20: SOME EFFECTS OF EVERYDAY MOODS AND POSSIBLE INDIVIDUAL DIFFERENCES IN THESE EFFECTS

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This volume deals, in part, with the effects of energetical states on cognitive processes. This topic has been the focus of recent research for social, cognitive and clinical psychologists interested in the effects of everyday moods an arousal states. In the first half of this chapter, I shall review some of this research - especially that dealing with the effects of such states on everyday social judgements and behaviour. This will be followed by a discussion of some of the possible processs through which these effects might be mediated. Researchers in the areas of research from which my illustrations are drawn have not devoted much attention to the issue of individual differences. Nonetheless, in the second half of the chapter, I will argue that work on moods may contribute to an understanding of the basis of individual differences in energetical states, and their consequences for cognition.

SOME EFFECTS OF MOODS

Moods and Judgements

Mood states cause judgements to be congruent with the tone of the state. For example, a positive mood induced by receipt of a free gift results in people rating their television sets and cars more favourably (Isen, Shalker, Clark & Karp, 1978). Numerous other studies confirm this type of effect. Positive moods induced in such ways as succeeding on a task, thinking positive thoughts or being given false feedback that one's mood is positive have been shown to cause the tone of social judgements of others, of neutral pictures, and of the future to become more positive (eg Clark & Waddell, 1983; Feather, 1966; Forest, Clark, Mills & Isen, 1979; Masters & Furman, 1975). Negative moods have analogous effects. For instance, a negative mood induced by being in a hot room leads to more negative judgements of strangers (Griffitt, 1971) and negative states induced by such things as failure and false feedback that one's mood is negative cause judgements about photographs to become more negative (eg Isen & Shalker, 1977; Forest et al, 1979).

Moods and Behaviour

Mood states also often, but not always, cause behaviour to become more congruent with the mood. Good moods, for instance, induced in ways such as succeeding on a task, receiving an unexpected gift, or experiencing pleasant weather lead to increased helping as indicated by donating to a charity, picking up dropped papers, making a phone call, assisting an experimenter and leaving generous tips (Cunningham, 1979; Isen, 1970; Isen,

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Clark & Scwartz, 1976; Isen & Levin, 1972). Many other studies confirm that positive moods increase helping (eg Batson, Coke, Chard, Smith & Taliaferro, 1979) and also demonstrate that positive moods increase people's willingness to approach strangers for information (Batson et al, 1979) and may make people more receptive to persuasive communications (eg Janis, Kaye & Kirshner, 1965).

In contrast to positive moods, negative moods have more complex effects. They sometimes but not always lead to mood congruent behaviour. For instance, while Baron & Bell (1976) have shown that negative moods may increase antisocial, aggressive behaviour, very often negative moods have been shown to increase prosocial behaviour (eg Cialdini, Darby & Vincent, 1976; Manucia, Baumann & Cialdini, 1984).

Moods and Task Performance

There is a growing body of evidence indicating that moods influence task performance. First, moods may interfere directly with task performance. In a series of studies by Ellis and his colleagues, for instance, depressed moods have been shown to interfere with encoding of material into memory as well as with retrieval of material that has been recently learned (eg Leight & Ellis, 1981; Ellis, Thomas & Rodriguez, 1984; Ellis, Thomas, McFarland & Lane, 1985). There are, however, many exceptions to these findings (eg Hasher, Rose, Zacks, Sanft & Doren, 1985) and it will be important to identify the conditions under which moods do and do not interfere with encoding and retrieval of information (see, for instance, Ellis, 1985).

Recent literature also suggests that the effects of moods on task performane may go far beyond simply interfering with learning or recall. For example research indicates that material may sometimes be better learned if its intrinsic valence matches the learner's mood (eg Bower, Gilligan & Monteiro, 1981; Nasby & Yando, 1982). However, this effect has not always been replicated (eg Bower, Monteiro & Gilligan, 1978; Isen et al, 1978). Moods also have been shown to improve recall of material learned when in a similar mood (eg Bartlett, Burleson & Santrock, 1982, study 2; Boser, Monteiro, & Gilligan, 1978, study 3) although this finding too has not always been replicated (Bower et al, 1978 studies 1 & 2; Bartlett et al, 1982, study 1).

Moods, Decision-Making and Creativity

Further, positive moods may take decision-making more efficient. Isen and Means (1983) induced either a positive mood in subjects by giving them success feedback or gave them no feedback. Then subjects were given information about nine qualitative dimensions of six cars and were told to choose a car. As subjects made a decision, they gave verbal protocols. Those in positive moods took less time to make the decision and were less likely to go back over material they had already looked at than were others. They also were more likely to completely eliminate dimensions from consideration that were unimportant to them and to quickly eliminate cars based on a negative rating on a single important dimension.

In still other work reported by Isen, positive moods induced either by success or receipt of a free gift seem to increase subjects' tendencies to take small risks but to inhibit taking large risks (Isen, Means, Patrick & Nowicki, 1982; Isen & Patrick, 1983). Finally subjects in whom positive moods have been induced seem more creative than others. They will give more unusual word associations to stimulus words than will others (Isen,

Johnson, Mertz & Robinson (1985), they are more likely to think of unusual uses for items (Isen & Nowicki, 1981 as cited in Isen, Means, Patrick & Nowicki, 1982), and they use broader categories than would otherwise be the case (Isen & Daubman, 1984).

EXPLANATIONS FOR MOOD EFFECTS

Of course researchers have concerned themselves with the processes that may underlie these effects. Some proposed processes involve the storage and retrieval of information in memory. Many of these processes are assumed to operate automatically with little effort on the part of the people involved. Other proposed processes are motivational in nature and are assumed to be conscious and effortful (see Clark & Isen, 1982 for a more detailed discussion of these two types of processes).

Mood-Cueing and Memory

One idea is that mood may cue, and consequently make more available, material that is stored with a similar affective tone in memory. This idea is captured in two different proposals. First, as evidence already cited indicates, there may be state dependent mood effects - that is, material learned by subjects when in a particular mood may be best recalled when subjects are again in a similar state. The material learned does not necessarily have to have an intrinsic affective value that matches the later state at retrieval. It just has to have been stored at a time when one was experiencing that state. A second related but not identical idea is that mood may selectively cue material that itself has a similarly toned meaning for the subject. It may have a similar meaning for the subject because it was stored at a time the subject was experiencing a similar state, but it may have had that intrinsic meaning before learning or have acquired that meaning later.

The mood-cueing hypothesis can easily account for why moods lead to more congruent judgements and behaviour. Moods may cause mood congruent thoughts about the objects to be judged to come to mind more easily and those thoughts may, in turn, influence judgements and behaviour. It is also possible that the moods more directly trigger mood congruent behavioural responses (eg the thought of helping or an urge to help - see Clark & Waddell, 1983). The mood-cueing idea can also account for such findings as moods leading to better learning of mood related material. Mood-related material may easily fit with other activated mood-related thoughts and thus may more easily be elaborated than other material at time of learning. Consequently it may be more easily recalled later. Finally these ideas may even account for such findings as positive moods leading to more unusual associations if one assumes that such moods cue a broader network of information than would otherwise be available thus leading to the availability of more associations than would otherwise be the case (Isen et al, 1985).

What is the evidence for mood-state-dependent memory? As briefly mentioned above, some studies have found such effects (eg Bower et al, 1978, study 3; Bartlett, Burleson & Santrock, 1982), but there have been many failures to find mood state dependent effects (eg Bower & Mayer, 1985; Isen et al, 1978). It seems as though state-dependent mood effects are fragile phenomena that may occur only in limited circumstances. The same is true of mood dependent retrieval. Some researchers find evidence for it (eg Isen et al, 1978) but others do not (eg Mayer & Bremer, 1985). Moreover, the mood dependent retrieval idea has received much stronger support

when the mood in question is positive than when it is negative (see Isen, 1985). Like the mood state dependency idea, it appears that mood dependent retrieval probably occurs, but that we have yet to do an adequate job of specifying exactly when it is likely and when it is not.

Mood-Cueing General Response Styles

Since moods have been consistently found to influence judgements and behaviour, yet the effects on retirval of individual pieces of material in memory must be described as weak, it is reasonable to suggest that moods do not simply or only cue individual, mood-congruent pieces of information in memory which in turn influence judgements or decisions about behaviour. They may also cue broader programs or styles of behaving (a suggestion that received some attention by another working group at this meeting - that on theoretical processes). For instance, moods may make people generally more sociable and agreeable. This could account for the fact that people in positive moods are more likely to rate strangers in positive ways (eg Griffitt, 1971; Clark & Waddell, 1983) and explain why they tend to help others more (eg Isen, 1970). It is also possible that moods trigger general tendencies to evaluate other people and objects in a positive or negative manner without cueing individual pieces of information.

As Isen (1984) points out, there is some evidence against the idea of such response bias effects in that positive moods do not make all judgements more positive and negative moods do not make all judgements more negative. Nonetheless, it still seems possible that such response biases or tendencies exist - although to account for the fact that not all judgements are biased it must also be assumed that they are held in check by still other processes. For instance, a general tendency to judge things in a favourable manner when in a positive mood may only be sufficiently powerfuyl to overcome evaluations driven by the actual stimulus in question in situations where there is ome ambiguity in the person's mind regarding the desirability of the stimulus. If a clear, unambiguous evaluation of an object has already been stored in memory (eg murders are bad) that evaluation may be quickly accessed overriding any general response tendencies. Alternatively, mood elicited response biases may produce an urge to respond in a particular way, but that urge may be followed by a check on the reasonableness of one's response prior to the response actually taking place. If the biased response is judged to be quite unreasonable (eg murders are not bad) the response will not be made, otherwise it will.

Such ideas have not received much attention. However, as noted they fit well with observations that moods have consistent effects on judgements and on certain behaviours yet do not consistently increase the retrieval of individual, mood-congruent pieces of information in memory.

Moods and Capacity

Still another explanation for some effects of moods is that they take up capacity in memory leaving less capacity to be devoted to other tasks. This might occur because moods cue mood-related material and this material takes up capacity (and thus this explanation may be closely related to the mood-cueing ideas expressed above). Alternatively capacity could also be taken up because people devote effort either to intentionally and effortfully alleviating or maintaining moods (processes that will be discussed in more detail below). In either case, the idea that moods take up capacity can explain why moods might interfere with encoding of new material and retrieval of old material as Ellis and his colleagues have observed (Ellis

et al, 1984; Ellis et al, 1985). It can also explain such findings as positive moods leading to the use of more efficient task strategies than would otherwise have been chosen (Isen & Means, 1983).

Moods as Pieces of Information

Still another explanation for some effects of moods has been suggested by Schwartz and Clore (1983) and involves the assumption that one's mood serves as a piece of information which subjects take into account when making a judgement or behaving. More specifically one's mood may be misattributed as having been caused by objects and or people in one's environment present at the time the mood is experienced. Mood congruent effects on judgements and behaviour can be accounted for in this way. For instance, if one feels good when asked to make a judgement about another or when asked to help another one may misattribute the good mood as having been caused by the other and conclude that one must like that other. Consequently one may judge the other more favourably or be more inclined to help than usual.

Controlled, Strategic Processes

The processes underlying mood effects discussed this far, with the possible exception of mood serving as a piece of information, are all assumed to be rather automatic and non-effortful in nature. However, to explain all the mood effects, it is necessary to postulate the existence of intentional, effortful strategies as well. Specifically, to explain such findings as negative moods leading to increased helping, researchers have proposed that people use intentional strategies to alleviate negative states. Thus, people may help more when in negative moods because they believe helping will make them feel good (Harris, 1977) and thus can be used to alleviate negative states (Cialdini, Darby & Vincent 1973; Manucia, Baumann & Cialdini, 1984). Similarly people may sometimes use intentional strategies to maintain positive states (an effect which has yet to be demonstrated) or to avoid disrupting those states (Isen & Simmonds, 1979). Such strategies could account for subjects in positive moods using efficient decision making strategies. Perhaps they intentionally do so to avoid ruining their moods (Isen & Means, 1983). Of course, with practice such strategies can become automatic (see Clark & Isen, 1982 for a more extensive discussion of controlled strategies).

MOODS AND INDIVIDUAL DIFFERENCES

Existing work on mood and arousal may contribute to an understanding of individual differences in the effects of moods in at least two ways. First, researchers have already identified people who are particularly prone to feeling specific energetical states: Watson & Clark (1985) discuss a trait called "negative affectivity"; clinicians have long been interested in people who are particularly prone to depression; and Diener, Larson, Levine & Emmons (1985) have recently reported evidence supporting the idea that certain people experience affective states - both positive and negative - more intensely than do others. The work on the effects of temporary mood states reviewed above can contribute to further understanding of

such individual differences by suggesting their implications for judgements, behaviour and task performance.

In addition, the work reviewed above suggests which individuals may develop into the sort of people characterised by negative affectivity, depression, a tendency to experience effect intensely, etc.

Storage and Structure of Material in Memory

To the extent that mood state dependent effects and mood congruent retrieval effects exist and account for effects of moods on judgements and behaviour, what is stored in memory and how well it is interconnected should be very important in determining who will be most subject to such effects. There is evidence that most people have more positive than negative material stored in memory and the positive material may also be better interconnected (see Clark & Isen, 1982). This may be due to lifelong habits of intentionally maintaining positive moods and/or alleviating negative moods. However the exact extent of positive and negative material and their respective interconnections may vary considerably between people. Some people may have a preponderance of negative material in memory and/or have negative memories which are especially well interconnected. They may be particularly prone to experience negative moods and their consequences. Others who have stored a preponderance of positive material and/or whose positive memories are especially well interconnected may be particularly prone to positive moods and their consequences.

A recent paper by D Clark and Teasdale (1985) reveals the promise of pursuing this type of individual difference. In a first study they found effects of positive and negative moods on ability to recall mood congruent trait words for females but not for males. (This occurred despite there being no gender differences in self-reported mood before or after the mood induction). In a second study these investigators examined whether this might be due to women using positive and negative trait terms more often than men (and as a result presumably having them stored in memory more closely linked with affect than do men). Males and females rated the extent to which they used the trait terms when thinking and talking about others. As predicted women reported using the words more often than men. Also, a positive correlation was found between a word's usage and the difference between the number of women recalling the word in a congruent state and the number recalling it while in an incongruent state. Moreover the gender difference in mood congruent recall obtained only for those six (of twelve possible) trait words for which females actually reported higher usage than males.

Private Self-Consciousness

The emphasis on internal thoughts and feelings in many of the processes proposed to underlie mood effects also suggests the potential importance of a personality trait known as private self-consciousness (Feningstein, Scheier & Buss, 1975; Scheier & Carver, 1983) for understanding individual differences in moods and their effects. People high in private self-consciousness show a chronic tendency to attend to internal thoughts, attitudes and feelings; people low in this trait do not. To the extent that accessing one's own affect-congruent thoughts and feelings is important for eliciting moods and their consequences, people high in private self-copnsciousness ought to be especially subject to moods and their effects. At least one study does show that people high in this trait respond more strongly to mood inductions than do those low in the trait

(Scheier & Carver, 1977).

Private self-consciousness also may lead to mood-congruent material being better rehearsed and more interconnected which, as pointed out above, is itself an important individual difference. Further, high private self-consciousness may increase people's use of stored controlled strategies for two reasons. First such people may simply be more conscious of the availability of these strategies than others. Second, they also may be more conscious of their own values and beliefs regarding the circumstances under which emotions ought or ought not to be expressed.

Consistent with some ot these ideas is work by Carver, Blaney and Scheier (1979) who found that, among subjects who reported a moderate fear of snakes, those who were exposed to a manipulation known to temporarily increase private self-awareness (ie a mirror) halted an approach to a snake faster than those who were not exposed to this manipulation unless they also held high expectancies of being able to control their fear and to complete the approach. Although these effects have not been demonstrated with subjects high and low in chronic (rather than manipulated) private self-consciousness, it is reasonable to suspect that a parallel pattern of results would be obtained. Finally it is reasonable to suggest that high private self-consciousness might result in lower tendencies to misattribute current moods and use them as a basis for judging objects as Schwartz & Clore (1983) suggest. People high in private self-consciousness, after all, should be especially aware of the true source of their moods as well as of their true attitudes about stimuli and objects in their environment.

Awareness of One's Own Physiological States

Physiological arousal has long been a part of many researchers' conceptualisations of emotion and recent work suggests that perception of one's own arousal state and storage of information about that state may constitute part of what it means to say that moods are stored in memory and consequently part of what is cued later (Clark, 1982; Clark et al, 1983; Clark, Milberg & Erber, 1984). To the extent that this is true, individual differences in people's awareness of their own arousal states ought to have an impact on what is actually stored and, in turn, on the magnitude of subsequent moods and their impact on judgements and behaviour. People must have at least some awareness of changes in their arousal states if such changes are to be stored in memory and later cued.

Katkin (1985) has reported a method that can be used to measure individual differences in ability to detect one's own heart rate. Similar measures may be developed for other visceral changes. What are the implications of differences in awareness of one's own visceral responses for understanding individual differences in moods and their effects? Those low on this trait may experience and consequently store little information about moods in memory. Thus they may not be particularly subject to mood effects. People higher on this trait, may store some rough information about these states in memory. This information may subsequently be cued when they are in the same or a similar state thus producing mood-cueing and its consequences. Going still a step further, those who are especially high on this trait may once again show a deop in such cueing and its effects since various positive (and negative) mood inducing states will result in a somewhat differently patterned visceral states. People very sensitive to their states may accurately perceive and store these differences. As a result different positive (or negative) states may not efficiently cue positive and negative material stored earlier. Extreme sensitivity to the nature of different mood states might also reduce individuals'

tendencies to misattribute the causes of moods in the way suggested by Schwartz and Clore (1983) since people high in sensitivity should be especially aware of what circumstances produce what precise feelings.

Finally, it is also possible that individual differences in visceral perception relate to the use of controlled strategies. People who are particularly sensitive to their own physiological states may be especially likely to find these states disruptive and therefore especially likely to develop strategies for dealing with them. These particular ideas have not received attention to date, but clearly deserve to be pursued.

Coping Skills

As already noted, people often do not react to moods in a passive manner but rather they strive to cope with and to change affective states. Such controlled, intentional strategies presumably can override automatic cueing of mood congruent material or behavioural styles and, with practice, the strateties may become automatic. In any case, to fully understand individual differences in how moods and arousal influence task performance it is clear that we must understand individual differences in coping skills.

Again this is an issue which has not captured the attention of many researchers interested in transient mood states but it is clearly important. Researchers in other areas (eg Lazarus & Folkman, 1984) have discussed different types of coping strategies people use in response to stress. We might determine whether the coping strategies outlined by these authors apply to the control of everyday moods as well as whether additional strategies are used. Then we must identify the antecedents of strategy learning and use. There are many types of coping strategies (eg distraction, intentionally focusing on other types of material in memory etc) and many variables that might affect the learning and use of such strategies. It will be important to focus on long term determinants of strategy learning and use (eg direct parental teaching, tendency of care-takers to attend to a child's moods and alleviate them or to leave the child alone to cope with moods, socialisation about the appropriateness of expressing emotions etc) as well as on short term determinants of strategy use (eg fatigue, goals for the time during which moods are being experienced). Understanding such processes will greatly enhance our ability to understand and predict chronic individual differences in tendencies to use controlled strategies and consequently in tendencies to experience moods and their effects.

CONCLUSIONS

I have briefly outlined some recent research on the effects of moods on performance of such everyday tasks as making judgements about objects and other people, making decisions about how to behave and what car to buy as well as on such things as creativity. The types of processes through which these effects might be mediated have also been reviewed. Finally some brief comments about the directions in which research on individual differences in this area might proceed have been mentioned. Very little work has yet been devoted to understanding the implications of already identified individual differences in everyday mood states (as opposed to, say, clinical depression). Neither has much work been devoted to understanding the antececents of such states. Nonetheless, it seems clear that this is an area in which important work may be done in the future.

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