FlashReport

Ideology is related to basic cognitive processes involved in attitude formation

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ABSTRACT

Ideological orientation shapes the perception of the social world and conservatism is associated to an increased weighting of negative over positive information. In the present work we explored how this ideology-based difference is also related to basic cognitive processes involved in attitude formation. In particular, we hypothesized that conservatives, as compared to liberals, would show stronger illusory correlation effects when negative information is relatively infrequent. In Study 1 we employed the typical illusory correlation paradigm (Hamilton & Gifford, 1976) and results confirmed the hypothesis: conservatives developed more negative impressions toward the minority group and showed consistent memory biases. In Study 2, positive information represented the infrequent dimension and in this case no ideology-based difference was observed. Overall, findings indicate that when exposed to numerically different novel groups and negative behaviors are infrequent, illusory correlation effects are accentuated among individuals embracing conservative rather than liberal views of the world. This result may help to understand why conservatives tend to form more negative attitudes toward social minorities.

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Stereotypes about social groups often reflect exaggerations of real group differences (Brigham 1971; Ford & Stangor, 1992), but they may also be formed even in the absence of any real difference between the groups. This has been clearly demonstrated by the pioneering studies by Hamilton and colleagues on *illusory correlation* (Hamilton, Dugan, & Trolier, 1985; Hamilton & Gifford, 1976). In the standard experimental procedure participants are presented with a series of positive and negative behaviors performed by members of two social groups (e.g., Group A and Group B). Importantly, one group is larger than the other, and the relative frequency of the two types of behavior is also manipulated. For instance, Group A could be twice as large as Group B, but the ratio between positive and negative behaviors within the two groups is held constant. In one of the original experiments (Hamilton & Gifford, 1976; Study 1), Group A performed 18 positive and 8 negative behaviors, whereas Group B performed 9 positive and 4 negative behaviors. Although there was no factual basis for considering one group as better than the other, perceivers formed more negative impressions about Group B. In addition, memory biases also emerged and people erroneously overestimated the frequency of the co-occurrence of the two infrequent information (i.e., being a member of Group B and performing undesirable behaviors). This effect has been explained by assuming that rare information is particularly distinctive and therefore it attracts the attention so that to become extremely accessible (Hamilton & Gifford, 1976; Hamilton et al., 1985; for a review, see Stroessner & Placks, 2001). For instance, it has been shown that people spend more time processing sentences describing members of the infrequent group performing infrequent behaviors and this particularly careful processing is responsible of the typical illusory correlation effects (Stroessner, Hamilton, & Mackie, 1992). Although various alternative (or complementary) accounts have been proposed (Fiedler, 1991; Rothbart, 1981; Smith, 1991), the distinctiveness of the information appears to play a key role (Risen, Gilovich, & Dunning, 2007; Sherman et al., 2009; Stroessner & Placks, 2001).

Ideology-based differences in the processing of valenced information

Political ideology is related to several personality and cognitive styles differences (Jost, Glaser, Kruglanski, & Sulloway, 2003), as well as to the reactions to positive and negative information. For instance, conservatives display more extreme physiological reactions (e.g., skin conductance) to threatening information (Oxley et al., 2008). Shook and Fazio, (2009) also recently nicely demonstrated that conservatives, as compared to liberals, are more likely to display avoidant strategies while exploring the environment which, in the end, lead them to stronger learning asymmetries, favoring the learning of negative over positive stimuli. Other research (Carraro, Castelli, & Macchiella, 2011) has shown that negative information automatically grabs the attention of conservatives. For instance, conservatives, as compared to liberals, responded more slowly to negative words in a Stroop task (Carraro et al., 2011, Study 1). Similarly, spatial attention was related to personal ideology and conservatives were more likely to direct their attention toward spatial locations in which negative information was presented (Carraro et al.,

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2011, Study 2), even when other individual differences (i.e., need for closure and need for cognition) were taken into account (Carraro et al., 2011, Study 3).

Thus, political ideology appears to be associated to asymmetries in the way positive and negative information is processed, with conservatives being more vigilant toward negative information. In the current work we explored whether the distinctiveness of rare negative behaviors when performed by numerical minority groups is even more accentuated for perceivers who embrace a conservative view of the world. This would be indexed by stronger illusory correlation effects among conservatives, that is an increased biased perception about numerical minority groups.

Study 1

Participants

Two-hundred and thirty-four students (194 females) participated in the study.[1]

Procedure

Participants were shown 39 sentences each describing a behavior performed by either a member of Group A or B. Group A was larger than Group B (26 vs. 13 exemplars). Sentences were either positive (27 sentences; e.g., "Jim, who belongs to Group A/B, has given way to sit to an elderly lady.") or negative (12 sentences; e.g., "James, who belongs to Group A/B, usually tells many lies."), and the ratio between positive and negative behaviors was identical within the two groups (i.e., 0.44). Thus, members of Group A performed 18 positive and 8 negative behaviors, whereas members of Group B performed 9 positive and 4 negative behaviors. Sentences were presented one after the other in a random order and each of them remained visible for 7 s. Participants were then required to evaluate the two groups along 11 traits (funny, irritable, intelligent, stupid, willing, sociable, brilliant, lazy, happy, unhappy and unpleasant). Responses had to be provided along 5-point Likert scales from 1 (= not at all) to 5 (= very much). Subsequently, participants were provided with the full list of behaviors and asked to indicate the group membership of the actor of each behavior. This cued recall task enabled to assess how many positive and negative behaviors were attributed to the two groups. Next, a conceptually similar measure was administered and participants were asked to estimate how many behaviors were performed by members of Group A and how many of them were negative. Identical questions were administered in relation to Group B. Finally, political ideology was assessed by asking participants to report their level of agreement (from 1 = "not at all" to 7 = "very much") with 5 different topics (reduction of immigration, medically assisted procreation, homosexual marriage, use of arms for personal defense and adoption by homosexual couples; after appropriate rescaling assigning higher values to conservative ideologies, $\alpha = .73$, $M = 3.77$, $SD = 1.22$).[2]

Results

Illusory correlation

After appropriate rescaling (i.e., high scores indicate more positive evaluations), the mean evaluation of Group A ($\alpha = .81$) and Group B

($\alpha = .85$) were separately calculated. A *t*-test showed more negative attitudes toward Group B ($M = 3.12$, $SD = .56$) than Group A ($M = 3.65$, $SD = .48$), $t(232) = 9.73$, $p < .001$. As for the cued recall task, a phi coefficient correlation was computed for each participant[3] (see Hamilton & Gifford, 1976) in such a way that positive values indicated an illusory association between Group B and negative behaviors. The observed value was indeed positive ($M = .21$, $SD = .40$) and significantly higher than zero, $t(216) = 7.43$, $p < .001$. As for the estimation of the frequency of negative behaviors within each group, we calculated the perceived proportion of negative behaviors given the overall number of behaviors attributed to the group. As expected the proportion was higher in relation to Group B ($M = .59$, $SD = .21$) than Group A ($M = .38$, $SD = .19$), $t(223) = 9.74$, $p < .001$. Overall, strong illusory correlation biases emerged.

Illusory correlation as a function of ideology

From the evaluative ratings toward the two groups we calculated the difference between the perception of Group A and Group B. A regression analysis showed that the score on the political ideology scale was a significant predictor of the differential evaluation of the two groups, $\beta = .17$, $t(232) = 2.55$, $p = .011$, so that increased levels of social conservatism were associated to more negative evaluations of Group B as compared to Group A. The phi correlation coefficient derived from the cued recall task was also significantly associated to political ideology, $\beta = .22$, $t(216) = 3.31$, $p < .001$, and, as predicted, the illusory correlation between Group B and negativity was accentuated among conservatives. As for the third index, we calculated the difference between the proportion of negative behaviors attributed to Group B and Group A. In line with previous findings, political ideology was again a significant predictor, $\beta = .20$, $t(223) = 3.11$, $p = .002$, further confirming the stronger tendency among conservatives to incur into biased perceptions of the minority group. Although the gender composition of our sample was unbalanced, exploratory analyses were carried out including participant gender and its interaction with ideology as predictors. In no case, significant effects involving gender emerged (all ps > .13) suggesting that ideology is related to illusory correlation independently of participant gender. Future research with a larger sample of males, however, should more specifically focus on this issue.

Study 2

In Study 1 illusory correlation was consistently stronger among conservatives and we hypothesized this was due to their increased attention toward negative information (Carraro et al., 2011). However, alternative explanations could be advanced. Indeed, one possibility is that conservatives, as compared to liberals, are more heavily influenced by the numerical composition of the two groups and provide overall more negative evaluations toward minorities independently from the valence of the behaviors. In addition, conservatives' need for structure may foster an accentuation of the (perceived) difference between the two groups (see Jost et al., 2003), and thus exaggerate illusory correlation. In this case, political ideology should predict the strength of illusory correlation even when desirable behaviors are relatively less frequent than undesirable behaviors. In contrast, if political ideology impacts onto illusory correlation modulating the salience of the infrequent negative information, no relation between political ideology and illusory correlation should emerge when desirable behaviors are infrequent.