

SELF-FOCUSED ATTENTION AND THE SELF-REGULATION OF ATTENTION: IMPLICATIONS FOR PERSONALITY AND PATHOLOGY

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The ability to shift attention away from the self may increase self-conscious individuals' vulnerability to negative affective states. Participants' ability to shift their attention away from themselves was assessed by how quickly they could shift attention to an external stimulus when thinking about themselves relative to their reaction time when thinking about someone else. This measure of attentional flexibility was not related to the degree of self-focus. Consistent with previous research, individuals high in private self-focused attention were more dysphoric. Being low in attentional flexibility magnified the effects of private self-focused attention. Participants high in private self-awareness who could not stop thinking about themselves experienced more dysphoria and generalized anxiety than those lower in self-consciousness or those who could better regulate attention. A similar effect was found for public self-awareness and social anxiety.

Imagine focusing your attention on something that is unpleasant and finding it difficult to look away. This would be a rather upsetting state of affairs. Now imagine that the unpleasant stimulus is you and you cannot stop thinking about yourself. More than just being upsetting, this may be associated with depression and other psychological difficulties. Indeed, self-focused attention (i.e., thinking about oneself) has been implicated in the onset, maintenance, and deterioration of mood in depression (e.g., Nolen-Hoeksema, 1991; Pyszczynski & Greenberg, 1987).

On the other hand, self-focused attention alone may not be enough to

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lead to depression. After all, if someone finds self-focus aversive, all he or she need do is focus on something else. Although self-focused attention may contribute to negative affect, it cannot explain why depressed individuals do not simply shift their focus of attention elsewhere. The fact that individuals remain self-focused suggests that they may have a deficit in their ability to shift their focused attention. The purpose of the present study is to test how individuals' ability to shift their attention away from themselves is related to negative affect. In particular, self-focused attention combined with the inability to stop thinking about oneself may lead to more negative affect and depressive symptomatology than either one alone.

SELF-FOCUSED ATTENTION

Self-focused attention refers to where attention is directed, or the content of current thoughts. Such attention can be directed outward, at the situation, or inward, at the self. There seem to be stable individual differences in how much attention individuals pay to themselves. By definition, someone high in self-focused attention is paying more attention to himself or herself than someone low in self-focused attention (e.g., Duval & Wicklund, 1972). The thoughts of someone high in self-focused attention are directed inward, at the self, whereas the thoughts of someone low in self-focused attention are directed outward, at the environment or situation. Researchers also frequently differentiate between private self-focused attention, or the self considering itself egocentrically, and public self-focused attention, or the self considering itself from the viewpoint of others (Carver & Scheier, 1987).

A great deal of research suggests that an inward focus of attention is often unpleasant and associated with negative affect (e.g., Scheier & Carver, 1977). For example, Smith and Greenberg (1981) found that private self-consciousness and depression were positively correlated in college students. Other researchers have extended this finding to clinically depressed populations (Ingram, Lumry, Cruet, & Sieber, 1987). Research and experimental evidence support a strong, positive correlation between self-focused attention and negative affectivity, such as dysphoria and depression. In particular, whereas self-focused attention after positive events does not increase negative affect (nor does it appear to increase positive affect), self-focus after negative events greatly increases negative affect (e.g., Greenberg & Pyszczynski, 1986; for reviews, see Fejfar & Hoyle, 2000; Mor & Winquist, 2002).

Theorists posit that private self-focused attention may be a cause of depression and other psychopathologies (Ingram, 1990; Pyszczynski & Greenberg, 1987; Pyszczynski, Greenberg, Hamilton, & Nix, 1991). In

particular, based on Carver and Scheier's (1981) cybernetic control theory, Pyszczynski and Greenberg (1987) suggest that self-focused attention increases after a loss to help achieve the goal of recovering the lost object. Normally, individuals briefly self-focus as part of a test-operate-test-exit control loop designed to help direct their behavior toward reaching the goal of recovering the lost (and possibly irretrievable) object. In depression, however, the individual "may be *unable* or unwilling to give up the desired but unattainable goal" (Pyszczynski & Greenberg, 1987; emphasis added). Thus, the individual remains stuck in this control loop, unable to exit, constantly evaluating himself or herself. Staying in this control loop results in heightened self-focused attention, which may reduce self-esteem and positive affect, and possibly end in depression (McFarland & Ross, 1982; Wood, Saltzberg, Neale, Stone, & Rachmiel, 1990). Furthermore, many of the symptoms of depression may be a direct result of self-focused attention (Pyszczynski & Greenberg, 1987). The experience of being stuck in a state of chronic self-focused attention may be a critical factor in the development of negative affective states.

The relationship between self-focused attention and anxious states is less clear. In a review of the literature, Mor and Winquist (2002) found that public self-focused attention was a much stronger predictor of anxiety than private self-focused attention. To further roil the waters, their review suggests that social anxiety may be related to public self-focused attention, whereas private self-focused attention may be a predictor of generalized self-focused attention. The limited pool of studies that examine anxiety prevent a firm conclusion regarding the association between private and public self-focused attention and anxiety.

ATTENTIONAL FLEXIBILITY

The ability to shift one's focus of attention may be important in the relationship between self-focused attention and negative states. In particular, individuals' flexibility of attention may help explain the progression from self-focused attention to depression. Because individuals can only pay attention to a limited amount of information at any given time, attention must be regulated and shifted to be flexibly allocated to various tasks as the demand arises (Kahneman, 1973; Treisman, 1960). Although there is nearly an infinite amount of information available in the environment that can be attended, the focus of attention is limited to a very small portion of that information. So, an individual who is self-focused is paying attention to himself or herself in the present moment. Because attention may be shifted from stimuli to stimuli as the need arises, that self-focused individual may be externally focused if the situation de-

mands attention to something or someone outside the self. The content of attention needs to be considered separately from the ability to shift attention from one target to another.

In terms of self-focused attention, some individuals may find it easier to shift their focus of attention away from the self than others. Other individuals may find it difficult to disengage from self-focused attention, which is important because individuals who cannot escape self-focus should be at greater risk for negative affect and pathologies. For example, in an extensive review of the literature, Baumeister (1991) found that individuals are often motivated to stop thinking about themselves and may go to extreme lengths (e.g., suicide, masochism, drug use) to escape an inward focus of attention. Consistent with the literature on self-focused attention, Baumeister concluded that individuals find self-focused attention aversive and try to escape this state, if possible. Moreover, he noted that the efforts individuals make to stop thinking about themselves are likely just as important as the fact that they are thinking about themselves. In particular, the extremes that some individuals will go to in order to escape self-awareness (e.g., suicide; Baumeister, 1990) suggest that shifting attention away from the self is not a trivial or easy endeavor.

Thus, individual differences in the ability to disengage from self-focused attention likely are as important in determining negative affectivity as individual differences in self-focused attention. Individuals who are highly self-focused but who can easily stop thinking about themselves need not go to extremes to escape self-awareness. Individuals who cannot stop thinking about themselves are likely to engage in the more drastic behaviors Baumeister (1991) describes. Self-focused attention is most unpleasant when it is chronic and inescapable. Individuals who can easily allocate their attention away from themselves should do so when self-focused attention becomes too negative. They thus may avoid the depressive focusing style described by Pyszczynski and Greenberg (1987).

In this vein Ingram (1990) proposes that the construct of self-absorption—the combination of self-focused attention and deficits in attentional regulation—is a key factor in many psychopathologies. In such a model, one would expect that individuals high in self-focused attention who cannot easily shift attention away from themselves would experience more negative affect than either individuals high in self-focused attention whose attention is more flexible or individuals low in self-focused attention. Likewise, Eysenck hypothesizes that “it is probable that anxious individuals are more likely than non-anxious ones to be distracted from an ongoing task by *internal* worries and preoccupations” (Eysenck, 1988, p. 128). These theories of negative affectivity assume

that the ability to regulate attention is separate from the content of attention and that mood disorders are best predicted by the combination of self-focused attention and inflexible allocation of attention.

MEASURING ATTENTION

Experimentally, one should be able separate and measure these two different factors of attention (e.g., James, 1890; Pashler, Johnston, & Ruthruff, 2000). The content of attention has a long history of study. The degree of self-focused attention can be measured through well-validated and highly reliable paper-and-pencil measures (e.g., Fenigstein Self-Consciousness Questionnaire; Fenigstein, Scheier, & Buss, 1975). But measuring participants' ability to shift their focus of attention is a slightly more difficult matter. Paper-and-pencil measures of attention-shifting ability may miss the dynamic quality of this ability.

Although methods exist to study attention control, most are concerned with on-task performance and a participants' ability to avoid being distracted (i.e., sustained attention, Davies & Parasuraman, 1982; Davies & Tune, 1969), rather than attention shifting itself. Recent research on task switching has given psychologists a means to study the executive control of attention, however. In a task-switching paradigm, a participant is asked to alternate between two demanding tasks. Research has found that when participants have to switch between tasks, their performance suffers relative to times when they worked on a single task (Pashler et al., 2000). Moreover, the decline in performance is related to the difficulty of the task and to individual differences in executive control of attention (Cepeda, Cepeda, & Kramer, 2000; Cepeda, Kramer, & Gonzalez de Sather, 2001). In particular, participants' response time to the secondary task indexes their ability to switch tasks and therefore their attentional flexibility (Baddeley, Chincotta, & Adlam, 2001).

The present research used the task-switching paradigm to assess participants' ability to shift their attention away from themselves (*self-focus flexibility*). Participants were asked to switch from a task that required self-focus to a task that required outward focus. For the main task, participants had to make me/not me judgments of personality trait words. On certain trials, the computer beeped and participants had to respond to that tone as quickly as possible. From the task-shifting literature, individuals who have less self-focus flexibility should have more difficulty disengaging from the self-focused task and, hence, should respond to the external task more slowly than individuals who have more self-focus flexibility (see Baddeley et al., 2001; Keele & Hawkins, 1982; Logan & Gordon, 2001). To control for individual differences in reaction time, cognitive complexity, and other variables, participants' reaction time to the tone also was as-

sessed when they were outwardly focused (making yes/no judgments about whether traits described a close friend or family member).

HYPOTHESES

Models of attention (e.g., Baddeley et al., 2001; Pashler et al., 2000) suggest that the content of attention is separate from the ability to reallocate attention. Thus, there should not be a relationship between self-focus flexibility, as assessed using the task-switching paradigm, and self-focused attention, private or public. Theories of negative affect and psychopathologies suggest that attentional content (self-focused attention) should be related to negative affect. There may not be a relationship between the ability to shift attention away from the self and negative affectivity because attention-shifting ability should matter only among individuals high in self-focused attention. That is, the interaction between private self-focused attention and self-focus flexibility may predict negative affect (dysphoria) better than either factor alone.

In addition, generalized anxiety may be related to the inability to stop engaging in private self-focused attention. In particular, individuals who had both a harder time shifting their focus of attention away from themselves and a more inward focus of attention (private self-focused attention) may be more anxious than either individuals who were able to shift their focus of attention away from themselves more easily or those who had lower levels of self-focused attention. Social anxiety, meanwhile may be related to the inability to disengage from public self-focused attention.

METHOD

PARTICIPANTS

The participants were 112 undergraduate students (44 females and 68 males) who attend a small Midwestern college. They received course credit in return for their participation. The experimenter told participants that the purpose of the experiment was to study "people's unconscious beliefs about the similarity between themselves and their friends." Participants were run individually, in one 30-min session.

MEASURES

Upon arrival to the laboratory, participants were given an initial briefing on the nature of the experiment. They then signed an informed consent form and completed personality inventories.

Spielberger Trait Anxiety Inventory (Spielberger, Gorsuch, & Lushene, 1970). This is a 20-item inventory that is widely used to assess levels of generalized anxiety. It is used as a screening instrument, as well as in diagnosis and outcome research. The inventory has been found to have substantial validity and it has good properties to differentiate anxiety from depression.

Fenigstein Self-Consciousness Questionnaire (SCS; Fenigstein et al., 1975). The SCS is a 22-item scale that shows an individual's self-consciousness in both public and private situations. Each item is scored from -4 to +4, with 0 representing neutral. Public self-consciousness refers to the tendency to think about those aspects of oneself that are matters of public display, whereas private self-consciousness refers to the tendency to think about more covert or hidden aspects of the self. The scale also includes a measure of social anxiety, or apprehensiveness about being evaluated by others. Extensive research on the original instrument shows that public and private self-consciousness mediates a wide range of behaviors and cognitions.

Beck Depression Inventory (Beck & Beamesderfer, 1974). The Beck Depression Inventory consists of 21 items that assess the severity of depression symptoms in both clinical and normal populations. Each item is a list of four statements arranged in increasing severity about a particular symptom of depression. This scale is widely used and has well-established validity and reliability. In samples of non-diagnosed adults, the scale measures negative affectivity or dysphoria.

Descriptive information for each of these scales, including mean, standard deviation, and internal reliability appears in Table 1.

PROCEDURE

The cover story described the experiment as an investigation into how people perceive their friends and themselves. Participants were told that a computer would flash words that describe personality traits on the screen for a brief period of time and that they would have to indicate, using the keyboard, whether the word they saw described the participants themselves (internal focus of attention instructions). Participants were told that in the second half of the experiment, they would have to indicate whether another set of words described one specific person they knew well, usually a friend or a relative (external focus of attention instructions). Participants were asked to specify clearly whom they were going to think about by writing this person's initials on a piece of paper. The order of responding was counterbalanced across participants.

During the experiment, the computer beeped 12 times (six times when participants were thinking about themselves and six times when they

TABLE 1. Means, Standard Deviations, and Intermittent Correlations

Variable	M	SD	1	2	3	4	5	6
1. Public Self-consciousness	8.29	10.09	.84					
2. Private Self-consciousness	10.09	9.55	.46**	.67				
3. Attentional Flexibility	0.82	6.11	.17	.04	.74			
4. Dysphoria	5.89	5.11	.24*	.18	.12	.81		
5. Social Anxiety	2.77	8.56	.23	-.11	.13	.03	.75	
6. Generalized Anxiety	38.8	9.83	.12	.09	.00	.53**	.17	.71

Note. Cronbach's alphas are given on the main diagonal of the correlation matrix. N = 112. *p < .05; **p < .01.

were thinking about someone else). Participants were told to press the mouse button as quickly as they could upon hearing this beep. They were told that this was just an additional distractor, designed to make the rating of the personality trait words more difficult. This was to prevent them from focusing on the reaction time task (if participants were aware of the true purpose of the beep, this secondary task may have become their primary task in their desire to perform well). Participants' reaction time to the beep measured their ability to shift their attention away from themselves. In particular, how quickly participants could shift their attention from the primary task to a secondary task while thinking about themselves was an index of self-focus flexibility (see Baddeley et al., 2001).

STIMULI

The words presented to participants were 50 personality trait words drawn from Anderson's (1968) likeability ratings. One-third of the words were positive (top 20% of Anderson's list), a third of the words were neutral (middle 20% of the list), and a third were negative (bottom 20% of the list). They were presented for exactly 2 sec on a Macintosh Plus microcomputer. On trials when the computer beeped, the beep occurred 500 ms after the word first appeared on the screen. The presentation of the stimuli and measurement of reaction times were controlled using a Macintosh Pascal program the written for this experiment.

RESULTS

Participants' average reaction time to the beeps when they were thinking about another person was subtracted from their average reaction time to the beep when they were thinking about themselves. Subtracting participants' reaction time when they were thinking about something unrelated to themselves controlled for individual differences in overall reaction time, so that the difference score operationalized participants' ability to disengage from self-focus. A negative difference score indicated that participants responded more quickly to the beep when they were thinking about themselves than when they were thinking about someone else. A positive difference score indicated that participants responded more quickly to the beep when they were thinking about someone else than when they were thinking about themselves. Thus, a larger number indicated poorer self-focus flexibility, meaning that participants could not shift their focus of attention away from the self as quickly as they could shift their focus of attention away from a more neutral target.

As shown in Table 1, there was no correlation between the reaction time difference score (self-focus flexibility) and the private self-consciousness subscale of Fenigstein and colleagues' (1975) self-consciousness scale, $r(112) = .04, ns$. Self-focus flexibility was similarly unrelated to public self-consciousness, $r(112) = .17, ns$. Thus, consistent with theories of attention (James, 1890; Pashler et al., 2000; Posner & Petersen, 1990), self-focus flexibility and self-consciousness may be two unrelated constructs.

PLAN OF ANALYSES

A moderated multiple regression was used to analyze the unique contribution of self-consciousness (public and private), self-focus flexibility, and the interaction between the two to the prediction of dysphoria, generalized anxiety, and social anxiety. In the first step of the regression, self-consciousness and self-focus flexibility, or the reaction time difference score, were entered into the regression equation.¹ In the second step, the interaction between self-consciousness and self-focus flexibility (the product of the two) was entered into the regression equation as a predictor of the dependent measure. The analyses tested whether the combination of self-focus flexibility and self-focused attention helped predict the dependent variable (dysphoria or anxiety) beyond the effects of each one considered separately (Cohen & Cohen, 1983).

To study the effects of the gender of the participant or of order of responding, two models were run that controlled for either gender or order of responding (whether participants rated themselves or their friend first). These models did not differ from the simpler models that did not control for gender or order of responding. Similarly, gender and order did not moderate any of the effects, including the higher order interaction between self-focus flexibility and self-consciousness. Thus, these variables will not be considered further.

DYSPHORIA

For dysphoria, as assessed by the Beck Depression Inventory, the relationship between private self-consciousness and dysphoria approached conventional significance levels, $B = .177, t(110) = 1.90, p < .06$. This repli-

1. The results of these and the other analyses were similar and remained significant when reaction time while thinking about the self and reaction time while thinking about another were entered separately into the regression equation.

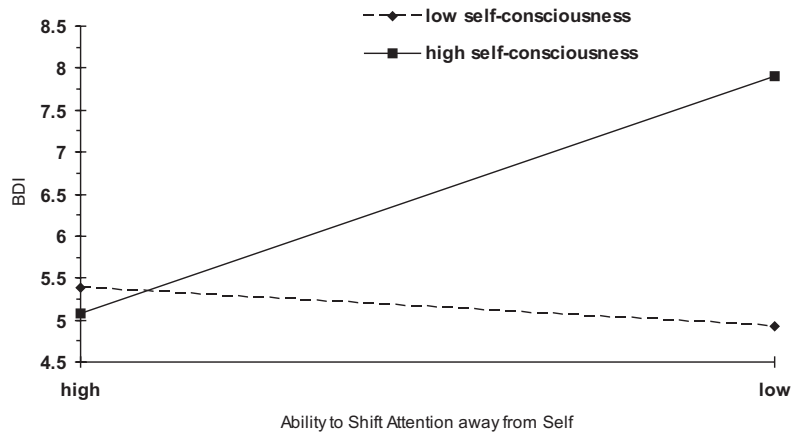


FIGURE 1. Dysphoria for participants at +1 *SD* and -1 *SD* in private self-consciousness and ability to shift attention away from the self.

cates prior studies that found that self-focused attention and dysphoria are related (Smith & Greenberg, 1981). The reaction time difference score, or self-focus flexibility, did not significantly improve the regression equation, $B = .113$, $t(110) = 1.21$, *ns*, $R^2 = .046$. This indicates that attentional flexibility by itself does not predict depression.

The interaction between private self-consciousness and self-focus flexibility did significantly improve the equation predicting dysphoria, $B = .265$, $t(109) = 2.14$, $p < .05$, $\Delta R^2 = .030$. Thus, the combination of a participant's level of self-consciousness and attentional flexibility predicted his or her level of dysphoria better than either one alone. In particular, both being high in private self-consciousness and having difficulty shifting attention away from the self were related to elevated dysphoria scores (see Figure 1). An analysis of simple slopes at one standard deviation above and below the mean indicated that self-focus flexibility predicted dysphoria for participants high in private self-consciousness, $B = .314$, $t(109) = 2.39$, $p < .025$, but did not for participants low in private self-consciousness, $B = -.072$, $t(109) = .570$, *ns*.

When public self-consciousness was considered, a very different pattern of results emerged. Like the results for private self-consciousness, dysphoria was related to public self-consciousness, $B = .227$, $t(110) = 2.41$, $p < .025$, and was not related to self-focus flexibility, $B = .082$, $t(110)$

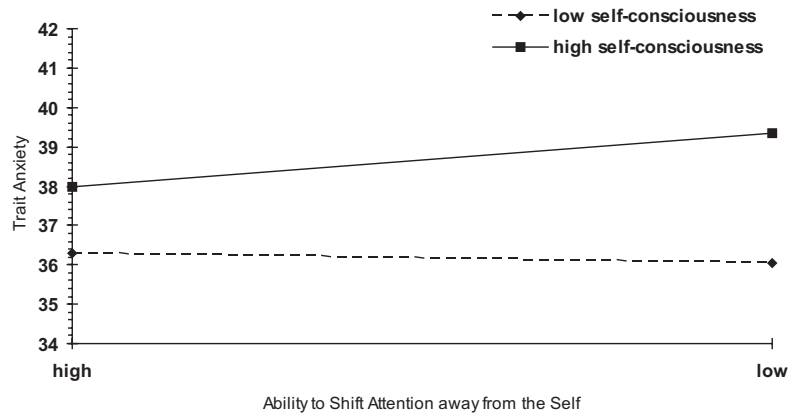


FIGURE 2. Trait anxiety for participants at +1 SD and -1 SD in private self-consciousness and ability to shift attention away from the self.

= .86, *ns*, $R^2 = .064$. Entering interaction between self-focus flexibility and self-consciousness did not improve the equation, $B = .110$, $t(109) = .964$, *ns*, $\Delta R^2 = .008$. The inability to think about the self in a public reference does not appear to be related to dysphoria, which is consistent with previous findings (for a review, see Mor & Winquist, 2002).

GENERALIZED ANXIETY

When trait generalized anxiety was the dependent measure, neither private self-consciousness, $B = .090$, $t(110) = .945$, *ns*, nor reaction time to the computer beep, $B = -.006$, $t(110) = -.064$, *ns*, $R^2 = .008$, were significant. Taken separately, self-consciousness and the inability to shift attention away from the self were not predictive of anxiety. Of greater interest was the interaction between self-focus flexibility and private self-focused attention, which barely missed conventional statistical significance levels in predicting anxiety, $B = .233$, $t(109) = 1.83$, $p < .07$, $\Delta R^2 = .030$. As with dysphoria, participants who were high in private self-consciousness and who had difficulty shifting their attention away from the self were more likely to have high levels of anxiety, $B = .271$, $t(109) = 1.61$, $p < .10$, as compared to participants who were lower in private self-consciousness, $B = -.170$, $t(109) = 1.31$, *ns* (see Figure 2).



FIGURE 3. Social anxiety for participants at +1 SD and -1 SD in public self-consciousness and ability to shift attention away from the self.

Public self-focused attention, $B = .127$, $t(110) = 1.31$, ns , self-focus flexibility, $B = -.024$, $t(110) = .252$, ns , $R^2 = .016$, and the interaction between these terms, $B = .080$, $t(109) = .679$, ns , $\Delta R^2 = .004$, were not related to generalized anxiety in this study.

SOCIAL ANXIETY

Social anxiety was measured using the social anxiety subscale of the Self-Consciousness Questionnaire. Participants' social anxiety was not related to their private self-consciousness, $B = -.11$, $t(110) = 1.18$, ns , self-focus flexibility, $B = .14$, $t(110) = 1.44$, ns , $R^2 = .030$, or the interaction between those two measures, $B = -.015$, $t(109) = .115$, ns , $\Delta R^2 = .000$. Social anxiety does not appear to be predicted by private self-consciousness, which is consistent with previous findings (Mor & Winquist, 2002).

Social anxiety was related to public self-focused attention, however, $B = .209$, $t(110) = 2.209$, $p < .05$, which is to be expected based on previous research (Mor & Winquist, 2002). Whereas social anxiety was not related to self-focus flexibility in this case, $B = .095$, $t(110) = 1.007$, ns , $R^2 = .060$, it was related to the combination of public self-consciousness and attentional flexibility, $B = .231$, $t(109) = 2.044$, $p < .05$, $\Delta R^2 = .035$. As shown in Figure 3, the relationship between self-focus flexibility and so-

cial anxiety was stronger for individuals high in public self-consciousness, $B = .367$, $t(109) = 2.34$, $p < .05$, than for individuals low in public self-consciousness, $B = -.069$, $t(109) = .560$, *ns*. Individuals who find it difficult to stop thinking about themselves in a public frame appear to experience heightened social anxiety.

DISCUSSION

These results indicate that the ability to shift attention away from the self and the degree to which one is focused on the self are not related. The ability to shift one's focus of attention, as assessed with a task-switching paradigm (Baddeley et al., 2001), was not correlated with private self-consciousness. This suggests that the content of attention needs to be considered separately from the ability to allocate attention and that both may be important factors in the experience of self-focused attention. An individual can be high in self-consciousness yet be able to shift his or her focus of attention away from him or herself easily if the need or desire arises. Conversely, it is possible to be low in self-consciousness and yet to find it difficult to shift one's focus of attention away from the self.

Moreover, individual differences in the self-regulation of self-focused attention can be used to predict personality, negative affect, and distress, especially in combination with high self-focused attention. Consistent with previous research, private self-consciousness predicted dysphoria in this study (Fejfar & Hoyle, 2000; Mor & Winquist, 2002). The ability to shift attention away from the self was not related to negative affectivity, which could be expected because attentional flexibility should only matter when self-focus becomes aversive. As predicted, negative affectivity (both dysphoria and generalized anxiety) was related to the interaction between private self-consciousness and the ability to disengage from the self. Individuals high in self-focused attention who could not easily shift their attention away from themselves were more depressed and anxious than either individuals who were high in self-focused attention but whose attention was more flexible or individuals who were low in self-focused attention.

Social anxiety, meanwhile, was related to heightened public self-focused attention in concert with attentional inflexibility. Individuals who think about themselves from the standpoint of others and find it difficult to escape such public self-consciousness are at greater risk for social anxiety. This seems to be consistent with both models of social anxiety and previous research (Leary & Kowalski, 1995; Mor & Winquist, 2002). Dysphoria and generalized anxiety were not related to public self-focused attention or the combination of public self-focused attention and

self-focus flexibility in this study, however. This suggests that the subtype of self-awareness (public vs. private) may play an important role in the experience of negative affect and the development of psychopathologies.

These results are consistent with the theory that difficulties disengaging from self-focused attention may intensify the effects of self-focused attention on cognition and emotion. Self-focused attention is likely to produce negative affect (Duval & Wicklund, 1972). Many individuals may respond to this aversive self-awareness by merely focusing on something other than the self, limiting the magnitude of self-awareness on mood, and preventing the negative affect from becoming a chronic state (Baumeister, 1991). But if the individual has a deficit in attention regulation (which may be caused by stress undermining his or her capacity to regulate behavior; Muraven, 2003), the individual is likely to have difficulties stopping himself or herself from thinking about the self once self-awareness has begun. Such an individual may begin to experience chronic negative states and may be at risk for depression or other mood disorders (McFarland & Ross, 1982; Sakamoto, 1998; Wood et al., 1990). Deficits in attention regulation may increase an individual's vulnerability to mood disorders because, even if that individual is not self-focused at the moment, any negative event that leads to self-focus may set into motion the process that can lead to depression (Pyszczynski & Greenberg, 1987).

Their relative inflexibility of attention resources might also explain the poorer cognitive performance of depressed individuals. Research has found considerable evidence that attentional capacity is diminished in dysphoric individuals, even after controlling for motivational deficits (Conway & Giannopoulos, 1993; Dobson & Dobson, 1981). For example, in Conway and Giannopoulos' (1993) experiment, participants who were depressed used less information and integrated what information they had more poorly when making decisions than participants who were not depressed. Because they are more likely to have deficits in shifting attention away from the self, depressed individuals may not be able to shift their focus of attention to external matters as well as individuals who are not depressed can. Therefore, although depressive individuals have the same amount of attentional resources as everyone, some of their attention is spent thinking about themselves and they find it difficult to free up these attentional resources to focus on other matters. Thus, poor self-regulation of attention may help to account for individual differences in cognitive performance.

LIMITATIONS

Obviously, care must be taken when generalizing these results to populations with clinically diagnosed depression and other psychopathologies. This research answers some questions about the mental processes and possible etiology of what has become known as dysphoria (Kendall, Hollon, Beck, Hammen, & Ingram, 1987; Tennen, Hall, & Affleck, 1995), not about clinically diagnosed psychological disorders. Populations with more severe disorders might demonstrate a similar pattern of results, but more research is necessary before firm conclusions are possible. Future researchers may wish to examine the role of individual differences in the regulation of attention with other personality traits, psychopathologies, and behaviors, such as religious behavior, alcohol use, and suicide, as proposed by Baumeister (1991). Finally, the relationship between shifting attention away from the self and attention shifting in general is an open question.

Additionally, the exact causal relationship between self-focused attention, ability to shift attention away from the self, and personality (anxiety and dysphoria) is unclear. Experimental research has established that self-focused attention is a contributing factor to negative affect and depression (Gibbons et al., 1985). Whether deficits in self-focus flexibility are a cause or a result of negative affectivity is less than clear, however. The within-person nature of the results (participants' attention-shifting ability was assessed while they thought about themselves and while they thought about someone else) does help to rule out many spurious variables (for example, a general slowing of processing among dysphoric individuals). Also, the complex interactive relationships among self-focused attention, attention shifting, and negative affective (and lack of a direct relationship between attention shifting and self-focus and personality) may rule out simple explanations. The results cannot be explained simply by lower motivation or greater self-focus among dysphoric individuals. Experimental studies of attention shifting and its relationship to negative affectivity may help clarify this issue.

CONCLUSION

The present research suggests that being able to regulate one's attention is a distinct factor of attention that may play an important role in personality. Participants who were high in private self-consciousness and who had a hard time shifting their focus of attention away from themselves were more dysphoric and reported greater generalized anxiety than participants who were equally high in private self-consciousness but

who could escape thinking about themselves. A similar effect for public self-awareness was found for social anxiety. Thus, the self-regulation of attention may be as important as the direction of attention. Self-awareness is likely to be much more aversive when one cannot stop being self-aware. Future models of depression and anxiety that consider the focus of attention and the self-regulation of attention concurrently may be better than models that consider the factors separately.

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