The Effects of Attributional Processes on Boredom Proneness

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The present study examined the “unique” contributions of attributional complexity and causal dimension (stability, internality) scores in the prediction of boredom proneness. A group of 214 undergraduate students completed the Boredom Proneness, Attributional Complexity, and Causal Dimension scales. As hypothesized, both attributional complexity and causal dimension scores were significant predictors of boredom proneness. Boredom proneness was found to be associated with lower attributional complexity scores and more stable attributions. It was also found that high boredom proneness scores were associated with internal attributions for boredom. Results of hierarchical regression analyses indicated that after attributional complexity and the causal dimensions were entered first into the equation, the effects of gender did not make a significant contribution to the prediction of boredom proneness. Implications for previously found gender differences and attributional retraining are discussed.

Boredom has been implicated as a correlate of a vast array of health and social problems. That is, it has been found to relate to such negative outcomes as substance abuse (Pascale & Sylvester, 1988; Paulson, Coombs & Richardson, 1990), drunken driving (Arnett, 1990); eating disorders (Abramson & Stinson, 1977; Ganley, 1989), pathological gambling (Blaszczynski, McConaghy, & Frankova, 1990), and poor academic achievement (Maroldo, 1986). Boredom has also been shown to be

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associated with employment issues such as job dissatisfaction (O’Hanlon, 1981), and property damage (Drory, 1982).

The literature has indicated that causal attributions and a construct such as attributional complexity may influence the tendency to be bored. However, the contribution of such variables has not been examined empirically. Therefore, the purpose of the present study was to quantify the impact of attributional processes on boredom proneness.

Theoretical literature associating boredom and the construct of attributional complexity is exemplified by the research of Perkins and Hill (1985). They discuss boredom as being related to the tendency for individuals to perceive stimuli as unidimensional and one-sided. They state that “...cognitive changes in the direction of less differentiated and more homogeneous construing give rise to a state of subjective monotony which induces, or perhaps even represents, the state we call boredom (1985, p. 231).”

Other theoretical literature by Hamilton (1981) and Hamilton, Haier, and Buchsbaum (1984) indicates that boredom proneness may be related to an individual’s attentional control. They speculate that highly involved and intrinsically interested individuals focus their attention on the complexities of the situation to the exclusion of potential distractors. On the other hand, individuals viewing situations with a narrow or singular focus report higher feelings of monotony and an increased awareness of time passage.

Research has also indicated that causal attributions may affect boredom levels. For instance, the literature has suggested that boredom may be the result of an external causal attribution. Boredom has commonly been considered to be due to a lack of perceived external stimulation (see Zuckerman, 1979). Further, Sundberg, et al., (1991) suggest that the higher boredom proneness scores of males may be due to their use of an external attribution (e.g., boredom) in labeling a negative emotional state.

Depression is a construct positively related to boredom (see Ahmed, 1990; Farmer & Sundberg, 1986; Vodanovich, Verner & Gilbride, 1991). Research indicates that depressives employ internal and stable attributions for a negative event (e.g., Abramson, Seligman, & Teasdale, 1978; Coyne & Gotlieb, 1983; Forsterling, 1985; Seligman, Abramson, Semmel & von Baeyer, 1979; Zuroff, 1981).

An internal attribution for boredom is also consistent with the requirements for a dispositional attribution specified by Kelley’s “cube” theory in the area of social psychology (Kelley, 1967; 1972). The boredom-prone individual is likely to assess the feeling “I am bored” as being a frequently occurring event (i.e., high consistency), as being a rather unique reaction as compared to others in a given situation (i.e., low
consensus), and as being a relatively common experience across targets (low distinctiveness).

Finally, a recent definition states that for an event to be labeled as boredom, the lack of arousal and dissatisfaction characteristic of boredom must be attributed to inadequate stimulation, the assessment of which is a perceptual process (Mikulas & Vodanovich, 1993). Further, the authors point out that an inadequately stimulating situation consists of the evaluations of both internal and external “realities.” Based on this definition, the nature of causal attributions for boredom may be more complex than previous literature implies.

The preceding review indicates that causal attributions (e.g., internality, stability) and a construct such as attributional complexity may influence the tendency to be bored. For the effect of these variables to be tested properly, their impact independent of gender in the prediction of Boredom Proneness scores needs to be examined. This is because a number of studies have concluded that males possess significantly higher boredom proneness scores (e.g., Sundberg, Latkin, Farmer, & Saoud, 1991; Tolor, 1989; Vodanovich & Kass, 1990; Zuckerman, 1979), and lower attributional complexity scores than females (e.g., Fletcher, Danilovics, Fernandez, Peterson, & Reeder, 1986).

Consistent with the research cited above, it was hypothesized that males would score higher than females on boredom proneness and lower than females on attributional complexity. Further, it was expected that both attributional complexity and causal attributions would add significant and unique contributions to the prediction of boredom proneness scores. Specifically, it was hypothesized that boredom proneness would be associated with low attributional complexity scores and stable attributions. Because the literature was mixed on whether boredom-prone individuals would employ internal or external attributions, no specific hypothesis was proposed on this issue.

METHOD

Participants
The participants were 214 undergraduate students (males n = 79, females n = 135) enrolled in psychology courses at a small Southeastern University. The average age was 23.4 years with a standard deviation of 6.7.

Procedure
The subjects (N = 214) completed a packet consisting of (in order): a short demographic sheet (i.e., age, gender, race), the Boredom Proneness Scale, the Attributional Complexity Scale, and the Causal Dimension Scale. The forms were completed during regular class periods, and the participants received extra credit toward their final course grade. Conse-
sequently, the volunteer rate was over 95%. Finally, all responses were kept anonymous.

Instruments

The Attributional Complexity Scale (Fletcher, et al., 1986) was used to assess individual differences in attributional processing (e.g., “I prefer simple rather than complex explanations for people’s behaviors,” “I believe it’s important to analyze and understand our own thinking processes”). The 28-item, Likert-type scale ranged from (1) “Strongly Disagree,” to (7) “Strongly Agree,” with higher scores denoting greater attributional complexity. Individuals high in attributional complexity are thought to have a preference for complex explanations of behavior, the use of meta-cognitions when making attributions, and an awareness that one’s behavior is a function of the person interacting with the social situation.

The Attributional Complexity Scale has been shown to be a reliable measure, with internal consistency ranging from .85 (Fletcher, et al., 1986) to .90 (e.g., Marsh & Weary, 1989). Likewise, sufficient test-retest reliability (.80) has been reported for a period of over 18 days (Fletcher, et al., 1986). The internal consistency of the scale in the present study was .88.

The authors of the Attributional Complexity Scale have demonstrated validity for their measure. For instance, they found the scores on the scale to be significantly positively related to need for cognition, but not with social desirability or locus of control (Fletcher, et al., 1986).

The Causal Dimension Scale (Russell, 1982) is a 9-item scale which assesses an individual’s perceptions about the causes of a given event. The scale consists of three subscales: locus of causality, stability, and controllability. The instructional set was modified slightly to ask participants to imagine a situation in which they had experienced boredom and to think about the reasons for that boredom.

Research by Russell, McAuley, and Tarico (1987), Vallerand and Richer (1988), as well as the present study, found problems with the reliability of the three item controllability subscale (alpha = .51, .50, and .34 respectively). For this reason the controllability subscale was not analyzed in the present study. The resulting six-item scale consists of the two subscales of Locus of Causality (internal versus external, e.g., “Is the cause(s) of your boredom something that reflects an aspect of yourself or reflects an aspect of the situation”) and Stability (stable versus unstable, e.g., “Is the cause(s) of your boredom something that is permanent or temporary”), both arranged on a nine-point Likert-type scale. A response of (1) indicated either and external (or unstable) attribution and (9) indicated an internal (or stable) attribution.

A variety of studies have shown acceptable internal consistency for both the locus of causality and stability subscales of the Causal Dimen-
sion scale. Reliability coefficients range from .68 (Abraham, 1985) to .86 (Russell, 1982) on the locus of causality subscale and from .73 (Vallerand & Richer, 1988) to .85 (Russell, McAuley, & Tarico, 1987) on the stability subscale. In the present study coefficient alphas for the locus of causality and stability subscales were .75 and .68, respectively.

In addition, there is evidence for the validity of the Causal Dimension scale. Factor analytic work conducted by Russell (1982) and Vallerand and Richer (1988) supports the existence of the three subscales within the Causal Dimension scale. All three subscales have been shown to be significantly positively correlated with a composite measure of successful academic performance (Russell, McAuley, & Tarico, 1987). The locus of causality subscale has shown a significant positive relationship to pride in success situations and a negative correlation with anger in failure situations (Russell, McAuley, & Tarico, 1987).

The Boredom Proneness scale (Farmer & Sundberg, 1985) was used to assess the tendency toward boredom (e.g. "I often find myself with nothing to do—time on my hands," "Time always seems to be passing slowly"). To increase variability, the 28-item true-false instrument was revised for the present study to a 7-point Likert-type scale, ranging from (1) "Highly Disagree," to (7) "Highly Agree," with high scores indicative of boredom proneness.

The internal consistency of the Boredom Proneness Scale has been shown to be satisfactory (.79) both in its original true-false format (Farmer & Sundberg, 1986) and .79 and .83 in the revised Likert-type format by Vodanovich, Verner, and Gilbride (1991) and Watt and Vodanovich (1992a), respectively. Finally, Farmer and Sundberg (1986) reported a test-retest reliability of .83 after a one-week interval. The reliability of the scale in the present study was .79.

Evidence also exists for the validity of the Boredom Proneness Scale. For example, the scale (7-point format) has been shown to correlate positively with impulsivity (Watt & Vodanovich, 1992b), anxiety, hostility (Vodanovich, Verner & Gilbride, 1991). Positive correlations have also been reported between boredom proneness scores (true-false format) and hopelessness, loneliness, depression, and self ratings of boredom (Farmer & Sundberg, 1986). Significant negative correlations using the 7-point format have been found between boredom proneness and positive affect (Vodanovich, Verner & Gilbride, 1991) and self-actualization (McLeod & Vodanovich, 1991). Further, Farmer and Sundberg (1986) found the Boredom Proneness Scale (true-false format) to be significantly related to Lee’s (1986) Job Boredom Scale and Zuckerman’s (1979) Boredom Susceptibility subscale.
TABLE 1 Pearson Correlations Among Boredom Proneness Predictors

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<tr>
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<th>AC</th>
<th>CDSTA</th>
<th>CDLCAU</th>
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</table>

Note: AC = Attributional Complexity, CDSTA = Causal Dimension-Stability, CDLCAU = Causal Dimension-Locus of Causality

N = 214

** p < .01

RESULTS

Pearson correlation coefficients were computed between the predictors used in the present study (see Table 1). Although a few of the correlations were statistically significant, all were relatively low (the highest being .21). Therefore the intercorrelations were not considered problematic in terms of performing regression analyses (e.g., multicollinearity).

As expected, preliminary analyses (ANOVAs) indicated that males possessed significantly higher boredom proneness scores (X = 93.6) than females (X = 87.6); F(1,213) = 6.5, p < .05. Also, as predicted, males (X = 142.3) had significantly lower attributional complexity scores than females (X = 151.2); F(1,213) = 10.3, p < .01. Gender differences were also found on the stability subscale of the revised Causal Dimension Scale, with males possessing significantly higher scores (X = 8.4) than females (X = 6.5); F(1,213) = 9.4, p < .01. No significant gender differences were found on the locus of causality subscale.

The main effects of Attributional Complexity, both Causal Dimension subscales, and gender were significant in the prediction of boredom proneness scores (see Table 2). Tests for interaction effects between the independent variables (e.g., attributional complexity by gender) were not significant.

Hierarchical regression analyses were used (with R2 change as the criterion) to examine the unique contributions of attributional complexity, locus of causality, stability attributions, and gender in predicting boredom proneness scores. The results indicated that after gender was entered as a “dummy” variable on step 1, Attributional Complexity and the Causal Dimension subscales of locus of causality and stability (each entered last in the regression equation) accounted for a significant amount of “unique” variance in boredom proneness scores. Conversely, when
TABLE 2  The Effects of Attributional Complexity, Locus of Causality, Stability, and Gender in the Prediction of Boredom Proneness

<table>
<thead>
<tr>
<th>Statistic</th>
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<th>CDLCAU</th>
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<td>1.04</td>
<td>.59</td>
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<td>.005</td>
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<td>8.60*</td>
<td>4.70*</td>
<td>1.3</td>
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</tbody>
</table>

Note: SE = Standard error; CDSTA = Causal Dimension-Stability; CDLCAU = Causal Dimension-Locus of Causality; AC = Attributional Complexity.

* Contribution of each predictor when entered first in the regression equation.
b Contribution of each predictor when entered last in the regression equation.
*p < .05; **p < .01; ***p < .001

Attributional Complexity and the Causal Dimension subscale scores were entered as a block on step 1, gender failed to yield a significant increase in the prediction of boredom proneness scores (see Table 2). Finally, when all of the predictors assessed in the present study were entered into the regression equation as a block, the multiple R was .36.

DISCUSSION

The results of the present study suggest that attributional or cognitive factors may be significant predictors of boredom proneness, and that such factors may partially account for the gender differences reported in previous research. Indeed, our findings indicate that such factors may be more predictive of the tendency to be bored than gender per se.

The findings with regard to attributional complexity scores add empirical support to earlier theoretical work (e.g., Hamilton, 1981; Hamilton, Haier, & Buchsbaum, 1984; Perkins & Hill, 1985) which indicates that a less varied or homogeneous perception of stimuli can lead to the experience of boredom. That is, consistent with our expectations, we found a significant negative beta weight for the contribution of attributional complexity in the prediction of boredom proneness scores.

We found internal and stable attributions to be associated with high Boredom Proneness scores. As mentioned earlier, these findings are congruent with Kelley’s attributional theory and the literature on depres-
sive attributional style. The finding that high boredom proneness scores are associated with internal attributions supports the distinction between boredom (usually considered to be a state) and boredom proneness (typically considered a trait). For most people (i.e., non-boredom-prone individuals), boredom is considered to be a temporary situation which logically is attributed to an external and unstable cause. However, boredom-prone individuals are likely to evaluate their experience of boredom as a trait; consequently they will be more inclined, by definition, to employ internal and stable attributions.

In summary, the beta weights of the variables investigated in this study indicate that the profile of a boredom-prone individual is one who is less attributionally complex and who attributes boredom to stable and internal causes.

Our findings also indicate that males use stable and less complex attributions for their boredom, both of which are associated with higher levels of boredom proneness in the present study. However, we did not find evidence that males employ external attributions for boredom more than females. Consequently, our findings indicate that gender differences found in past research may be due to males using less complex and more stable attributions, rather than males using different locus of causality attributions for boredom.

If it is true that boredom-prone individuals attribute their boredom to internal and stable causes, long-term strategies that focus on increasing the ability to generate internal stimulation or activity may prove successful in reducing the likelihood of boredom (see Czikszentmihalyi, 1975; Mikulas & Vodanovich, 1993; Watt & Blanchard, 1993). Short-term approaches may include enhancing the credible use of external and unstable attributions for boredom. Such attributional techniques have proven useful in reducing speech anxiety and improving grades among first-year college students (Olson, 1988; Wilson & Linville, 1985). Finally, the present findings regarding attributional complexity also suggest that efforts aimed at perceiving stimuli as multidimensional may help prevent and/or alleviate boredom.
REFERENCES


