

Mood Influences on Helping: Direct Effects or Side Effects?

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A review of the literature concerning the promotive influence of experimentally generated happiness and sadness on helping suggested that (a) increased helping among saddened subjects is an instrumental response designed to dispel the helper's negative mood state, and (b) increased helping among elated subjects is not an instrumental response to (maintain) the heightened effect but is a concomitant of elevated mood. A derivation from this hypothesis—that enhanced helping is a direct effect of induced sadness but a side effect of induced happiness—was tested in an experiment that placed subjects in a happy, neutral, or sad mood. Through a placebo drug manipulation, half of the subjects in each group were led to believe that their induced moods were temporarily fixed, that is, temporarily resistant to change from normal events. The other subjects believed that their moods were labile and, therefore, manageable. As expected, saddened subjects showed enhanced helping only when they believed their moods to be changeable, whereas elated subjects showed comparable increases in helping whether they believed their moods to be labile or fixed.

An impressively large body of experimental work indicates that adult benevolence is increased by a variety of mood-inducing procedures. Interestingly, such procedures have been shown to enhance helping when they have led either to the temporary mood state of happiness or sadness (cf. Cialdini, Baumann, & Kenrick, 1981; Krebs, 1970; Rosenhan, Karylowski, Salovey, & Hargis, 1981). One general interpretive account of this pattern is that helping occurs as an active response designed to manage the temporary mood state. That is, individuals help so as to relieve their own sadness and maintain happiness.

A presumption of this *instrumental* view of mood-based benevolence is that adult altruism possesses a self-gratifying quality that allows it to influence mood state favorably. Evidence that altruists find prosocial action rewarding comes from several sources. Weiss and his co-workers (Weiss, Boyer, Lombardo, & Stitch, 1973; Weiss, Buchanan, Alstatt, & Lombardo,

1971) have demonstrated that college-age subjects respond to the opportunity to help as if it were a reinforcing event. Harris (1977) found that adults perceive altruism as having mood-elevating properties. Finally, Baumann, Cialdini, and Kenrick (1981) showed for three separate data patterns that, among adults, the relation between mood and altruism paralleled that between mood and self-gratification.

Despite the data attesting to the rewarding nature of adult benevolence, additional evidence is necessary to warrant confidence in the larger, instrumental argument that altruism is *used* in the service of mood relief or mood maintenance. Support for this argument is differentially strong in the domains of sad and happy mood. It is important, therefore, to review the respective literatures separately. We can begin with the literature on sad mood, in which the data are highly congenial with the instrumental model.

Sad Mood

Cialdini and his associates have been consistent advocates of an instrumental interpretation of negative mood-enhanced helping.¹

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¹ The negative moods referred to here are those akin to temporary sorrow or depression. Such affectively unpleasant experiences as frustration and anger, which are typically relieved via aggressive action, are not expected to lead to benevolence.

This interpretation is embodied in their *negative state relief* model, which accounts for such increased aid in terms of its effects on the benefactor's (rather than the recipient's) distress. Initial support for the model came from a study (Cialdini, Darby, & Vincent, 1973) in which subjects whose moods were "lowered" by causing or witnessing harm to an innocent other were given the opportunity to help a third party. Half of the subjects received something gratifying (unexpected money or praise) between the harm and the chance to help; the other half were given no such rewarding experience. As predicted, those subjects without the pleasurable intervening experience helped significantly more than controls. Those who received the intervening rewards, however, were no more helpful than control subjects. Cialdini et al. (1973) argued that these latter subjects had their affective negativity relieved by a gratifying event and consequently no longer needed to be altruistic to restore mood.

Other data compatible with an instrumental motive for negative mood-based helping can be found in a comparison of the helping patterns of experimentally saddened children and adults. Young children, who are not sufficiently socialized to find altruism personally rewarding and hence would not use it as a mood restoration device, show somewhat reduced benevolence when their moods are lowered after reminiscing about sad experiences (Moore, Underwood, & Rosenhan, 1973; Rosenhan, Underwood, & Moore, 1974; Underwood, Froming, & Moore, 1977). Adults, however, who do find altruism a gratifying experience (Weiss et al., 1971), show heightened levels of benevolence following exposure to the same reminiscence procedure (Cialdini & Kenrick, 1976). Furthermore, this adult pattern is progressively adopted by children as they advance in age and pass through the socialization process (Cialdini & Kenrick, 1976). The prime exception to saddened young children's low levels of helping occurs when the prosocial act is visible to an adult. In this situation, where helping can produce external reward via the adult's praise or approval, saddened children help more than neutral mood controls (Kenrick, Baumann, & Cialdini, 1979). Thus, it appears that among experimentally saddened young children, enhanced

helping occurs only when it is likely to be instrumental to the receipt of gratification and to resultant mood relief.

One can draw a similar conclusion from research into how the personal costs and benefits of rendering aid influence the helping actions of saddened adults. Weyant (1978) found that college students whose moods were lowered by task failure helped more frequently than control subjects when the helping opportunity entailed rather low costs (sitting at a donations booth) for relatively high benefits (the American Cancer Society). When the helping act required high costs (soliciting donations door-to-door) for low benefits (Little League Baseball), the negative mood subjects tended to help less than neutral mood controls. A similar data pattern occurred in a conceptually similar experiment by Benson (1978). Negative mood seems to promote prosocial action only when the act itself is of sufficient overall hedonic weight to improve the helper's affect. Such a finding is, of course, wholly in keeping with an instrumental model.

Happy Mood

Because altruism can be experienced as gratifying by adults (Harris, 1977; Weiss et al., 1971, 1973), an instrumental explanation is also viable for the enhanced prosocial activity of positive mood individuals: Happy persons help more to maintain the elevated mood. Some indirect evidence consistent with such a view comes from studies showing that positive mood inductions lead subjects to reward themselves more (Masters, 1972; Masters & Peskay, 1972; Mischel, Coates, & Raskoff, 1968; Rosenhan et al., 1974; Underwood, Moore, & Rosenhan, 1973) and to expose themselves more to favorable self-information (Mischel, Ebbesen, & Zeiss, 1973). Data on helping come from studies showing that positive mood subjects tend to help more than neutral mood controls on tasks with pleasant consequences but help less on tasks with unpleasant consequences (Forest, Clark, Mills, & Isen, 1979; Isen & Simmonds, 1978; Shaffer & Graziano, 1981). One interpretation of these findings is that the happy subjects used helping to retain their levels of elevated affect.

At the same time, however, there are compelling data in the area of happy mood and

helping that seem to counsel against an instrumental interpretation. First, happy mood inductions lead to increased generosity both in adults (e.g., see Cunningham, 1979; Isen, Clark, & Schwartz, 1976; Isen & Levin, 1972; Kazdin & Bryan, 1971), who find altruism self-gratifying, and in young children (e.g., see Barden, Garber, Duncan, & Masters, 1981; Rosenhan et al., 1974), who do not. Further, the promotive effect of happy mood on the benevolence of young children appears even when the help is wholly anonymous. These data from children too young to have internalized the reward value of altruism (Bar-Tal, Raviv, & Levin, 1980) suggest that benevolence blooms within happy individuals for reasons unrelated to its self-gratifying properties.

A parallel inference can be derived from the Weyant (1978) experiment discussed previously. Recall that Weyant's saddened subjects helped to a greater degree than neutral mood controls only when the personal costs of the helping act were low and the benefits high; when the costs-to-benefits ratio was hedonically disadvantageous, they actually helped less. However, among Weyant's happy mood subjects, the costs and benefits of the prosocial action had little influence on behavior. Happy subjects helped just as frequently as control subjects whether the combination of costs and benefits of the act made helping more or less hedonically attractive. Such data support the view that mood maintenance via self-reward is not the predominant motive for enhanced altruism under conditions of temporary happy effect.

Concomitance Model

If, as some of these findings suggest, an instrumental approach does not best explain the augmented benevolence of happy mood subjects, what does? An alternative to the instrumental view is that elevated mood is a psychological state that is conducive to performing altruistic deeds. This conceptualization, in which prosocial activity is seen as a side effect of rather than a direct reaction to positive affect, can be termed the *concomitance model*.

Various possible interpretations of the enhanced benevolence of positive mood subjects can be categorized as concomitant. For example, one might argue that because positive

mood inductions cause subjects to like others more (for evidence, see Clore, 1975), they are naturally more willing to help those others. Another possibility is that positive affect produces an increased belief that good things will happen in the future, thereby causing subjects to be more generous with their present resources. Such a belief could stem from the general optimism of elated subjects (Masters & Furman, 1976) or from their enhanced sense of personal control (Alloy, Abramson, & Viscusi, 1981; Forest et al., 1979). A third such explanation is that happy mood subjects feel emotionally advantaged and are consequently inclined by equity considerations to share the good feelings with those in need (Rosenhan, Salovey, & Hargis, 1981). A final concomitance explanation can be derived from the work of Isen, Shaker, Clark, and Karp (1978), who found that positive mood facilitated access to positive, as opposed to neutral or negative memories. Thus, when confronted with an opportunity to help, happy subjects may selectively recall the positive aspects of prior helping experiences and, accordingly, may be more willing to render aid again. The common feature of each of these concomitance accounts is the proposition that it is one's reaction not to positive mood but to some psychological by-product of it that promotes altruism.

A Test

The tentative conclusion we reached following our review of the preceding literature was that enhanced helping is best explained by an instrumental model in the case of sad mood but by a concomitance model in the case of happy mood. That is, temporarily saddened subjects show heightened benevolence to relieve their mood; however, the increased altruism of temporarily elated subjects occurs not for a comparably instrumental purpose (i.e., mood maintenance) but through the action of an altruism-conducive concomitant of happiness (e.g., liking for others, selective memory for positive experiences). To test a derivation from our tentative conclusion, we conducted a study in which subjects believed that performing an altruistic deed either could or could not influence their current moods.

Following a conventional mood manipulation, subjects were given a (placebo) drug.

Half the subjects were informed that one effect of the drug would be a "freezing" of present mood state, making it temporarily resistant to influence from normal events. The other half were not so informed. All subjects were then afforded a chance for altruism. We predicted that the standard, elevated helping response of sad and happy subjects would be eliminated only in those subjects whose sad mood had been "frozen" by the drug. That is, because we assumed that saddened subjects increase altruism to restore mood, we predicted that subjects believing their current moods unresponsive to the positive impact of altruism would not help more than neutral mood controls. In contrast, comparably saddened subjects who still believed their affective states to be labile would seize the opportunity for mood management by helping. Among happy subjects, whose increased helpfulness we assumed was generated for noninstrumental reasons, the prediction was different: that there would be no differential helping between subjects who did or did not believe their happy moods to be labile. Both groups would show the typical increase in prosocial behavior because, presumably, such behavior among happy individuals is not mediated by a motive to regulate mood.

Method

Subjects

Subjects consisted of 86 male and female introductory psychology students recruited for an experiment in "perceptual memory" who received course credit for their participation. Eight subjects refused to take the placebo; they were equally divided between "fixed" and "labile" conditions. In addition, 6 subjects distributed about equally across conditions were dropped from the analysis because they were suspicious of the purpose of the experiment.

Procedure

Subjects were led individually to an experimental room by an experimenter. A chance meeting with a confederate was staged in which the confederate asked for permission to speak with the experimental subject and offered to wait in the hallway. Inside the room, subjects were informed that the research addressed the effects of a fast-acting memory drug, Mnemoxine (actually a placebo), which they were to receive as part of the memory experiment.

Mode lability manipulation. Subjects read a letter attesting to the drug's safety. In the fixed condition, the letter read in part:

You should know that Mnemoxine has no lasting side effects and is quite safe within the dosage limits to be utilized in this research. Its one anticholinergic-like side effect, dryness of the mouth, should dissipate entirely within 45 minutes after administration. In a similar manner the mood-related side effects, which shall be fully explained to you by the experimenter, should also be completely over by this time. The experimenter will answer any questions you may have.

In the labile condition, the sentence referring to mood-related side effects was omitted. All subjects filled out a brief medical history. They were told that the research also addressed the effects of mood on memory.

In the fixed condition, the experimenter added:

Our mood scales will offer an indication of how the Mnemoxine is being absorbed into your system, since, in addition to a dry mouth, a standard side effect of the drug is to preserve chemically whatever mood you are in when it takes effect. By that I mean that Mnemoxine is from the family of drugs whose effect is not to create a mood, but to take whatever mood is present in an individual and prolong it artificially. So, in the case of Mnemoxine, if you are feeling happy when it takes effect, you will stay happy for the next 30 minutes or so, no matter what. If, on the other hand, you are feeling sad when it takes effect, you will continue to be sad for the next 30 minutes or so, no matter what.

Labile subjects were told:

Although Mnemoxine does not have any mood-related side effects, a typical side effect is dryness of mouth. However, we will be monitoring your mood from time to time because, as I indicated, we are also interested in the relationship between mood and memory.

All subjects were then given a placebo consisting of 15 cc of flat tonic water, which they drank from a small medication cup.

Mood valence manipulations. Manipulations for the three mood states were those used by Baumann et al. (1981). The experimenter introduced them as "preliminary memory exercises." Subjects were required to recall and reminisce about experiences that made them feel sad or happy. Two such memories were elicited. The event more conducive to assigned mood was reviewed a second time. Neutral mood subjects imagined their route to school and making a telephone call to obtain the time of day. The more neutral topic, as judged by the experimenter, was reviewed a second time.

Mood valence manipulation check. At the end of the mood induction, the experimenter asked the subject to respond to two scales. Subjects were first asked to report their present mood relative to their mood immediately before the experiment. The end points of this 7-point scale were *A great deal happier* (1) and *A great deal sadder* (7). The experimenter pretended to run out of the next scale and left the laboratory to obtain more. In the fixed condition, the experimenter added, before leaving "As I said before, the Mnemoxine should fix your present mood in unchanged form for the next 25 minutes or so."

Helping opportunity. In each session, as the experimenter opened the door to leave, the confederate, waiting

outside, again asked to speak with the subject. As the experimenter departed, the confederate entered, wearing identification from a local nonprofit blood organization. The confederate, who was blind to the subject's condition, asked the subject to make a number of brief phone calls to collect additional information from established blood donors. The subjects were given a form that described the task and listed the time commitment inherent in performing 1 to 10 calls. The confederate asked the subject if he or she would be willing to make any calls ("anytime within a 1-week period"), and if so, how many. The confederate thanked all subjects and left the room.

Independent variables. Subjects were randomly assigned to one of three mood valence conditions (happy, neutral, or sad) and to one of two mood lability conditions (fixed or labile).

Dependent variables. The major dependent measure consisted of the number of phone calls volunteered by each subject. The effectiveness of the mood valence manipulation was measured by responses to the mood scale.

Results

Analysis of variance (ANOVA) revealed that there were no relevant effects for sex of subject. Thus, all means were collapsed over the sex factor and are presented accordingly.

Mood Manipulation Check

The results of the ANOVA on the mood check revealed no significant effects except the predicted main effect for the mood induction procedure, $F(2, 66) = 37.19, p < .001$. Mood check means for all cells are presented in Table 1. In addition, planned comparisons showed that sad mood subjects differed significantly from neutral mood controls, $F(1, 66) = 8.46, p < .01$, as did happy mood subjects, $F(1, 66) = 7.11, p < .01$. The respective mean mood scores for these groups were 4.67, 3.24, and 2.58, with larger scores indicating more sadness.

Helping

Means and standard deviations for the helping measure can be found in Table 2. To ensure that predicted effects were not caused by restricted within-cell variation in certain cells, we performed a test of homogeneity of variance on the number of calls volunteered. The resultant F_{\max} statistic, 3.49, failed to reach the critical value of 6.92 for significance.

Because we made specific predictions con-

Table 1
Mean Mood Scores

| Mood lability | Mood valence | | |
|---------------|--------------|---------|-------|
| | Sad | Neutral | Happy |
| Labile | 4.67 | 3.17 | 2.42 |
| Fixed | 4.67 | 3.67 | 2.75 |

Note. N per cell is 12. Higher scores indicate greater sadness.

cerning our instrumental argument for sad mood and our concomitant argument for happy mood, we performed the following a priori contrasts on the number of calls volunteered (Hays, 1963): First, we tested in a general contrast our predictions (a) that in contrast to a labile mood state, an event designed to fix one's mood would reduce to control levels the helping tendency of saddened individuals, and (b) that helping in a happy mood would not be reduced by fixing one's mood. This contrast pitted the three groups predicted to be more helpful (labile sad mood, labile happy mood, and fixed happy mood) against the three groups predicted to be less helpful (fixed sad mood and both neutral mood control groups). The contrast was significant, $F(1, 66) = 4.87, p < .03$.

Second, we performed a contrast that more specifically tested our instrumental argument concerning sadness-based helping. This test compared the labile sad mood group against the combination of the fixed sad mood group plus the neutral mood control groups. The outcome of this contrast was significant, $F(1, 66) = 4.50, p < .04$. A simple test pitting the labile sad mood group against the fixed sad mood group offered additional support for the instrumental character of helping in sad mood, $F(1, 66) = 3.63, p < .07$.

Two comparable specific contrasts were conducted to examine the instrumental versus concomitant nature of helping while in a happy mood. In the first, the labile happy mood group was tested against the combination of the fixed happy mood condition plus the neutral mood control groups $F(1, 66) < 1$. In the second, a simple test of the labile versus fixed happy mood groups was performed, $F(1, 66) < 1$. The failure to find differences with these tests is inconsistent with an instrumental view of

Table 2
Mean Calls Volunteered and Percentages of Helpers

| Mood lability | Mood valence | | |
|---------------|--------------|------------|------------|
| | Sad | Neutral | Happy |
| Labile | | | |
| <i>M</i> | 3.25 (58%) | 1.25 (33%) | 2.33 (58%) |
| <i>SD</i> | 3.49 | 2.05 | 2.71 |
| Fixed | | | |
| <i>M</i> | 1.25 (42%) | 1.58 (42%) | 2.67 (58%) |
| <i>SD</i> | 1.87 | 2.50 | 3.05 |

Note. *N* per cell is 12. Range for number of calls volunteered is 0–10.

happiness-based helping but is consistent with a concomitance view.²

Discussion

The results of this study bolstered the case for an instrumental model of negative mood helping. As predicted, sad subjects helped more than neutral mood controls only if they believed their mood was alterable. When sad subjects were led to believe that helping could not improve their mood, they were no more helpful than neutral mood subjects.

Our data also supported the argument for a noninstrumental (concomitance) model of positive mood helping. Happy subjects' likelihood of helping was not affected by the presumed lability of their mood. For them, helping increased equivalently, whether or not they perceived their moods to be potentially modifiable.

Of course, other interpretations for our data pattern or of portions of it are possible. For example, the differential levels of helping in the fixed versus labile conditions for sad subjects could conceivably be attributed to differences in the moods produced in those two cells. Such an explanation (in terms of the degree of sadness subjects experienced) that is straightforward seems unlikely in that the mean mood levels were identical for the two conditions.

However, this general type of alternative explanation may not be dismissed so easily. For instance, there is increasing evidence that identically mood-altered subjects whose attention is focused inward show different help-

ing patterns than those whose attention is focused outward (Barnett, King, & Howard, 1979; Rogers, Miller, Mayer, & Duval, 1982; Rosenhan, Salovey, & Hargis, 1981; Thompson, Cowan, & Rosenhan, 1980). The work of Rosenhan and his colleagues is especially relevant here because they found that an internal focus reduced helping among saddened subjects (Thompson et al., 1980) but increased it among elated subjects (Rosenhan, Salovey, & Hargis, 1981). It might be argued that our fixed mood procedure caused subjects to focus more inwardly, upon themselves and their mood states, than did our labile mood procedure. If so, the differential helping in our fixed sad and labile sad mood subjects might be explained as due to a different attentional focus. However, such an interpretation is rendered less plausible by two additional considerations. First, if our fixed mood procedure caused an internal focus that suppressed the enhanced helping tendency of our saddened subjects, then that same internal focus should have increased the helping tendency of our happy fixed mood subjects (Rosenhan, Salovey, & Hargis, 1981), but no such increased helping occurred. Second, previous literature has suggested that an inward focus of attention causes saddened subjects to help significantly less than neutral mood control subjects (Barnett et al., 1979; McMillen, Sanders, & Salomon, 1977; Rogers et al., 1982); again, no such effect occurred in our data. Thus differential focus of attention is unlikely to account for our findings. Nonetheless, the fixed/labile manipulation may have produced changes in our subjects other than those we intended. To the extent that such changes may have occurred, alternative explanations must be considered.

The present study provided the first direct test of the instrumental model in sad, neutral, and happy moods. Although our data support an instrumental model of helping in sad subjects, the mechanism underlying the non-instrumental helping of happy subjects has yet to be determined. It remains for future in-

² Also presented in Table 2 are the percentages of subjects in each condition who volunteered to make at least one call. Although the pattern of results was highly similar to that of the number-of-calls-made measure, the dichotomous help/no-help measure did not produce conventionally significant effects.

vestigations to assess the degree to which concomitant factors of happy mood, such as increased liking, sense of control, optimism, access to positive memories, and equity strains, account for the promotive effect of induced happiness on helping.

Although there is a good fit between much of the previous literature and our conclusion that increased helping in elated subjects occurs for reasons unrelated to the management of mood, one body of evidence appears incongruent with such a view. Specifically, three separate studies have found elated subjects to be less helpful than controls when performing unpleasant tasks but somewhat more helpful when performing pleasant tasks (Forest et al., 1979; Isen & Simmonds, 1978; Shaffer & Graziano, 1981). This pattern suggests, at first glance, that happy individuals attempt to manage their moods via the hedonic consequences of helping. However, all three of the studies used a helping task—the reading of positive or negative statements—that may well have changed the subjects' mood as they helped; indeed, mood change is the purpose for which the statements were initially designed (Velten, 1968). Therefore, subjects who began in a good mood may have read a larger number of positive than negative statements, not because they were trying to maintain the good mood in any instrumental way but because reading the positive statements kept them in a good mood, whereas reading the negative statements moved them to a neutral mood.³

According to this analysis, the differences found in the numbers of positive and negative statements read reflected not the differential willingness of happy subjects to help in reading such statements but instead, the helping levels typically associated with the moods that the statements themselves subsequently evoked. One piece of evidence to support our reinterpretation comes from the Shaffer and Graziano study (1981), which also reported the percentage of subjects who agreed to help. Because this measure was taken before subjects read any statements and therefore before the statements themselves could have affected subjects' moods, it represents an unconfounded measure of the effect of experimentally induced mood on willingness to help. Contrary to the number-of-statements-read measure, which showed that significantly more positive than

negative statements were read, the percentage-of-helpers measure showed no such difference; in fact, happy subjects were slightly more likely to agree to read negative statements than positive statements (91% vs. 83%).

Of course, we cannot have complete confidence in our reinterpretation on the basis of such evidence alone. However, it does render the results of the Isen and Simmonds (1978), Forest et al. (1979), and Shaffer and Graziano (1981) studies compatible with the previous literature, especially the Weyant (1978) experiment, which found happy subjects to help for reasons unrelated to the governance of their mood states. In all, then, this article's major proposal—that the enhanced benevolence of experimentally saddened subjects is instrumental in nature, whereas the enhanced benevolence of experimentally elated subjects is concomitant in nature—is generally consistent with the findings of past research.

³ In the Isen and Simmonds (1978), Forest et al. (1979), and Shaffer and Graziano (1981) studies, the mean number of negative statements read by happy mood subjects was 7.8, 12.4, and 14.3, respectively. Therefore, it seems plausible that reading this many negative statements could have affected the mood.

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