research was supported by University of Canterbury Research Grant #2202086.

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