EMOTIONAL CONTAGION AND ITS RELATIONSHIP TO MOOD

Christopher K. Hsee,

Yale University

Elaine Hatfield, John G. Carlson

University of Hawaii

Claude Chemtob[1]

Veterans Administration, Honolulu, Hawaii

Running head: Emotional Contagion and Mood

Abstract

Two questions were explored in this study: Do people tend to "catch" other people's emotions? If so, what impact does a person's preexisting mood (priming) have on their susceptibility to emotional contagion? We proposed two hypotheses. Hypothesis 1: Emotional contagion can be demonstrated in a controlled laboratory setting. Hypothesis 2: Preexisting mood (priming) will affect people's susceptibility to emotional contagion. These hypotheses were tested in a laboratory experiment. College students were asked to recall a series of happy, neutral, or sad events. After this standard mood manipulation, they were asked to observe a videotape of a target person relating a happy or sad emotional experience. Emotional contagion was assessed in two ways--via a self-report measure and via judges' ratings of subjects' facial expressions as they observed the target person's emotional displays. As predicted, clear evidence of emotional contagion was obtained in this controlled laboratory setting.

Regardless of their own mood, subjects did seem to catch others' emotions. There was also some suggestion, however, that preexisting mood may have affected subjects' receptivity to emotional contagion. Happy students were more attentive to the target person's expressions of emotion and were also somewhat more likely to mimic his happy or sad emotions. These results were of borderline significance, however. The implications of these findings were discussed.

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Introduction

Emotional contagion has been defined as "A tendency to mimic another person's emotional experience/expression (his or her emotional appraisals, subjective feelings, expressions, patterned physiological processes, action tendencies, and instrumental behaviours) and thus to experience/express the same emotions oneself (Hatfield & Rapson, 1987)." This paper will explore two questions: One, can social psychologists demonstrate the existence of emotional contagion in a controlled laboratory setting? Two, what impact does a subject's pre-existing mood (priming) have on susceptibility to emotional contagion?

Hypothesis 1: Emotional contagion can be demonstrated in a controlled laboratory setting. A variety of observers have reported that people sometimes show evidence of emotional contagion (Hatfield & Rapson, 1987). They observe that people who spend time with happy, sad, or anxious targets tend to come to share those emotions themselves.

How might we account for such contagion effects? Logically, people might catch other's emotions in several ways. Theorists have long argued that emotional "packages" are comprised of many components--among them, conscious awareness, facial expression, vocal and postural expressions, autonomic nervous system activity, and instrumental emotional behaviors--and that different portions of the brain process the various aspects of emotion (Lewicki, 1986; MacLean, 1975; Papez, 1937). Each of the emotional components acts on and is acted upon by the others (Carlson & Hatfield,

1991; Candland, 1977; Berscheid, 1979). It is possible then, that, in part, conscious processes could mediate such contagion. (For example, as subjects listen to a target describe his emotional experiences, they might remember times they felt much the same way and shared much the same experiences. Such conscious reveries could spark a similar emotional response.) More often, the process is probably an automatic, non-conscious one. In conversation, people automatically and continuously mimic (or are in synchrony with) the facial expressions, voices, postures, and behaviors of others (Bavelas, Black, Lemery, & Mullett, 1987; Bernieri, et al., 1988; Warner, 1988). This may be a non-conscious reaction (O'Toole & Dubin, 1968). Theorists have speculated that people's emotional experience may be influenced by an awareness of either: (1) the Central Nervous System commands that direct such mimicry/synchrony in the first place; or (2) the afferent feedback from such facial, postural, or verbal mimicry/synchrony (Laird, 1984; Tomkins, 1963; Izard, 1971). For a review of the link between emotion and facial feedback, see Adelmann and Zajonc (1989). Ekman (cited in Schmeck, 1983) points out that this may be one reason why smiling faces at parties or grief at a time of mourning are infectious. "The perception of another face is not just an information transfer," contends Ekman, "but a very literal means by which we <u>feel</u> the sensations that the other feels" (p. 1). It is such mimicry/synchrony in which we are primarily interested and which we think is primarily responsible for emotional contagion.

Regardless of why such contagion might occur, researchers from a range of disciplines have observed phenomena which suggest that emotional contagion <u>does</u> occur.

Child psychologists have long been interested in empathy, sympathy, and emotional contagion (Eisenberg & Strayer, 1987). Originally, the German term Einfuhlung (empathy) meant inner imitation, motor mimicry, or emotional contagion. Titchener (1909) argued that one could never know what another felt by reasoning. He or she could only know by feeling him or herself into the other's feelings. Later researchers speculated about how this process might work. Allport (1961) thought it involved "the imaginative transposing of oneself into the thinking, feeling, and acting of another" via the "imitative assumption of the postures and facial expressions of other people" (p. 530-536). Murphy (1947) speculated that people came to feel as others felt because of motor mimicry. Today, theorists make clear distinctions between the process in which we are interested, primitive empathy or emotional contagion, and empathy or sympathy (See Eisenberg & Miller, 1987 or Wispe, 1986). Unfortunately for our purposes, researchers have heretofore devoted most of their attention to understanding the development of the more cognitive, sophisticated, and socially beneficial processes of empathy and sympathy; the primitive process of emotional contagion has been neglected. Nonetheless, child psychologists have collected some evidence that, from the start, parents and children seem to manifest emotional contagion (Meltzoff, 1988; Reissland, 1988; Thompson, 1987). Haivland and Lelwica (1987) found that 10-week-old infants could imitate their mother's facial expressions of happiness, sadness, and anger. Hoffman (1987), too, observes that children often experience and display others' emotions. For example, children sometimes bury their faces in their mothers' laps upon seeing another child fall and cry. They sometimes strike

their doctors in anger when other children receive an injection. Parents are equally prone to mimic the emotions of their newborns (Thompson, 1987). Mothers are most likely to catch their infants' positive emotions (interest, enjoyment, and surprise) but they do mimic the infants' negative emotions (pain, sadness, and anger) to some extent (Malatesta & Haviland, 1982). Frodi and her colleagues (Frodi, Lamb, Leavitt, Donovan, Neff, & Sherry, 1978) found that parents who were asked to observe a sad-angry newborn reported feeling more "annoyed, irritated, distressed, disturbed, indifferent, and less attentative and less happy" than those who viewed a smiling infant. Their diastolic blood pressures and skin conductance levels paralleled these self-reports. Together, such observations in the developmental area suggest that parents and children do seem to be predisposed to take on one another's emotional reactions.

Psychotherapists, too, have observed that therapists tend to catch their clients' emotions and that therapists can use such synchronies to gauge what their clients are feeling (Jung,1968; Reik, 1948; Tansey & Burke, 1989). Clinical researchers have collected considerable evidence as to the impact manic, depressed, anxious, and angry people make on those around them. In some of these studies, clear evidence of contagion may be found (Howes, Hokanson, & Lowenstein, 1985).

Dramatic theorists such as Stanislavski (Moore, 1960) have observed that actors generally catch the emotions they protray.

Social-psychologists have attempted to distinguish true contagion (the rapid transfer of emotion from one person to another in a group) from other types of social influence--such as conformity, imitation and response

to social pressure, and social facilitation (Wheeler, 1966). They have found that group members do seem particularly susceptible to catching the joy and sadness (Hsee et al., 1991; Uchino et al., in press), laughter (Leventhal & Mace, 1970), fear, and panicky behavior of other group members (Kerckhoff & Back, 1968; Schachter & Singer, 1962). Thus, psychologists and others (Carlson & Hatfield, 1991) have observed phenomena which appear to meet the criteria of emotional contagion.

The first purpose of the present study, then, was to demonstrate the existence of emotional contagion in a carefully controlled laboratory setting.

Of course, some people should be especially susceptible to contagion and some situations should be more conducive to contagion than others. Thus, this experiment also begins to explore one factor that may determine who will be most susceptible and when they will be most susceptible to contagion. We propose, as a beginning: Hypothesis 2: Background mood (priming) will affect people's susceptibility to emotional contagion.

For both theortical and practical reasons, it is important to discover the relationship between background mood and susceptibility to emotional contagion. Theoretically, such information would give scientists a better understanding the dynamics of the contagion process. Practically, such information would allow people to control their emotional lives. Just how such priming should affect contagion is less clear to us. Two different theoretical traditions lead to very different predictions as to how mood and susceptibility to contagion should be linked.

1. The addition hypothesis. Cognitive theorists have argued that affect may influence cognitive organization. Some contend that people who are experiencing emotion X may be especially likely to perceive, attend to, process, and recall material consistent with that emotion. (See Bower, 1981; Bower & Cohen, 1982; Gilligan & Bower, 1983 and Isen, 1987 for a review of this voluminous research.) It is tempting to apply such notions here. After all, subjects must perceive emotional information if contagion is to occur. Following this reasoning, one might predict that if subjects are in a happy mood, they should be especially likely to catch happy emotions and especially resistent to catching sad ones (Isen, 1987). If subjects are in a neutral mood, they should be slightly more likely to catch happy emotions than sad ones. If subjects are already sad, they should be more likely to catch sad emotions.[2] In brief, Hypothesis 2a states : Subjects will be most likely to catch emotions that are congruent with their current mood state. Because this hypothesis suggests background mood and the mood of the target person sum in the contagion process, Hypothesis 2a will be referred to as the addition hypothesis.

2. The interaction hypothesis. A second theoretical perspective would lead to a very different conclusion as to how background mood should affect susceptibility to emotional contagion. Some cognitive psychologists argue that happy people are more attentive to incoming stimuli, better able to process it, and show better recall than do less happy people. Happy people are especially open and receptive to external stimulation (Bousfield, 1950); their memories may be enhanced (Isen, 1987). Similarly, researchers have pointed out that sad people may find it difficult to attend to, process,

and recall incoming information. Sadness and depression are of course different emotional states. Yet, researchers have observed that both sad and/or depressed people seem more preoccupied with themselves than with other people or what is going on in the world around them and thus, not surprisingly, they show deficits in attention and performance (American Psychiatric Association, 1987; Beck, 1972; Kim & Baron, 1988).

In line with this reasoning, it seems reasonable to predict that the happier people are, the more attentive and responsive to others' moods they will be. This should be true whether the target person is displaying happy or sad emotions. Hypothesis 2b: The happier subjects are, the more likely they will be to catch others' emotions--regardless of the type of emotion the target is expressing. Because Hypothesis 2b predicts that the subject's general mood will interact with the target's emotions in determining the outcome of the contagion process, it will be referred to as the interaction hypothesis.

Some support for this hypothesis comes from an experiment conducted by Hsee and his colleagues (1990). They attempted to determine whether powerful men and women would be less aware of other's feelings and thus less susceptible to emotional contagion than were their less powerful peers. To their surprise, they found that, in fact, happy, powerful, subjects seemed to be more aware of other's emotions and more responsive to them than were the more sad, fearful, powerless subjects. Unfortunately, in that study, power and mood were intentionally confounded, so it is impossible to say whether it was subjects' mood or power that influenced their susceptibility to emotional contagion. A second

goal of this study, then, is to put Hypotheses 2a and 2b to the test. We hope to determine whether background mood (priming) and a target person's emotions are additive (Hypothesis 2a) or interactive (Hypothesis 2b) in determining how likely subjects are to catch the target's emotions.

Method

Design

The study involved a 3 (subjects' mood: positive, neutral, negative) x 2 (target's emotion: positive, negative) x 2 (type of measurement: facial expression, self report) design. The first two factors were between-subject factors, and the third was a within-subject factor.

Subjects

Sixty students from three introductory psychology courses at the University of Hawaii participated in this study in exchange for bonus points. Subjects were randomly assigned to the six conditions.

Procedure[3]

When a subject arrived, he or she was ushered into the experimental room and seated at a table. In front of the subject's table was a second table, which contained a TV monitor and a VCR. A video-camera stood nearby on a tripod.

The experimenter began by providing subjects with an overview of the experiment. She explained that they were studying human communication. Subjects would be asked to think of three life events. Eventually, they would be asked to describe these events while being video-taped. (To minimize possible experimenter effects, the induction procedures were tape-recorded.)

Mood induction. The next step was to prime the subjects to experience a happy, neutral, or sad mood. Thus, in the happy (sad) condition, the instructions continued on as follows:

> Close your eyes. I will give you a few moments to think of a very, very happy (sad) event in your life--any event which made you extremely happy (sad), made you on top of the world as if you had everything going for you (made you feel extremely depressed, dejected, worthless, and so forth.) Please imagine it as if you were now experiencing it again. Please go through it with as many details as possible. (40 seconds elapsed).
>
> Stop. On the paper in front of you, write down a brief summary of the event. (10 seconds).

This procedure was repeated two times. This mood induction technique, called autobiographic recollections, was developed by Mosak and Dreikurs (1973) for use in clinical settings. It has been found to be a better method of mood induction than the oft-used Velton Mood Induction Procedures (Brewer, Doughte, & Lubin, 1980).

In the neutral condition, the recorded instructions were identical to those we have just described, except that, this time, the experimenter asked subjects to think of three classrooms and to recall various details of the rooms (their dimensions, number of windows, types of floor, brands of equipment, etc).

Assessing subjects' background mood.

After the induction procedure, subjects were asked to complete a brief questionnaire. The first question on the page was a filler. It asked subjects which event they would like to describe during the forthcoming videotaping. The second question, a manipulation check for subjects'

background mood, asked how strongly they were feeling four types of emotion--happiness, sadness, surprise, and anger--at the moment. Possible answers ranged from 0 (Nothing at all) through 10 (Extremely strong). Only the subjects' self-reports of happiness and sadness were of interest to us here. In order to test our hypotheses and to control experiment-wide error rate, it was necessary to construct a single index of happiness/unhappiness. An Index of Happiness was calculated by subtracting subjects' responses on the sadness scale from their responses on the happiness scale. Possible scores on the Index ranged from 10 (Extremely happy) to -10 (Extremely sad). Columns three and four were merely fillers. This scale was developed by Borg (1982). He contends that this scale is as close to a ratio-scale for measuring emotional intensity as exists. For information on the reliability and validity of this scale, see Borg (1982).

After the subjects completed the questionnaire, the experimenter said that since it would take a few minutes to review their summaries and decide which story to film, students could "kill time" if they wished by taking a look at a tape on which a previous participant had described his experiences. Presumably, that would give them a better sense of the experimental procedures. These instructions prepared the subjects for the next phase of the experiment: presentation of the target person's emotions (positive or negative).

Presentation of the emotional stimulus. Hsee et al. (1990) developed a set of video-tapes in which a male student described an extremely happy or an extremely sad experience. On the happy tape, the target person

recounted a joyous surprise birthday party his friends had given him. His facial expressions, voice, and posture all conveyed the same message--intense happiness. On the sad tape, the same student described a heart-breaking experience. His grandfather had died when he was six and the funeral had been a sad affair. As the man relived the day, his facial expression, tone, and gestures conveyed his intense feeling of sadness and loss. These emotional events were not scripted. The speaker was recounting real experiences. His descriptions and emotional expressions were natural, spontaneous, and extremely affecting. (See Ekman, 1985, for possible differences between posed and spontaneous emotional expressions.) In this experiment, half of the subjects watched the happy tape on their TV monitor. The rest viewed the sad tape. All subjects were alone while viewing the clips. They were unaware that their faces were being videotaped as they watched the clips.

Assessing emotional contagion.

This paper began with the observation that people may be consciously aware of their emotions and/or may simply automatically express their emotions via facial expressions, ANS responses, or other habitual emotional behaviors. Accordingly, in this experiment, we wanted to assess emotion in at least two different ways. Accordingly, (a) judges rated the subjects' spontaneous facial expression of emotion as they watched the interviews, and (b) at the end of the target's video presentation, subjects provided retrospective self-reports of the emotions they had experienced earlier while watching the happy and sad interviews.

This was done in the following way: (a) As subjects viewed the target person's tape, a hidden video camera recorded the emotional expressions which played across their faces. (Subjects were alone in the experimental room at the time their expressions were recorded. They expected to be filmed after the experimenter returned.) Later, judges analyzed the subjects' taped facial expressions to determine how much happiness and sadness their faces registered as they watched the interviews (see below for details), and (b) When taping was complete, the experimenter asked subjects to fill out a second questionnaire. The first question served as a self-report measure of subjects' emotions while watching the tape. It asked the subjects to indicate how happy and sad they had felt while watching the stimulus tape. Once again, they used the Borg scale described earlier. Again, an Index of Happiness was calculated by subtracting subjects' responses on the sadness scale from their responses on the happiness scale. (Subjects' self-reports of emotion were collected at the end of the experiment to avoid alerting them to the fact that we were interested in their emotions.)

The second question asked subjects to indicate on a 7-point Likert scale how attentive they had been while watching the tape. Possible answers ranged from (1) extremely inattentive to (7) extremely attentive.

The next page of the questionnaire was designed to assess subjects' attentiveness more objectively. It asked subjects five multiple choice questions about the tape they had seen. It included such questions as: "How old was the student when his friends arranged the surprise birthday party for him?" "How many people attended the party?" (if subjects had

been shown the happy tape) and "How many people were crying during the funeral?" "How old was the student when his grandfather died?" (if subjects had been shown the sad tape.) Finally, subjects were fully debriefed.

Judges' ratings of subjects' facial expression of emotion.

After the experiment, the 60 subjects' facial expressions (recorded during the experiment) were edited into a single tape, containing 60 one-minute segments. Each segment was begun half-a-minute after the target person began his emotional description. Subjects' facial expressions were then reproduced during the next 60 seconds. Then, four raters, all blind to the purpose of the study and to the subjects' experimental condition, viewed the edited tape. They rated how happy and sad subjects seemed to be on the same Borg scales described earlier. Again, an Index of Happiness was calculated for these ratings of facial expression. The four judges' ratings were averaged to yield a final Index of Happiness for each subject. It should be noted that the edited tape had no sound track, so judges' ratings were based exclusively upon subjects' facial and bodily reactions.

Reliability of the judges' facial expression ratings. To determine how reliable judges' ratings of subjects' facial expressions were, a Pearson product moment correlation for each pair of judges' ratings was conducted. Judges' 1-4 ratings correlated from .50 to .77. The coefficients on all the six pairs were significant ($p < .001$). These data suggest that the judges' ratings were fairly reliable.

Results

Manipulation Checks

The first step was to determine whether or not our manipulations were effective.

Subjects' Background Mood. Subjects in the happy, neutral, and sad priming conditions did differ in background mood as expected. Subjects' mean ratings on the Index of Happiness were 4.22, 2.52, and -2.30, respectively. A one-way analysis of variance indicated that these differences were significant ($F(2, 57) = 10.32$, $p < .001$.)

Target's emotions. The target was effective in displaying happy or sad emotions. Four judges rated the target person's emotions as he described a happy or sad event. The judges' ratings on the Happiness Index were 6.50 for the happy tape and -4.12 for the sad tape . Again, a one-way analysis of variance indicated that these differences were significant ($F(1, 6) = 95.48$, $p < .001$).

Dependent Measures

If Hypothesis 1 is correct, both subjects' self-reports of emotional experience and their facial expressions should mimic the target's emotions. Figures 1 and 2 provide clear evidence for the existence of such contagion.

Insert Figures 1 and 2 about here

Hypthesis 1 was tested via a 3 (mood) x 2 (emotion) x 2 (measurement) analysis of variance. It was found that subjects' emotional reactions were shaped by the target's emotional expression, regardless of how mood was measured [The Main effect for Emotion was significant= F

(1, 54) = 133.64; $p < .001$).] The next step was to see whether the individual measures of emotion--subjects' self-reports and judges' ratings--each showed evidence of contagion. They did. Two separate 3 x 2 (mood x emotion) analyses of variance were conducted. One focused on subjects' self reports and the other on judges' ratings. Both analyses provided clear evidence of contagion. Subjects' reported feeling happier [F (1, 54) = 122.60; $p < .001$] and displayed happier facial expressions [F (1, 54) = 14.43; $p < .001$] when viewing the happy target than when viewing the sad one. Again, figures 1 and 2 graphically depict these results. Although clear evidence of contagion was secured regardless of how subjects' emotion was measured, it was clear that the self-report measures provided a more sensitive index of subjects' emotions and more powerful evidence of contagion than did the video-tapes of their facial expressions. (The Rating x Emotion interaction was significant: F = 38.73, 1, 54 d. f., $p < .001$.)

Hypothesis 2 proposed that prexisting mood would effect subjects' susceptibility to emotional contagion. Hypothesis 2a (the addition hypothesis) proposed that we would secure a main effect for mood--subjects should be especially likely to catch emotions consistent with their own. Hypothesis 2b (the interaction hypothesis) proposed that we would secure a significant interaction between mood and emotion--the happier the subjects, the more contagion they would show. The data suggest that Hypothesis 2b <u>may</u> be correct. When subjects are happy, they may be more attentive and more responsive to others.

<u>1. Attentiveness data.</u>

If Hypothesis 2b is true, the sadder subjects are they more likely they should be to (a) admit they were less attentive to the tape, and (b) secure lower accuracy scores on the multiple choice test of attentiveness. To test this hypothesis, two separate one-way analyses of variance were performed, one on subjects' own attentiveness ratings and another on the objective attentiveness measures. In both cases, the results were in the expected direction: Subjects' ratings of their own attentativeness, in the happy, neutral and sad mood groups were 5.10, 5.00, and 4.60, respectively. Subjects' mean correct information scores were 2.75, 2.20, and 1.95, respectively. However, neither of these differences was statistically significant. For the subjective measure of attentativeness, $F(2, 57) = .58$; n. s.; for the objective measure, $F(2, 57) = 2.28$; n.s. Two simple contrasts were also run on both measures. The first contrast compared the happy versus the sad mood groups. This time, although the subjective measure was still not significant ($F(1, 37) = .32$, n. s.), the objective measure was significant: $F(1, 37) = 4.35$, $p < .05$. Other contrasts were non-significant. These findings seem to definitely rule out Hypothesis 2a and possibly to provide some weak support for Hypothesis 2b.

2. Contagion data.

Other data which seems to rule out Hypothesis 2a and provide some weak support for Hypothesis 2b, concerns subjects' self reports and judges' ratings of subjects' emotions while viewing the tapes. If Hypothesis 2b is correct, subjects in the happy condition should have consciously experienced and facially expressed more happiness when viewing the happy tape and more sadness when viewing the sad tape than

do their peers. When one looks at the pattern of the means (See Figures 1 and 2) one sees that there is no support for Hypothesis 2a; instead, the means fall in the pattern predicted in Hypothesis 2b--happy people do seem most responsive to the target person's emotions. These results are not statistically significant, however. Let us look first at the three way (mood x emotion x measurement) analysis of variance. That reveals neither significant main effect of mood [$F(2, 54) = .28$, n. s.] nor a significant interaction between mood and emotion [$F(2, 54) = 1.48$, n. s.]. When the two separate two-way (mood x emotion) analyses of variance are considered--one on the facial expression ratings and the other on subjects' self-reports--we again fail to find either a significant main effect for mood or a significant mood x emotion interaction on either measure of emotion. Finally, as before, two simple contrasts were performed. In the first contrast, scores of subjects in the happy versus sad mood groups (ignoring subjects in the neutral control group) were contrasted. When subjects' self reports were considered, the interaction was still clearly non-significant. When judges' ratings of subjects' facial displays of emotion were considered, however, the Mood x Emotion interaction [$F(1, 36) = 3.16$, $p < .08$] approached statistical significance. The same pattern of results was secured when the responses of subjects in the Happy and Neutral groups versus those in the Sad group were contrasted ($F(1, 56) = 2.97$, $p < .09$.)

Discussion

This experiment provides strong support for Hypothesis 1. Emotional contagion can be demonstrated in a controlled laboratory setting. There

was strong evidence that both subjects' conscious self-reports of emotion and their more-or-less non-conscious facial expressions were influenced by the target's emotions. The finding that people tend to display and experience one another's emotions has interesting implications both for the understanding and the control of emotion. Firstly, if one realizes that emotions are contagious, one has a better chance of understanding seemingly inexplicable emotional reactions. Sometimes people feel happy, angry, sad, or anxious not because of events in our own lives, but because they are sensitive to others' expressions of emotion. Once this is realized, people can be better judges of the source of our own emotions in various situations.

Secondly, the recognition that emotions are "contagious" gives people some hints as to how to control their own emotions. If people spend too much time associating with people who are angry, bitter, or sad, they may end up feeling the same way themselves. The implication is that, to control one's emotions, one should exercise control over one's relationships. More than likely, the process of contagion takes place on a daily basis without conscious intervention, but knowledge of the emotional effects of others could have a role in more conscious selection and regulation of social interactions.

What effect does preexisting mood have on the process of contagion? It is difficult to tell. On one hand, it is clear that preexisting mood has only a minimal impact on susceptibility to contagion. Does it have any effect? Perhaps. There is some weak evidence that people are most susceptible to catching others emotions when they are happy. People may

well be more attentive and responsive to others when they are happy than when they are focused on their own problems.

Subsequent Research

In subsequent research, researchers will surely want to continue to explore the effect of mood on emotional contagion. If, as the data suggest, mood has no effect on susceptibility to emotional contagion, that would be good to know. It would suggest that those who wish to access their own feelings as a guide to what others may be feeling, do not have to worry that their own mood may effect their sensitivity to others. If, on the other hand, subsequent research was to find that happy people are especially attentive to other's emotions and thus especially prone to experience emotional contagion and reflect it in their behavior, that too would have some fascinating implications. One would then have some hints as to when therapists (and people in general) will be especially able to attend to others and will be most able to use their own emotions as a guide to what other people are feeling. Interestingly, if the preceeding speculations are correct, these data also would suggest that happy people may be especially susceptible to "catching" others' moods. If they are in the company of other, equally happy, people, all's well and good--their spirits may soar. But if they are with people who are depressed, their spirits may plummet. Sad people may be less resilient. It does them little good to associate with happy people; they are only minimally able to attend to them and thus have little chance of "catching" their emotions. They tend to stay where they are emotionally.

Of course, subsequent research is necessary to say which of these two fascinating hypotheses is correct.

We might also note that although we assume subjects might catch any of the basic emotions--joy or sadness, love or anger, fear or serenity--we have only demonstrated that subjects can mirror two emotions, joy and sadness. In subsequent research, we would want to assure ourselves that they are equally capable of catching other social emotions.

Footnotes

1. Correspondence should be addressed to Dr. Elaine Hatfield, 2430 Campus Road, Honolulu, HI. USA 96822

2. In presenting the addition hypothesis, we write as if a happy or sad mood should have symmetrical effects on subjects' tendency to attend to, process, and remember congruent information. Of course, we know they do not. People are naturally motivated to maintain a positive state and to change an unhappy one. Thus, while we might expect happy people to show far more willingness to attend to, process, and recall happy material than sad, sad people may not be equally willing to deal with sad material. There may also be structural differences in the way happy and sad material is processed (See Isen, 1987 for a discussion of this point.) For clarity's sake, however, we will state the addition hypothesis in its starkest form, since we are concerned, for the moment, merely with contrasting two very different hypotheses--the addition and the interaction hypotheses.

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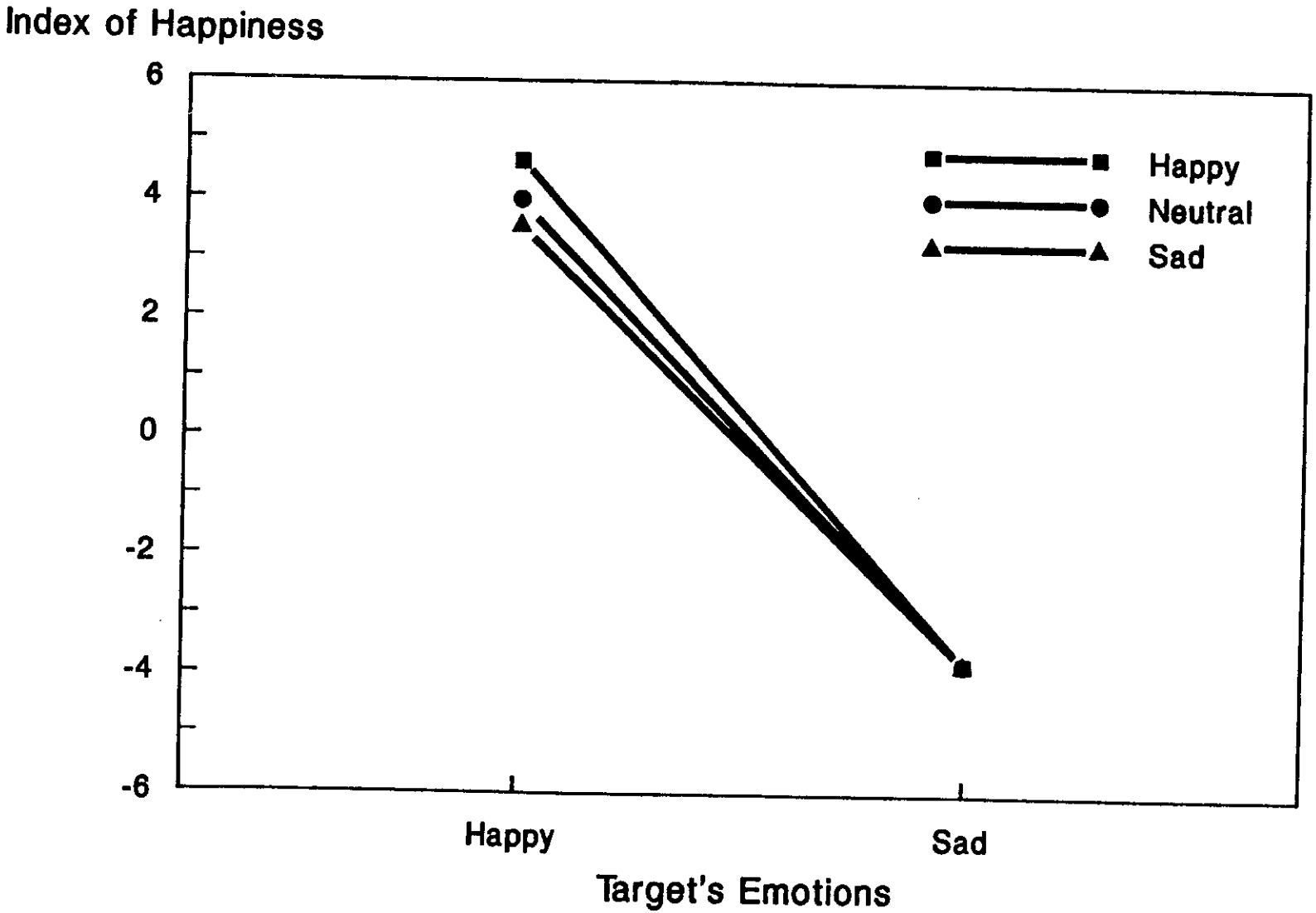
Figure Captions

Figure 1. Subjects' happiness (as assessed by facial expression).

Figure 2. Subjects' self reports of happiness.

Self Reports



Facial Expression