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The Influence of Hostile and Nonhostile Humor Upon Physical Aggression

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Abstract. Forty-one male undergraduates participated in an experiment designed to investigate the hypothesis that overt aggression would be enhanced by prior exposure to hostile humor, but inhibited by prior exposure to nonhostile humor. In order to investigate this suggestion, subjects were first angered or not angered by a male confederate, next exposed to either nonhumorous materials, hostile humor, or nonhostile humor, and finally provided with an opportunity to aggress against the confederate. Results offered support for both portions of the hypothesis.

In recent years, several experiments have sought to examine the impact of exposure to humorous materials upon subsequent aggression (Baron & Ball, 1974; Berkowitz, 1970; Mueller & Donnerstein, 1977). Taken together, the results of these studies suggest that the influence of such materials upon later aggression may depend quite strongly upon their specific content. On the one hand, several investigations (Baron & Ball, 1974; Mueller & Donnerstein, 1977) suggest that exposure to nonhostile humor may serve to reduce later aggression by previously angered persons. Specifically, in these studies, subjects exposed to nonhostile humor demonstrated lower levels of aggression than those exposed only to neutral, nonhumorous materials.

In contrast to these results, an additional experiment by Berkowitz (1970) has been interpreted as suggesting that exposure to hostile humor can actually enhance later aggression. In this study, subjects exposed to an aggressive comedy routine later directed stronger verbal assaults against a confederate than subjects exposed to a nonaggressive comedy routine. While these results may well indicate that exposure to hostile humor enhances subsequent aggression, a degree of ambiguity surrounds such conclusions. In particular, the omission of an appropriate no-humor control condition from the design of this study makes it impossible to determine whether the obtained findings stemmed primarily from (1) increments in aggression induced by exposure to hostile humor, (2) reductions in aggression induced by exposure to nonhostile humor, or (3) both factors. Thus, one major purpose of the present study was that of attaining more conclusive evidence concerning this issue.

A second purpose of the present study stemmed from the fact that previous investigations concerned with the influence of hostile and nonhostile humor upon aggression have differed sharply with respect to procedures and dependent measures. In view of this fact, it seemed useful to determine whether the increments and decrements in aggression reported in these separate studies could both be demonstrated within the context of a single set of procedures. In accordance with previous research, it was tentatively predicted that this would indeed be the case. Specifically, it was predicted that relative to a no-humor control condition, exposure to hostile humor would facilitate, and exposure to nonhostile humor would reduce, subsequent aggressive behavior.

Method

Subjects, Design, and Apparatus. Forty-one undergraduate males en-

rolled in introductory psychology at the University of Texas took part in the study. Subjects participated in the experiment in order to satisfy a course requirement. A 3 X 2 factorial design based upon three types of stimuli (nonhostile humor, hostile humor, no humor) and two levels of prior provocation (nonangry, angry) was employed. The apparatus consisted of a modified Buss "aggression machine" identical to that employed in several previous studies (e.g., Baron & Ball, 1974).

Procedure. The first portion of the experiment was described to subjects as concerned with the manner in which individuals form first impressions of others. In reality, however, it was employed solely to vary their level of anger toward the confederate. Thus, in the nonangry group, they received favorable and complimentary written feedback from this person, while in the angry group they received unfavorable and derogatory feedback from him. These procedures--which have been found to be quite effective in influencing subjects' level of anger toward a potential victim in previous studies--are described in considerable detail elsewhere (e.g., Baron & Bell, 1977).

The second part of the study was represented to subjects as being concerned with the impact of unpleasant stimuli upon physiological reactions. In order to study this topic, it was explained, one of the individuals present would serve as a stimulator, and deliver a series of electric shocks to the other, who would serve as a responder. The confederate was, of course, chosen to serve as the responder, and during the course of the study, subjects were provided with 20 separate opportunities on which to deliver electric shocks of an intensity of their choosing to this person. Before gaining their opportunity to aggress against the confederate, however, all participants were exposed to one of three types of stimuli: 10 nonhumorous pictures of scenery, furniture, and abstract art; 10 cartoons depicting nonhostile humor (e.g., one worker in an oriental rice field turns to another and remarks, "I've always wondered what Rice Krispies taste like."); or 10 cartoons depicting hostile humor (e.g., a woman is shown speaking on the phone, while in the background, a body dangles from a rope; she remarks "It all turned out just as you said it would, Mother."). These stimuli were introduced into the study at a time when, according to the experimenter, it would be necessary to wait several minutes before proceeding in order to allow the responder's (i.e., the confederate's) physiological reactions to return to base levels. The rationale for their presentation was simply that the experimenter planned to use them in a future study, and wished to obtain certain ratings of them.²

All appropriate materials were contained in a looseleaf notebook, along with a rating form on which subjects were asked to rate each stimulus along two dimensions: not amusing--very amusing; very little hostility or aggression--a great deal of hostility or aggression. As in previous research (Baron & Ball, 1974), both ratings were made along 7-point scales, and subjects were allowed five minutes to complete this task. At the conclusion of this period, the experimenter indicated that the study could now proceed, and the shock trials were initiated. After the last of these trials, subjects were asked to complete a brief questionnaire on which they rated their level of anger toward the confederate and their liking for him. A thorough de-briefing then followed, and served to conclude the experimental session.

Results

Subjects' ratings of the experimental stimuli. In order to deter-

mine whether subjects perceived the experimental stimuli in the anticipated manner, separate analyses of variance were performed upon their ratings of these materials. The analysis upon ratings of amusingness yielded only a significant main effect for stimulus type, $F(2,35) = 3.19, p < .05$. Follow-up comparisons by Duncan multiple-range test then revealed that as expected, subjects rated the hostile cartoons ($M=3.82$) and nonhostile cartoons ($M=3.94$) as significantly more amusing than the nonhumorous pictures ($M=2.71; p < .05$). However, the two humor conditions did not differ from each other.

The analysis upon ratings of aggressive content also yielded a significant effect for stimulus type, $F(2,35) = 47.31, p < .001$. Follow-up comparisons in this case revealed that subjects rated the hostile cartoons ($M=5.50$) as significantly higher in aggressive content than either the nonhostile cartoons ($M=2.91$) or the nonhumorous pictures ($M=1.07, p < .05$).

Aggression toward the confederate. An analysis of variance upon the mean intensity of shocks directed by subjects toward the confederate (the primary dependent measure of aggression), yielded a significant main effect for stimulus type, $F(2,35) = 3.59, p < .04$, and an effect for anger arousal which approached but did not quite attain significance, $F(1,35) = 3.33, p < .07$. (The interaction between these two factors did not approach significance, $F(2,35) = 0.32$.) Follow-up comparisons undertaken to examine the main effect of stimulus type revealed that subjects exposed to nonhostile humor directed significantly weaker shocks against the confederate ($M=3.08$) than subjects in the no-humor control condition ($M=4.14$). Correspondingly, subjects exposed to hostile humor directed significantly stronger shocks ($M=4.95$) against this person than those in the control group ($p < .05$ in all cases). Thus, hostile and nonhostile humor exerted the anticipated effects upon subsequent aggression. The borderline effect for anger arousal stemmed from the fact that angry individuals directed stronger shocks toward the confederate ($M=4.58$) than nonangry individuals ($M=3.53$). Further, this difference appeared consistently in all three stimulus conditions.

Postexperimental questionnaire. Results for the postexperimental questionnaire indicated that as anticipated, subjects in the angry group reported a significantly higher level of annoyance toward the confederate ($M=2.24$) than subjects in the nonangry group ($M=1.22; F(1,35) = 7.39, p < .01$). Similarly, subjects in the angry group reported a lower level of liking for this person ($M=4.76$) than those in the nonangry group ($M=5.94; F(1,35) = 17.86, p < .005$). Thus, the attempted manipulation of anger arousal appeared to be successful. In addition, the interaction between anger arousal and stimulus type was significant in both of these analyses, $F(2,35) = 7.51, 12.94, p < .05, p < .005$, respectively. In both cases, follow-up comparisons revealed that this interaction stemmed from the fact that angry subjects reported significantly greater annoyance with (or less liking for) the confederate than nonangry subjects in both the no-humor and hostile humor groups ($p < .05$), but not in the nonhostile humor condition. Thus, it appeared that exposure to nonhostile humor served to lessen or counteract the negative effects stemming from prior provocation.

Discussion

Results offered relatively clear support for the hypothesis under investigation. Specifically, relative to a no-humor control condition, exposure to nonhostile humor reduced, and exposure to hostile humor increased, subsequent aggression. In this regard, the results of the present investigation serve both to replicate and confirm those of earlier

studies (cf., Baron & Ball, 1974; Berkowitz, 1970). In two other respects, however, they also serve to extend previous findings. First, through the inclusion of a no-humor control condition, they provide more definitive evidence than that obtained in earlier research for the aggression-facilitating influence of hostile humor (cf., Berkowitz, 1970). And second, by demonstrating both humor-induced increments and decrements in aggression within the context of a single experiment, they point somewhat more firmly than previous findings to the conclusion that the impact of humorous materials upon overt aggression depends quite strongly upon the specific content of such stimuli.

At this point, it should be noted that the humorous materials employed in the present study were, by virtue of their nature, relatively low in terms of arousal properties. Given the important impact of heightened arousal upon aggression uncovered in recent investigations (see Rule & Nesdale, 1976), it seems quite possible that a somewhat different pattern of findings might have been obtained were more arousing materials, such as tapes of actual comedy routines, employed (cf., Mueller & Donnerstein, 1977). Further research should be conducted to examine this possibility.

One additional aspect of the present findings deserving of comment concerns the fact that exposure to nonhostile humor seemed to counteract the negative effects resulting from prior provocation. Specifically, following exposure to such materials, previously angered subjects no longer differed in reported anger or disliking for the confederate from those not previously provoked. These findings suggest that the aggression-inhibiting impact of nonhostile humor may stem, at least in part, from the induction among aggressors of emotional states incompatible with anger or overt aggression (e.g., feelings of amusement). However, other mechanisms may also play a role in such effects, and should be subjected to further investigation (cf., Mueller & Donnerstein, 1977).

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Footnotes

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² As has been the case in past research (e.g., Baron & Ball, 1974), these general procedures induced very little suspicion among participants. In fact, a verbal suspicion check, administered at the conclusion of the shock trials, indicated that only three individuals questioned the rationale provided. Data for these individuals were eliminated.