After the Movies: Transient Mood and Social Judgments

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The effects of transient moods on a variety of social judgments were studied in an unobtrusive field study. Subjects were interviewed immediately after leaving film performances classified as predominantly happy, sad, or aggressive in affective tone. Questions covered four topic areas: political judgments, expectations about the future, judgments of responsibility and guill, and quality-of-life judgments. Judgments on all four question categories were significantly influenced by the offective quality of the films. Judgments were more positive, lenient or optimistic after viewing a happy film than after a sad or an aggressive film. These mood biases were universal irrespective of the demographic background of subjects, suggesting the robustness of the phenomenon. The results were interpreted in terms of recent models of emotional influences on social cognition, and the practical implications of the findings were considered.

OWe are often confrorted in daily life with the necessity of making complex social judgments on relatively short notice. To take a few examples, many everyday questions about such matters as our perceptions of politicians, expectations about the future, attributions about others or satisfaction with various aspects of our lives require us to deal quickly and selectively with massive amounts of complex yet relevant information. It is usually assumed that people answer such questions rationally and that their judgments may be taken at face value. This unobtrusive field study was designed to show that a broad spectrum of everyday social judgments, including many that are often asked in public opinion surveys, can be seriously distorted depending on the short-term mood state of the respondents and that such distortions can be explained in terms of contemporary models of social cognition.

Most social judgments by necessity involve the processing of inherently complex and ambiguous information and, as a consequence, are sensitive to various biasing influences (see Heider, 1958). Mood may be one of the most important short-term sources of everyday judgmental distortions. The way a person feels was found to have an important influence on judgments of the AUTHORS' NOTE: Support from the Australian Research Grants Commission to the first author is gratefully acknowledged. Requests for reprints should be sent to Joseph P. For a Carbon of Parchalogy University of New South Wales, P.O. Box I. Kensington

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on perceptions of others (Clark & Waddell, 1983; Gouaux, 1971; Griffitt, 1970), on perceptions of future outcomes and internal-external control (Masters & Furman, 1976), and even on evaluations of consumer products (Isen, Shalker, Clark, & Karp, 1978). Recently, Johnson and Tversky (1983) reported that subjects who read newspaper articles about cancer or other tragic events tended to overestimate the likelihood of other, totally unrelated negative events. Schwarz and Clore (1983) found that changes in mood caused by recollections of happy or sad memories, or rainy or sunny weather (1) exerted a significant influence on a variety of social judgments. They suggest that people may mistakenly rely on their own transient feelings as evidence when answering questions that have affective connotations. It seems then that "emotional moods have a general influence on the interpretations of ambiguous information which cannot be accounted for by thematic relatedness" (Clore, Schwarz, & Kirsch, 1983, p. 8).

Because affective influences on judgments seem independent of thematic similarity (Johnson & Tversky, 1983), such biases are difficult to explain in terms of purely cognitive formulations (see Wyer & Srull, 1977). Bower (1981; 1983) put forward an associative network model, which assumes that mood states may become linked to other cognitive contents as a result of prior associations. Once a mood state is experienced or "activated," this will increase the likelihood that its associated concepts also reach a threshold level of activation. Because social perception is always selective and inferential (see Heider, 1958), the greater availability of mood-congruent concepts must influence the way complex social stimuli are interpreted. For example, the same social behaviors may be interpreted as confident versus arrogant, friendly versus ingratiating, courageous versus reckless—depending on the prevailing mood state of the judge and the selective priming of positive or negative interpretive categories. Similarly, our judgments of subjective well-being, future expectations or perceptions of politicians may also be subject to such mood-contingent distortions.

Indeed, Bower (1981) found that interpretations of inherently ambiguous TAT pictures were dependent on the judges' manipulated mood, and Forgas, Bower, and Krantz (1984) reported that happy subjects saw more positive than negative behaviors, whereas sad subjects perceived more negative than positive acts in a person perception task. Several clinical studies also demonstrated the biasing effects of enduring mood states on clients' social judgments (Roth & biasing effects of enduring mood states on clients' social judgments than to see themselves, their environment, and even other people in a more negative light than do others (see Teasdale & Spencer, 1984).

Our study seeks to extend these earlier findings, by demonstrating the existence of mood biases in the more realistic and demanding judgmental existence of mood biases in field settings. Laboratory-based studies of mood-dependent judgmental biases may suffer from several shortcomings. The often transparent nature of the mood manipulations, the possibility of demand

characteristics, and the occasional lack of effectiveness of some methods present one important limitation (Isen & Gorgoglione, 1983). A second problem is that the intensity of such manipulated mood states may differ from everyday mood fluctuations, possibly limiting the external validity of the findings. For example, hypnotically induced emotions are often more intense than everyday moods are (Bower, 1981). Although some prior studies have found mood effects in field settings (Isen et al., 1978; Schwarz & Clore, 1983), neither the range of judgments nor the range of moods was sufficiently broad to warrant generalizations. In the Isen et al. study only positive moods were sampled, and in both studies only a limited range of judgments was examined.

For these reasons, it is of considerable importance to complement laboratory experiments with large-scale field studies. Finding naturally occurring situations with strong mood effects is of course not a simple task. Everyday moods fluctuate throughout our daily routines, as a result of many unforesceable and uncontrollable influences. As people are free to choose and change the social episodes they enact (Forgas, 1982), for the purposes of field study we had to find a social situation that is characterized by (1) clearly identifiable mood effects and (2) strong restrictions on the participant's ability to avoid or change the situation. One situation satisfying both of these requirements occurs when people visit a cinema and voluntarily expose themselves for a prolonged period to what is essentially mood-inducing audiovisual stimulation. Because films come in many varieties, this situation also has the added advantage of allowing the empirical comparison of the judgmental consequences of a variety of different mood states.

In this investigation we focused on the effects of viewing happy, sad, and aggressive films on a variety of social judgments. We expected that happy moods would be associated with the most positive and optimistic judgments, and sad moods with the most negative and pessimistic judgments. The hypotheses are more difficult to formulate in the case of aggressive films. Although viewing aggression is clearly a most rewarding pastime as the success of many action films such as Rambo clearly indicates, we know relatively little about the quality of the emotional experiences generated by such films. We decided to include aggressive films in addition to happy and sad films in this study in order to gain some empirical information about the affective and cognitive consequences of such movies.

METHOD

Overview

Several currently popular movies were identified as having a predominantly happy, sad, or aggressive theme. A large number of visitors leaving the selected films were approached and asked to complete a brief public-opinion-survey-type questionnaire containing 13 questions. The questions were designed to represent four judgmental categories, including (1) political judgments, (2)

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judgments of the likelihood of future events, (3) judgments of responsibility and guilt, and (4) judgments of satisfaction with personal and work life. In addition, the demographic characteristics of the respondents (sex, age, approximate socioeconomic status) were also recorded.

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Subjects were 980 visitors to various film performances in Sydney during August-September 1985. Respondents were selected randomly in a wide range of movie theaters and performances, including both city and suburban, and day centers featuring 4 to 7 theaters (including several downtown cinema performances per theater sampled. The sample included, with an average of 4.2 males; 371 saw a happy movie, 253 a sad movie, and 356 an aggressive movie. In terms of socioeconomic status, 257 were classified as lower class, 512 as middle class, and 211 as upper-middle class. Of the total sample, 24.8% (244) were less over 40. In terms of the demographic characteristics, the sample represents a for the obvious underrepresentation of older people among the movie-going public.

Mood Manipulation

In the first instance, a survey was made of all the films currently showing in the metropolitan area. Of this list, a short list of those films with predominantly sad, happy, or aggressive themes was prepared on the basis of personal reports and an analysis of critical reviews in the media. To confirm this preliminary tors before a final selection was made. Some difficulty was encountered in finding sufficient numbers of films were also personally viewed by the investigations appeared a rather unfashionable genre at this time. Finally, a list of four films within each of the three categories was drawn up, which were most likely to films included (1) happy films (Beverly Hills Cop, Police Academy II, Back to the Future, Brewster's Millions); (2) sad films (Dance with a Stranger, Mask, Birdy, Killing Fields), and (3) aggressive films (First Blood, Rambo, Mad Max III). This selection process was subsequently validated by subjects' mood ratings after seeing these films (see below).

Dependent Variables

All judgments were collected in the form of simple 7-point bipolar scales, with both extremes and the midpoint clearly labeled (e.g. unsatisfactory—average—excellent). We looked at the effects of mood on four specific judgmental domains. (1) Political questions included four scales asking for

expected affective impact of the three different categories of films their mood state on a 7-point scale, from bad to good, as a control of the any of the films. The last question on the questionnaire asked subjects to rate None of the questions had any direct cognitive associations with the topics of questions, the aim was to include a wide variety of domains, which ranged from satisfaction with their private, social, and working lives. In selecting these evaluated in the context of specific recent and well-publicized court cases. (4) the personal to the impersonal and represented considerable thematic variability. driving, heroin trafficking, and interfering with the course of justice had to be The last category of questions asked about the subjects current assessment of punishment. Here the appropriateness of severe punishments for drunken coming year). (3) The third category included questions about responsibility and performance of the economy, improvements in personal fortunes over the likelihood of future events (a nuclear war between the superpowers, the future surveys. (2) The second question category asked for judgments about the These questions were very similar to the typical Gallup Poll items used in public and the leader of the opposition), and the current state and federal governments. ratings of satisfaction with two prominent political figures (the prime minister

Procedure

subjects from a departing crowd. were not tabulated because of the time pressures associated with gathering experimenters did not detect any differences in subjects' willingness to answer the questionnaire across the three mood conditions, although exact refusal rates although these judgments must of course be regarded as approximate only. The consensual estimates of the age and socioeconomic status of each respondent, male and female members of the audience. They aided each other in making Normally, two experimenters worked together, alternately concentrating on of the sheet the sex and estimated age and socioeconomic status of the subject. took about 30-90 seconds, the experimenter immediately recorded at the bottom then handed over the questionnaire, and if necessary, explained the use of 7-point rating scales. After the completion of the questionnaire, which normally few seconds to complete." The experimenter, who was blind to the hypotheses, survey asking about your judgments of a number of issues, which will only take a street in front of the exit. They were politely asked to "participate in a brief either in the lobby (where management permission was obtained), or on the Subjects were approached immediately after leaving the movie theaters,

Control Condition

Because judgments may be influenced not only by the mood generated by the films, but also by self-selection biases (c.g., happy people select to see happy films), it was important to control for this possibility. To achieve this goal, 120 subjects (60 males and 60 females equally divided across the three film types)

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significant differences in the overall positivity of judgments across people visiting the three film categories, F(2, 119) = .67; p < .231, and self-ratings of an identical questionnaire. A one-way analysis of variance revealed no were approached before they entered the movie theater, and asked to complete F(2, 119) = .41; p < 302.preattendance mood were also not significantly different across the three groups

RESULTS AND DISCUSSION

Validation of the Mood Manipulation

on our questionnaire, a self-rated mood scale, indged revealed highly significant establish that there were in fact differences in mood between the audiences of the subjects entered the movie theaters, thus providing a convincing validation of aggressive movies (4.32 versus 4.90) than did males. Overall, these results somewhat worse after sad movies (3.52 versus 3.65) and considerably worse after significant sex by movie interaction effect, F(2, 979) = 3.81, p < .05: Females felt to different categories of movies somewhat differently, as indicated by a and more positive, optimistic, or lenient judgments). Males and females reacted note that throughout this discussion, higher mean values indicate better mood. happy movie than after an aggressive (M = 4.65) or after a sad movie (M = 3.58; scale, subjects rated themselves as feeling significantly better (M = 5.93) after a differences before the performances according to the control study. On a 7-point difference in affective state after the films, F(2, 979) = 6.36, p < .001, versus no three categories of movies. An analysis of variance of responses to the last item interpreting the data given that exact refusal rates could not be kept. Differential mood differences in their respective audiences, which were not present before our mood-manipulation procedure. However, some caution is necessary in indicate that the three groups of movies generated very strong and consistent affected the results, although we consider this extremely unlikely. willingness to complete the questionnaire across the three conditions may have Before examining how mood influenced social judgments, we must first

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after happy movies, and more negative, pessimistic, and critical after sad or aggressive movies (Figure 1). four categories, judgments were generally more positive, optimistic, and lenient judgmental categories. An overall analysis of variance indicated that across all The 13 questions answered by the subjects represented four distinct

those of sad, 1(626) = 7.09, p < .001, or aggressive, 1(730) = 5.55, p < .001 films, showed that judgments by the audiences of happy films were more positive than (3.52) or aggressive (3.64) films, F(2, 979) = 30.49, p < .001. Additional t-tests leaders and governments were rated more positively after happy (4.03) than sad Mood influences on political judgments suggested that both federal and state

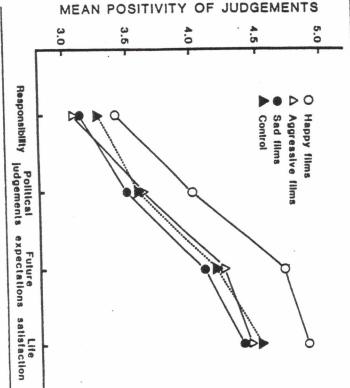


FIGURE 1 Overall analysis of judgments.

economy or improvements in their personal fortunes after seeing a happy (4.74) likelihood of future events revealed a similar pattern. People were significantly aggressive movies. The second group of questions dealing with estimates of the whereas no differences were found between people who saw sad as against Judgments after a happy movic were again different from judgments after sad, rather than a sad (4.10) or an aggressive (4.25) film, F(2, 979) = 32.58, p < .001. more optimistic about the avoidability of nuclear war, the performance of the differences between the last two categories. t(626) = 7.28, p< .001, and aggressive, t(730) = 5.71, p< .001 films, with no

jailing of a recently convicted prominent legal figure was much higher after both ments for drunken driving, the death penalty for heroin trafficking, and the responsibility and about guilt and punishment. Support for increased punishmore extreme negative judgments than did sad films (Figure I), although the p<.01. On this group of questions alone, aggressive films resulted in somewhat aggressive (3.10) and sad (3.13) than after happy (3.40) films, F(2, 979) = 8.168, The third category of items asked subjects to make judgments about

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difference was not significant. Both aggressive, (730) = 3.34, p< .001, and sad films, (626) = 2.85, p< .005, led to more critical responses than did happy films. The last group of questions dealt with subjects 'satisfaction with various aspects of their current lives. People rated their satisfaction with their social life, working file, and other people much higher after a happy (4.94) rather than a sad (4.41) or an aggressive (4.47) film, F(2, 979) = 25.83, p< .001. Ratings after happy films were more positive than after sad, (626) = 5.93, p< .001), or aggressive films, (730) = 5.79, p< .001, with no significant differences between these last two kinds of movies.

These judgmental biases are generally consistent with theories such as Bower's (1981). Clark and Isen's (1982) or Clore and Schwarz's (1983) formulations. Bower (1981) suggests that mood states preferentially activate mood-consistent cognitive categories, which are more likely to be selectively used in interpreting and processing the rich and ambiguous information array relevant to each of these judgments. When judging a politician, a government, the likelihood of nuclear war, or our satisfaction with our job, a very large number of relevant "facts," many of them inherently ambiguous and requiring further interpretation need to be processed. Feeling good (or feeling bad) seems to predispose people to access mood-congruent categories selectively, and to select and interpret ambiguous information in a mood-consistent manner (Clark & Isen, 1982). It seems that

the emotional premise from which we begin strongly influences what we perceive. . . . The current mood activates and primes mood-congruent categories into readiness, and these are used in expectation-driven, or top-down processing to classify and assimilate indeterminate experiences. (Bower, 1981, p. 140)

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In a somewhat different model, Clore et al. (1983) suggested that when people are asked an affective or emotionally relevant question, they consult their momentary feelings to form a judgment.... If ... they enter the situation in a previously formed mood or affective state, they may erroneously base their judgments on these preexisting feelings, reading them as reactions to the object of judgment, (p. 9)

Both of these models regard affective states as closely integrated parts of more general cognitive-representational systems. Although some implications of such affect-cognition models dealing with the effects of mood on memory turned out to be less robust than expected (cf. Bower & Mayer, 1985), affective influences on associative processes and judgments have now been confirmed in a variety of contexts (Clark & Waddell, 1983; Forgas et al., 1984; Gouaux, 1971; Griffitt, 1970; Isen et al., 1978; Johnson & Tversky, 1983).

An interesting aspect of our findings is the apparent asymmetry between positive or negative mond effects. If we regard the average premovie judgments as the baseline, it is clear that whereas happy movies had a strong positive effect on a variety of judgments, sad or aggressive movies were relatively ineffectual (Figure 1). Planned contrast analyses of variance showed that political

judgments.—F(1,979) = 23.42, p < .001, future expectations—F(1,979) = 27.11, p < .001, and judgments of life satisfaction—F(1,979) = 14.76, p < .001, were all more positive by viewers of a happy movie than by control subjects. In contrast, sad or aggressive movies had no algorithm effect on these three kinds of judgments when compared to judgments by control subjects. On the fourth judgmental category, judgments of responsibility and guilt, premovie control judgments were not significantly different from judgments after viewing any of the movies.

These results suggest that the effects of positive mood on judgments may be generally more robust than negative mood effects, although the impact seems also to depend on the particular judgmental dimension. Earlier research also showed that negative mood biases are more likely to be influenced by contextual factors such as the judgmental target (Forgas et al., 1984), and clinical studies suggest that mood-dependent biases in depression can also be highly context specific (Roth & Rehm, 1980). Several factors may contribute to the limits on negative mood effects on social judgments. Perhaps as a result of internalized cultural norms, people learn to constrain the effects of their bad moods in certain situations (Forgas, 1983; Forgas et al. 1984). Clark and Isen's (1982) notion of "controlled." processing may also account for limited effects of bad moods found here and escewhere, although the nature of this process in social judgments remains to be specified. A further exploration of the conditions under which controlled processing occurs may well indicate that normative and cultural factors play an important role in triggering such processing strategies.

Individual Differences and Mood Effects

An analysis of variance of subjects' sex, age, or socioeconomic status in the larger postmovic sample failed to reveal any differences across the three audience groups, confirming that judgmental biases were largely due to the effects of the films and not preexisting demographic differences. However, it is also possible that subjects of different age, sex, and socioeconomic status may react to the same films differently as far as their various judgments are concerned. This possibility was evaluated by carrying out a series of four-way analyses of variance in which mood condition (happy, sad, aggressive), sex (male, female), age (<20, 20-40, 40+) and estimated socioeconomic status (high, medium, low) were the independent variables.

For political judgments, only mood condition had a significant effect or, subjects' opinions. For predictions of future events, the under-20 age group was significantly more pessimistic (4.23) than the other two age groups (4.46 and 4.45), F(9, 926) = 5.39, p < .01. There was also a significant interaction between sex and socioeconomic status: for females, higher status was associated with more optimism for the future, whereas the opposite was the case for males, F(9, 926) = 8.18, p < .001. Judgments of responsibility were also significantly affected by age, with older subjects (>40) being much more punitive (2.81) than middle-aged (3.26) or younger subjects (3.47). Age was also a significant influence on the

older subjects rated their satisfaction higher (4.74) than did middle-aged (4.64) or younger (4.52) subjects, F(9, 926) = 3.63, p < .02. last category of judgments, concerned with ratings of current life satisfaction:

Audgmental biases is confirmed. Indeed, it is quite remarkable that the emotional manner, with no major interaction effects detected, the robustness of these and socioeconomic status were influenced by these films in an almost identical judgments. To the extent that judgments by people of various age groups, sex. impact of these films influenced the judgments of such a large and heterogeneous group of respondents in a relatively uniform manner. Overall, these findings confirm the generality of mood influences on socia

CONCLUSION

of mood biases in social judgments, and how they may be controlled, remains an consistent with the predictions of recent mood-cognition theories, such as and powerful than negative mood effects. The lindings may be regarded as unrelated social judgments. We found positive mood effects to be more general important task for future research. judgments in real-life settings. The further exploration of the applied significance this study helps to establish the external validity of mood influences on social areas and largely independent of the demographic characteristics of the subjects the judgmental biases found here were identical across a variety of thematic judgmental situations, including responses to public opinion surveys. Because particularly positive moods, may play a very important role in everyday Forgas et al., 1984; Gouaux, 1971; Griffitt, 1970; Isen et al., 1978; Schwarz & mood effects on social judgments (see Bower, 1981; Clark & Waddell, 1983; valid extension of some earlier laboratory and field experiments demonstrating Bower's (1981) and Clark and Isen's (1982) models, and represent an ecologically pictures generates strong and demonstrable mood effects in people, and that Clore, 1983). These results strongly suggest that transient mood states, these moods in turn have a significant influence on a wide variety of thematically This study was successful in demonstrating that exposure to various motion

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