The Rocky Road from Affect to Attentional Focus

The subjective state of affect has fascinated thinkers and scholars throughout human intellectual history. Another subjective state, attentional focus, has relatively recently become the target of serious scientific inquiry. In keeping with the theme of this volume, our chapter is concerned with the interplay between these two subjective states.

More specifically, this chapter is the story of our efforts over the last several years to clarify the elusive relation between affective states and attentional focus. This theoretical and empirical journey has turned repeatedly into an easy stride, a marathon, a short one-way street, and a complex highway structure—not necessarily in that order. The road from affect to attentional focus has indeed been rocky, to paraphrase Ned Jones (1979).

We have been concerned with the causal relation between affective states and attentional focus, and more specifically, with the question 'what affective states lead to what kind of attentional focus?'. Building on literature tradition (Sedikides, 1992a), we initially narrowed our empirical quest to the subjective experience of the affective states of sadness and happiness. Likewise, in congruence with established theory and research (Carver, 1979; Duval & Wicklund, 1972; Gibbons, 1991), we conceptualized attentional focus as falling on a bipolar continuum. One pole of the con-
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The continuum represents attentional resources that are directed internally, namely, to the self. The other pole of the continuum represents attentional resources that are directed externally, namely, to other persons or environmental objects.

We have been preoccupied in particular with one pole of the attentional continuum: self-focused attention. We were not alone. Understanding the nature of self-focused attention has been the primary or secondary objective of research on attributions and perspective taking (Gibbons & Wright, 1983; Greenberg, Pyszczynski, Burling, & Tibbs, 1992; Stephenson & Wicklund, 1983), perceptions of control (Mikulincer, Gerber, & Weisenberg, 1990), alcohol consumption (Hull, 1981; Hull, Levenson, Young, & Scher, 1983), belief perseverance (Davies, 1982), group interaction (Mullen, 1991), and communication in close relationships (Trommsdorff & John, 1992), as well as prosocial behavior (Berkowitz, 1987; Gibbons & Wicklund, 1982) and antisocial behavior (i.e., aggression and cheating; Carver, 1975; Diener & Walbom, 1976). Importantly, elevated levels of self-focused attention have been associated with psychological disorders, such as anxiety (Carver & Scheier, 1986) and schizophrenia (Exner, 1973). Most importantly, increased self-focused attention has been linked empirically to depression (Gibbons et al., 1985; Ingram, Lumry, Cruet, & Sieber, 1987; Larsen & Cowan, 1988). Self-focused attention has been hypothesized to maintain and exacerbate depressive episodes (Ingram, 1990; Pyszczynski & Greenberg, 1987).

The discovery of an association between depression and self-focused attention instigated empirical forays into the causal direction of the link between sadness, a key correlate of depression, and self-focus. Does sadness increase self-focus?

Why Sadness Increases Self-Focused Attention

Sadness is typically elicited by such events as a personal setback or the loss of a loved one. Appraisal theories of emotion have emphasized the role of controllability reduction in the experience of sadness. Sadness is accompanied by the perception that the unpleasant event is uncontrollable and inevitable (Smith & Ellsworth, 1985). Inaction is the consequence. Indeed, sadness is associated with a state of resignation (Ekman & Friesen, 1975; Roseman, 1984), passivity, absence of relational activity, and withdrawal (Frijda, 1986).

The retrenchment and barricading of the self from the social environment is an adaptive response in coping with permanent loss (Roseman, 1984). Turning inward avoids reminders of the loss (Frijda, 1986) and enables one to rest, recover, and redirect one's goals (Sedikides, 1992a),
perhaps through increased thinking (Forgas, 1998). Indeed, this pattern of increased thinking has been labeled by various theorists as accommodation (Fiedler & Bless, in press), ample mental capacity (Mackie & Worth, 1989) or effort (Schwarz, 1990), and central processing (Wegener, Petty, & Smith, 1995).

The evaluation of one's goals, the examination of why and how these goals have been thwarted, and the adjustment of goals are processes that are well served by an inward orientation (Ortony, Clore, & Collins, 1988). In summary, sadness instigates an inaction tendency and an avoidance orientation in reference to the outside world, as well as an inclination to turn inward and consider the implications of the unpleasant event for the self. It is likely then that sadness elicits self-focused attention.

**The Empirical Evidence**

The proposition that sadness elicits self-focused attention was taken to laboratory experimentation. In the typical laboratory procedure, the experimenter places participants in a mood state and then measures the degree to which participants' attentional focus is directed inward.

The first question of interest is whether sad mood elicits self-focused attention in comparison to neutral mood. The pioneering research by Wood, Saltzberg, and Goldsamt (1990a) speaks to this question. In Experiment 1, Wood et al. placed participants in a sad or neutral affective state via a 20-minute guided imagery task. As part of this task (Wright & Mischel, 1982), participants imagined hypothetical events and recalled personal events that were either sad or neutral. Wood et al. measured attentional focus through a pronoun choice task (Wegner & Giuliano, 1980). This task involves the selection of one of three pronouns (i.e., I, we, or they) for the ostensible purpose of sentence completion. The number of selected first-person singular pronouns serves as an index of self-focused attention. Participants in a sad mood state indeed self-focused more than did participants in a neutral mood state. Sad mood, in comparison to a neutral affective state, elicits self-focused attention.

A related question, though, remains to be answered. Does sad mood heighten self-focused attention in comparison to happy mood? Wood et al. (1990a) also addressed this question in Experiment 2. They placed participants in a sad, neutral, or happy mood by playing a musical selection for 10 minutes. Wood et al. measured attentional focus through both the Private Self-Consciousness (PSC) subscale of the Self-Consciousness scale (Fenigstein, Scheier, & Buss, 1975) and an open-ended thoughtlisting task. They coded the thought sample units that referred to internal states, abilities, or characteristics as self-focused. Then, these researchers
calculated a self-focus ratio, defined as the number of self-focused thought units divided by the total number of thought units. Sad participants indeed self-focused more than either neutral or happy participants on both the PSC subscale and the thought-listed ratios. Sad mood heightens self focused attention in comparison to happy mood.

However, the conclusiveness of the Wood et al. (1990a) results remained to be fully established. The results are open to two alternative hypotheses, which Wood et al. identified. The first hypothesis pertains to the affect induction task. This task may have produced affective states of unequal absolute magnitude. That is, sad-condition participants may have felt sadder than happy-condition participants felt happy. There is indeed a glimpse of evidence for this assertion in the manipulation check data of Wood et al.’s Experiment 2. Sedikides (1992b) addressed this alternative hypothesis in three experiments. Participants imagined sad, neutral, or happy events, and then wrote down thoughts and feelings related to the events. The absolute magnitude of sad and happy affective states, as judged by their respective distance from the manipulation check scale mean, was approximately equal in all three experiments. The PSC subscale was modified to reflect momentary, rather than dispositional, self-focus. in all three experiments, sad participants self-focused more than either neutral or happy participants, as assessed by the PSC subscale. In addition, Experiments 2 and 3 included a thought-listing task. in both experiments, sad participants listed more self-focused thoughts than either neutral or happy participants. Thus, the first alternative hypothesis was not deemed viable.

The second alternative hypothesis to Wood et al.’s (1990a) findings also concerns the affect induction task. The argument is that the guided imagery task confounds the induction of affect with the induction of body centeredness (i.e., self-focus). Sad affective states are more likely to lead to body centeredness than are happy affective states. Sedikides (1992b, Experiments 2-3) controlled for this potential confounding. In Experiment 2, participants imagined a friend, rather than the self, as the referent of the affect-inducing event. In Experiment 3, body centeredness was manipulated. Half of the participants imagined events that referred to their physical bodies. These events were disfigurement by fire in the sad condition, mentally reviewing body parts in the neutral condition, and having one’s hair done by a skilled hairdresser in the happy condition. The other participants imagined non-body-centered events. These events were a canceled Caribbean cruise in the sad condition, riding a bus in the neutral condition, and winning a free Caribbean cruise in the happy condition. The crucial interaction between affect and body centeredness was not significant. Even when the affect and self-focus inducing aspects of the imagination task are unconfounded, sadness still elicits self-focused attention to a greater extent than either neutral or happy affect. There-
fore, the second alternative hypothesis to the findings of Wood et al. was also deemed untenable.

In summary, both Wood et al. (1990a) and Sedikides (1992b) obtained support for the notion that sad affect elicits self-focused attention to a greater extent than either neutral or happy affect. The empirical landscape began to clear.

However, this temporarily serene state was interrupted abruptly by a wave of data reported by Salovey (1992). Participants in Salovey's two experiments were placed into a sad, neutral, or happy affective state by imagining emotional events of personal (i.e., autobiographical) significance. A modified version of Wegner and Giuliano's (1980) pronoun choice task was used to measure self-focus. Consistently with Wood et al. and Sedikides, Salovey found that sadness elicited higher self-focus than neutral affect. However, contrary to Wood et al. and Sedikides, Salovey reported that happiness also elicited higher self-focus than neutral affect. Salovey's second experiment used the same affect induction task, but measured self-focus by means of Linville's (1985) self-complexity procedure, in which participants describe themselves by sorting 33 traits into separate piles. Salovey validated this task as an index of self-focus by demonstrating in a pilot study that one lists a greater number of self-aspects when one's attention is directed to the self. Replicating the results of his first experiment, Salovey found that both sad and happy participants were more self-focused than neutral participants.

How can the partially contradictory findings of Wood et al. (1990a) and Sedikides (1992b), on the one hand, and Salovey (1992), on the other, be reconciled? Green, Sedikides, Saltzberg, Wood, and Forzano (2000) suggested that Salovey's results are not due to (sad or happy) affect per se, but rather to the fact that the affect induction task was confounded with the induction of self-focus. Participants imagined personal events that made them feel sad, neutral, or happy. The sad and happy scenes conjured up by participants implicated the self to a greater extent than the neutral scenes, leading to heightened self-focused attention in both conditions. Parenthetically, the Wood et al. (1990a) Experiment I is also subject to the same criticism, as participants imagined hypothetical events and recalled personal events. However, in Experiment 2, Wood et al. addressed this problem.

Green et al. controlled for the potential confounding in Salovey's (1992) mood induction task by employing a within-participants design. Participants experienced a neutral affective state and either a happy or sad affective state on two separate occasions by listening to musical selections. Participants listed significantly more self-focused thoughts when placed in the sad-affect condition than when placed in the neutral-affect condition. Using musical selections as the mood induction technique, Carr,
Teasdale, and Broadbent (1991) and Green and Sedikides (1999) also reported that sad mood induced heightened self-focused attention compared to happy mood. Our intellectual journey seemed to have come to an end: Sad affect, compared to neutral states, induces heightened self-focused attention. However, the conclusion of our journey was seeming rather than real. A new hurdle came in sight. How about happy affect? Does happiness decrease self-focused attention relative to a neutral affective state?

Why Happiness Decreases Self-Focused Attention

Happiness likely evolved from a more primitive approach response (Plutchik, 1970) and is associated with increased action readiness and stimulation seeking (Roseman, 1984). Happiness is thought to facilitate the performance of adaptive approach behaviors, such as exploration, affiliation, and reproduction (Plutchik, 1970), to strengthen social bonds (Frijda, 1986; Izard, 1991) and to sustain efforts for the attainment of valued goals (Lazarus, Kanner, & Folkman, 1980). Indeed, participants in an elated affective state, relative to those in a neutral state, express preferences for social activities such as attending a party or spending time with friends (Cunningham, 1988).

In summary, happiness is associated with an approach, expansive, exploratory, and affiliatory orientation. Given the bipolar nature of attention, an external focus implies reduced internal focus. Hence, we propose that happy, relative to neutral, mood states decrease self-focused attention.

The Empirical Evidence

The conjecture that happy mood decreases self-focused attention relative to neutral mood seemed to be rooted in logic. However, empirical results did not appear equally cooperative. Some investigators (Wood et al., 1990a, Experiment 2) did not obtain a significant difference between happy and neutral mood in the elicitation of self-focus. Additionally, Salovey (1992) found that happy mood increased, rather than decreased, self-focus relative to neutral mood. As a reminder, however, concluding in the case of Wood et al. (1990) that happy and neutral moods do not differentially influence self-focus is unwarranted, because according to manipulation checks, the happy mood induction was not as potent as the sad mood induction. Concluding in the case of Salovey (1992) that happy mood increases self-focus relative to neutral mood is also unwarranted, because the sad and happy scenes that participants visualized were likely more
self-involving and thus led to heightened self-focused attention compared to neutral scenes.

Green et al. (2000) tested the proposition that happy mood, relative to neutral mood, decreases self-focused attention by controlling for several of the potential shortcomings of past research. First, they used musical selections in an effort to overcome the likely confound between visualization mood induction procedures (e.g., imagining autobiographical events) and self-focused attention. Second, as mentioned above, they used a within-participants design in order to counter the possibility that happy mood inductions are less powerful than sad mood inductions. Specifically, each participant served as his or her own control by experiencing a neutral mood state on one occasion and either a happy or a sad mood state on another occasion. Green et al. (2000) found that happy mood, as opposed to neutral mood, indeed decreases self-focus attention.

Once again, our intellectual journey seemed to have come to an end: in comparison with neutral affect, happiness decreases self-focused attention. However, as to be expected, unexpected detours emerged. How is the subjective experience of self-focus transformed as a function of other affective states, besides sadness and happiness?

The Dimension of Affect Orientation

All of the relevant research so far has capitalized exclusively on a single affective dimension—that of valence. This is understandable and legitimate, as valence has achieved the status of a classic affective and evaluative dimension in psychological research (Osgood, Suci, & Tannenbaum, 1957; Scherer, Koivumaki, & Rosenthal, 1972). Nevertheless, another critical dimension may have escaped empirical scrutiny. This is the dimension of affect orientation, proposed by Green and Sedikides (1999). We believe that this dimension can enrich the relational contingencies between affect and self-focus.

Some affective states orient individuals spontaneously toward inaction. These states heighten awareness of the self and thus instigate internal-oriented cognitive and behavioral responses. Green and Sedikides (1999) termed such states reflective. Examples of reflective affective states are sadness and contentment. Other affective states, however, orient individuals spontaneously toward corrective or affiliative action. These states heighten awareness of the environment and instigate external-oriented cognitive and behavioral responses. Green and Sedikides termed such states social. Examples of social affective states are happiness and anger.

As is evident from the above examples, reflective and social affective states can be either positive or negative. Sadness is a negative and reflec-
reflective state, whereas contentment is a positive and reflective state. In a parallel vein, anger is a negative and social state, whereas happiness is a positive and social state. Hence, the affect orientation dimension can be conceptualized as orthogonal to the affect valence dimension.

Green and Sedikides (1999) proposed that reflective affective states induce higher degrees of self-focused attention than social affective states. Rationale for this proposal follows.

**Reflective Affective States**

We have already provided a rationale pertaining to why sadness leads to increased self-focused attention. We wish to extend this rationale to contentment.

The state of contentment signals to the organism that obstacles to one's goals are either surmountable or nonexistent (Ellsworth & Smith, 1988; Scherer, 1984). Hence, little further effort is needed, and a careful consideration of environmental contingencies is unnecessary. Contentment has also been conceptualized as a 'breather' affective state (Lazarus et al., 1980), because it allows individuals to free themselves, at least temporarily, from the stress of negative life events and to feel safe and comfortable with their accomplishments. The experience of contentment has been described as feeling relaxed, quiet, free of conflict, and in touch with physical sensations (Davitz, 1969). Naturally, contentment is associated with reduced action readiness. This state is adaptive, as the organism can rest, replenish resources, and ponder new courses of action. It follows that contentment is likely to elicit heightened self-focused attention.

**Social Affective States**

We have already provided a rationale as to why happiness leads to decreased self-focused attention. We will extend this rationale to anger.

According to the cognitive appraisal view of emotions, anger communicates a disapproval of another's behavior and a displeasure with the resulting consequences of this behavior (Clore, Ortony, Dienes, & Fujita, 1993). The cognitive construal of anger involves making attributions about an outside agent; that is, the eliciting conditions of anger are thought to be characteristics of the external environment. Anger, a high action readiness state, directs the organism toward intervention that will likely modify these characteristics (Smith & Ellsworth, 1985). In fact, according to the functional view of emotions, anger enables the organism to confront predators and directs the organism toward preparation for fight or flight.
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(Berkowitz, 1990; Frijda, 1986; Plutchik, 1994). In short, anger is likely to instigate an action tendency, thus directing the organism's attention toward aspects of the environment. By implication, anger is likely to reduce self-focused attention.

The Empirical Evidence

Green and Sedikides (1999) conducted two experiments in which they tested the hypothesis that two reflective and opposite-valenced affective states (i.e., sadness and contentment) heighten self-focused attention compared to two social and opposite-valenced affective states (i.e., happiness and anger). These researchers induced the corresponding affective states either through an imagination task (Experiment 1) or an imagination task coupled with musical selections (Experiment 2). They assessed self-focused attention using the PSC subscale (Experiment 1) or the PSC subscale and a state behavioral measure. The state behavioral measure consisted of 10 statements that assessed the degree to which participants intended to behave in an introverted manner. Examples include the following statements: 'Right now, I feel like I would prefer to read a book alone at home,' 'At this moment, I feel like I would rather spend time alone in my room getting my life organized,' and 'Right now, I feel I would enjoy taking a solitary walk.'

The results were consistent with the hypothesis. Participants who experienced reflective affective states manifested higher degrees of self-focused attention than participants who experienced social affective states. In short, the introduction of the affect orientation dimension broadened the understanding of the causal association between affect and self-focus.

These findings provide another reconciliation to the contradictory reports of Wood et al. (1990a) and Sedikides (1992b), on the one hand, and Salovey (1992) on the other. As a reminder, the former researchers reported that sadness induced higher self-focus than happiness, whereas Salovey reported that sadness and happiness were equally likely to increase self-focus in comparison to neutral mood. This discrepancy may be due to the techniques that these researchers used to induce happiness. Wood et al. (1990a) and Sedikides (1992b) used techniques similar to those of Green and Sedikides (1999): exhilarating music and visualization of strongly positive hypothetical scenarios. However, Salovey used happiness-inducing scenarios that seemed to be milder in positivity and intensity. In fact, Salovey's scenarios may have induced contentment rather than happiness. Stated otherwise, these scenarios may have induced two reflective affective states (e.g., sadness and contentment), a possibility that would explain the lack of difference in the degree to which these states induced self-focus.
Concluding Comments

A few years ago, we ventured into a theoretical and empirical journey whose purpose was to clarify the interplay between two subjective experiences: affective states and attentional focus. More specifically, we examined the unidirectional relation between affective states and self-focused attention. (For work that examines whether self-focused attention induces affective states, see Sedikides, 1992c; Wood, Saltzberg, Neale, Stone, & Rachmiel, 1990b.) We believe we have arrived at a destination. Sadness and contentment increase self-focused attention, whereas happiness and anger decrease self-focused attention.

These findings have theoretical, methodological, and practical implications. From a theoretical standpoint, the relation between affect and self-focus has been shown to be multifaceted. The affect valence dimension is insufficient to account fully for this relation. Indeed, the affect orientation dimension explains findings that otherwise would appear puzzling. From a methodological standpoint, our journey will hopefully sensitize researchers to think somewhat differently about the potential consequences of sad versus happy moods on the dependent measures of their choice. Sadness and happiness instigate spontaneously differential degrees of self-focused attention, which may act as a proximal mediator on the dependent measures of interest. From a practical standpoint, our research improves the understanding of phenomena in which self-focus is a correlate. For example, in comparison to individuals in reflective affective states, individuals in social states will be more likely to make situation rather than person attributions (Keltner, Ellsworth, & Edwards, 1993), consume more alcohol, and engage in antisocial behavior.

Despite progress, additional obstacles remain to be overcome. Are there any other affective determinants of self-focused attention, besides the affect dimensions of valence and orientation? What are the microscopic processes leading from an affective state to the elicitation of self-focused attention? Are there different types of self-focused attention? Although the road from affect to attentional focus has been half paved, the adventures in paving the remaining half promise to be even more unpredictable and exciting.

References


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