



Attributional Style of Lonely and Depressed People

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This article examines the attributional style of lonely and depressed people. Previous studies have suggested that both lonely and depressed individuals ascribe failure to characterological defects in themselves. However, the prototype of a lonely person and the prototype of a depressed person suggest that this characteristic attributional style should mainly hold for interpersonal failures. A questionnaire was formed, consisting of 20 hypothetical situations. Half of the situations were interpersonal, and half were not; half described successful outcomes, and half described failures. The subject selected an attributional alternative that best explained the outcome. The questionnaire was administered to 304 students, along with the Beck Depression Inventory and the UCLA Loneliness Scale. The results showed that lonely and depressed people ascribe interpersonal failures to unchangeable characterological defects in themselves (e.g., a lack of ability). Because the prototype of a lonely person is more singularly interpersonal than is the prototype of a depressed person, we hypothesized that loneliness would show higher correlations with the attributional style. This hypothesis was also confirmed. The findings were replicated using a modified version of the questionnaire.

A person's motivation at a task depends partly on whether the person expects to perform well. People who expect their interpersonal interactions to go well, for example, are more likely to have dates, organize social events, and participate in interpersonal situations. They seem to handle initial setbacks more constructively and to persevere in the face of failure. As a consequence of their higher motivation, these people are also apt to be more successful.

Sometimes people with objectively similar abilities may interpret success (or failure) quite differently and, as a result, develop different expectancies about future outcomes.

For example, a failure over organizing a party may be attributed by some people to a lack of ability on their part, leading to unfavorable self-assessments and future expectancies; the same failure may be attributed by others to their having exerted too little effort or having adopted a poor strategy, leading to more hope for the future. Thus, the person's attributional style may affect the person's expectancies, motivation, and performance.

Much research has examined the general relationship between a person's attributional style and the person's expectancies, motivation, and performance. Research on achievement motivation, for instance, has shown that people low in achievement motivation tend to attribute their failures to a lack of ability, whereas people high in achievement motivation tend to attribute their failures to a lack of effort. It has also been possible to manipulate attributions experimentally so as to produce changes in motivation and performance (see Weiner, 1972, 1974, 1979, for a review of this literature).

Recent theorists have applied attributional models to the clinical symptoms of depression (cf. Abramson, Seligman, & Teasdale, 1978; Weiner, 1979; Weiner & Litman-Ad-

The research reported in this article was supported in part by the Boys Town Center for the Study of Youth Development at Stanford University. However, the opinions expressed and the policies advocated herein do not necessarily reflect those of Boys Town.

We would also like to thank the following individuals for their comments and criticisms at various stages of this research: J. Merrill Carlsmith, Mark R. Lepper, Lee Ross, Bernard J. Weiner, William C. Howell, Robert L. Dipboye, and Dennis L. Jennings.

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izes, 1980) and loneliness (Peplau & Perlman, 1982; Peplau, Russell, & Heim, 1979). The basic premise of this work has been that a person suffering from depression (or loneliness) explains events in a self-defeating fashion, and that this attributional style lowers the person's success expectancies, motivation, and performance, thereby sustaining the symptom. One goal of these studies has been to understand this process in order to identify potentially useful clinical interventions. If this premise is valid, then higher levels of loneliness and depression should be associated with a characteristic attributional style. The present studies were designed to examine this relationship.

To highlight the theoretical issues, we shall first review some prior research findings. The attributional style of lonely people has been discussed by Peplau et al. (1979), who proposed that lonely people make more internal and stable attributions for failure and more external and unstable attributions for success than do nonlonely people. In addition, several studies, inspired by the "learned helplessness" approach to depression (Hiroto, 1974; Klein, Fencil-Morse, & Seligman, 1976; Miller & Seligman, 1975; Seligman, 1975) have been concerned with the attributional basis of depression. Seligman, Abramson, Semmel, and von Baeyer (1979) devised an attributional style questionnaire in which subjects were asked to imagine themselves in different situations and to describe the major cause of the outcome; then the subjects rated that cause on internality, stability, and globality. In explaining failures, depressed subjects reported causes that they rated as more internal, stable, and global than did nondepressed subjects; in explaining successes, their attributions were more external and unstable. Similarly, Janoff-Bulman (1979) had depressed and nondepressed subjects imagine themselves in scenarios with negative outcomes (e.g., a car accident, a social rejection); the subjects were asked to rate how much of the blame was due to the "kind of person you are" (characterological), "what you did" (behavioral), chance, other people, and the environment. Depressed subjects rated the characterological blame higher than did nondepressed subjects. More recently, Peterson, Schwartz, and Seligman (1981)

provided additional evidence that depressed people are relatively more likely to attribute bad outcomes to characterological factors and less likely to attribute them to behavioral factors.

Several studies have also examined subjects' attributions for their performance on an actual laboratory task. Kuiper (1978) measured attributions for success or failure on a word-association task. Depressed subjects ascribed failures to internal causes (i.e., ability and effort) to a greater extent than did nondepressed subjects, but there were no differences along the stability dimension. Similarly, Rizley (1978) studied the attributions of subjects engaging in a number-guessing task; the subjects judged the role of ability, task difficulty, effort, and luck as causes of the outcome. Depressed subjects rated internal causes (effort and ability) as more important determinants of failure and less important determinants of success. Finally, Klein et al. (1976) had depressed and nondepressed subjects rate the extent to which their outcome on an anagram task was due to ability and task difficulty. On an "internality" index (ability-minus-task-difficulty ratings), depressed subjects attributed failure more to the internal factor (ability) than did nondepressed subjects.

Overall, these studies do suggest a characteristic depressive attributional style. There are, however, several methodological issues that need clarification. First, previous studies have provided subjects with attributional alternatives based on a dimensional model derived for achievement situations. These alternatives were not meant to explain clinical phenomena and may not span the domain of people's natural explanations for interpersonal outcomes; they may not even be expressed in the attributional language of most people. Dimensions such as internality may be useful theoretically, but from a practical point of view, we first need to understand the most common ways that people express their attributions in everyday life. By imposing a theoretical structure prematurely, the theoretician may overlook other critical attributional factors (cf. Falbo & Beck, 1979).

Second, theoretical attributional dimensions are generally portrayed as orthogonal to each other, yet in practice, the most com-

monly used explanations may reflect a correlation between underlying dimensions. If the underlying dimensions are not independent of each other, there may be no practical advantage to using these dimensional labels instead of the subjects' original attributional vocabulary.

Finally, previous studies have examined subjects' attributions for interpersonal situations as well as noninterpersonal situations, and it is not clear whether the distinction between the two is important. There are theoretical reasons to expect the characteristic attributions of, say, a lonely person to apply only to interpersonal situations. This prediction arises from a semantic analysis of the symptom "loneliness." In one such analysis, Horowitz, French, and Anderson (1982) adopted the concept of a prototype to analyze the meaning of ill-defined symptoms like loneliness. A prototype consists of the most common features or properties that experts think of when they imagine a person with that symptom. The prototype of a lonely person thus contains the major feelings, thoughts, and behaviors of an idealized lonely person.

Horowitz, French, and Anderson (1982) empirically derived the prototype of a lonely person (see also Horowitz & French, 1979; Horowitz, French, Lapid, & Weckler, 1981). Their results showed that the features in this prototype were almost exclusively interpersonal ones (e.g., feels excluded from activities; isolates self from others; thinks "other people don't like me"; feels inferior; thinks "I don't know how to make friends"). These features suggest that interpersonal failure (and a lack of interpersonal competence) are implied by the concept of loneliness. Indeed, all of the items on the UCLA Loneliness Scale (Russell, Peplau, & Ferguson, 1978) are interpersonal statements (e.g., "I feel left out"; "No one really knows me well"). For this reason, a characteristic attributional style for lonely people should mainly apply to interpersonal situations.

In contrast, the concept of a depressed person is not as singularly interpersonal. To examine this concept, Horowitz, French, and Anderson (1982) derived the prototype of a depressed person. This prototype contained about twice as many features as the prototype of a lonely person, and these features fell into

several distinct semantic clusters. (Apparently, the term *depressed* is semantically more heterogeneous than the term *lonely*.) The prototype of a depressed person contained most of the features of the prototype of a lonely person (interpersonal features), but in addition, it also contained many noninterpersonal features (e.g., has a pessimistic attitude; lacks energy; feels helpless, ineffective). The Beck Depression Inventory (Beck, 1967) also reflects this mixture of features; it contains interpersonal statements (e.g., "I have lost most of my interest in other people") as well as noninterpersonal statements (e.g., "I get tired from doing anything"). For this reason, we hypothesized that the significance of interpersonal failures would also be evident in the attributional style of depressed people, but that the importance of interpersonal features would be attenuated by the noninterpersonal aspects. That is, because depression often results from problems in noninterpersonal domains, its relationship to attributional style for interpersonal failure should not be as strong as the corresponding loneliness relationship. The present studies therefore compared the attributional style of lonely and nonlonely people as well as that of depressed and nondepressed people. We devised a measure of attributional style that relied on the most common attributions made spontaneously by a large sample of subjects. We did not impose dimensions on the subject that may not be orthogonal, nor categories that may be stylistically unnatural, nor alternatives that may overlook particular attributions that subjects normally make. We then studied the attributional style for interpersonal and noninterpersonal situations.

Study 1

Method

The Attributional Style Assessment Test. Twenty-two items were written that described situations familiar to students. Half of these items were interpersonal, the other half were noninterpersonal, and each could be paired with an outcome describing either a success or a failure. An example of an interpersonal success is, "You have just attended a party for new students and have made some new friends." An example of a noninterpersonal failure is, "You have just failed to complete a crossword puzzle."

Twelve situations were selected at random and presented to a group of 30 pretest subjects; 6 items were

presented as successes, 6 as failures. The subjects' task was to imagine themselves in each situation and to write out the most likely cause for that outcome. These open-ended responses were then examined independently by three psychologists who identified meaningful categories that included all the reported attributions.

Six categories resulted: (a) the *strategy* attribution explained the outcome in terms of the person's particular approach, tactic, or method; (b) the *ability* attribution explained the outcome in terms of the person's competence (or lack of competence); (c) the *effort* attribution explained the outcome in terms of how hard the person had tried; (d) the personality *trait* attribution explained the outcome in terms of some pervasive characteristic of the person other than ability; (e) the *mood* attribution explained the outcome in terms of a transitory mood state; (f) the *other-circumstances* attribution explained the outcome in terms of any remaining external circumstances beyond the person's control.

Ten psychology graduate students, who were unfamiliar with the purpose of the study, were asked to classify the original free responses into the six categories. A category labeled "none of the above" was added for cases that did not seem to fit the six attributional categories. Less than 2% of the categorizations fell into this category, and they were mainly due to responses that were irrelevant to the situation. The six attributional categories were therefore broad enough to include most of the original free-response attributions. It is interesting to note that the situations of the present study did not seem to elicit luck and task difficulty as common attributions (cf. Weiner, 1972). Furthermore, two different attributions, the ability and trait attributions, could both be described as stable and internal; they both emphasize relatively enduring, unchangeable characteristics of the person. Two further attributions, the effort and strategy attributions, could both be described as unstable and internal; they both emphasize changeable, situationally specific variations in behavior.

Our prediction for the relationship between attributional style and loneliness and depression can now be further specified. Lonely and depressed people may display relatively low success expectancies, motivation, and performance because of a tendency to attribute failures more to characterological (ability and trait) and less to behavioral (strategy and effort) factors than do nonlonely and nondepressed people.

The next step was to insure that the situations were clearly interpersonal or clearly noninterpersonal. All 22 situations were presented to 20 new subjects, who rated each situation on a 9-point scale anchored at "not at all interpersonal" (1) and "very interpersonal" (9). The mean ratings for the noninterpersonal situations ranged from 1.70 to 4.15; whereas the mean ratings for the interpersonal situations ranged from 6.20 to 8.05. Each of the interpersonal situations was rated significantly more interpersonal than was each of the noninterpersonal situations, all $t_s(19) > 4.70$, $p_s < .001$. We selected 5 interpersonal and 5 noninterpersonal situations from this pool to include in the questionnaire. Each situation was expressed as both a success and a failure, yielding a total of 20 items: 5 interpersonal successes, 5 interpersonal failures, 5 noninterpersonal successes, and 5 noninterpersonal failures. Along with each item, we provided the

6 alternative reasons (or attributions) to explain the outcome. Here is an example of an interpersonal-failure item:

"You have just attended a party for new students and failed to make any new friends."

- a. I used the wrong strategy to meet people.
- b. I am not good at meeting people at parties.
- c. I did not try very hard to meet new people.
- d. I do not have the personality traits necessary for meeting new people.
- e. I was not in the right mood for meeting new people.
- f. Other circumstances (people, situations, etc.) produced this outcome.

Subjects responding to the questionnaire were asked to imagine themselves in each situation and to consider each possible reason that might explain why the situation had turned out as it did. Subjects were asked to circle the one reason that best explained the outcome, in a forced-choice format.¹

Procedure. The Attributional Style Assessment Test (ASAT), the UCLA Loneliness Scale (Russell et al., 1978) and the Beck Depression Inventory (Beck, 1967) were all included in a questionnaire packet given to approximately 600 introductory psychology students at Stanford University. Of those who completed and returned the ASAT, 304 had also completed the Beck Depression Inventory, whereas 298 had also completed the UCLA Loneliness Scale. The overall correlation between UCLA Loneliness Scale scores and Beck Depression Inventory scores was .588 ($p < .001$).

Results and Discussion

Each subject's responses were scored to show the relative frequency of each type of attribution for each of the four types of situations. Then, for each attributional category, we prepared a matrix that showed whether or not the subject had used that alternative for each of the five items of a type.

¹ In addition, subjects were asked to give each reason a rating to show how much, in their experience, it would have contributed toward the outcome if it had happened to them. The ratings were based on a scale ranging from 1 (the reason contributed little to the outcome) to 7 (the reason contributed much to the outcome). Results from the analyses of these importance ratings were very similar to those reported for the forced-choice data and lead to the same conclusions. Because the forced-choice format yields very similar results and is a more useful methodological tool (it is easier for the subject to complete and is more easily scored), only the data from this forced-choice format are reported.

The final version of the Attributional Style Assessment test can be obtained from the first author.

Table 1
Relative Frequency of Attribution Choices by Situation Type

Attributional category	Situation type				Overall
	Failure		Success		
	Interpersonal	Noninterpersonal	Interpersonal	Noninterpersonal	
Strategy	.20	.21	.14	.16	.18
Ability	.13	.28	.13	.25	.20
Effort	.23	.24	.28	.39	.29
Trait	.04	.01	.06	.01	.03
Mood	.23	.14	.26	.12	.19
External circumstances	.15	.13	.12	.07	.12

A two-way analysis of variance was performed, and from the results, we computed the reliability coefficients for the Kuder-Richardson (K-R 20; ShROUT & Fleiss, 1979). These reliabilities, averaged across the four types of situations, were strategy (.51), ability (.56), effort (.51), trait (.34), mood (.44), and other circumstances (.54).

Table 1 shows the mean relative frequency of each attributional choice for each type of situation. In general, the effort attribution was selected most often, and the trait attribution was selected least often. Also, the relative frequency of a given attribution seemed to depend on the nature of the situation; the ability attribution, for example, was selected more often for noninterpersonal situations, and the mood attribution was selected more often for interpersonal situations.

The subjects' frequency of using an attribution for a given type of situation was correlated with the corresponding frequency for each of the other three types of situations.

These correlations were low but uniformly positive. The strategy attribution showed the highest correlations (the mean r was .41), and the trait attribution showed the lowest correlations (the mean $r = .04$).

We also correlated the frequency of each attributional category. However, these measures were not independent of each other because a subject who selected many attributions of one kind had to select fewer attributions of every other kind. Therefore, the correlations were almost entirely negative. The largest negative correlation was between the frequency of the effort attribution and that of the ability attribution; averaged across the four types of situations, the mean correlation was $-.36$.

Attributional style and loneliness. We then correlated the relative frequency of each attributional category with scores on the loneliness scale. These correlation coefficients are reported in Table 2. Because of the large number of correlations, we adopted a strin-

Table 2
Correlations Between Forced-Choice Attributions and Loneliness by Situation Type (N = 298)

Attributional category	Situation type			
	Failure		Success	
	Interpersonal	Noninterpersonal	Interpersonal	Noninterpersonal
Strategy	-.169**	-.156*	-.109	-.129
Ability	.452**	.157**	-.147	.089
Effort	-.156*	-.069	-.063	-.135
Trait	.296**	.084	-.091	-.022
Mood	-.121	.024	-.009	.032
External circumstances	-.124	.027	.348**	.243**

* $p < .01$. ** $p < .001$.

gent criterion of significance ($\alpha = .01$). Table 2 shows, as predicted, that for interpersonal failure the loneliness scores correlated positively with ability and trait attributions and negatively with strategy and effort attributions. In addition, the correlations for attributions preferred by lonely people (ability and trait) were stronger for the interpersonal than for the noninterpersonal failures, $t(295) \geq 2.76$, $ps < .01$ (see Guilford & Fruchter, 1973, for a description of tests of differences between correlated correlations). The correlations for attributions preferred by nonlonely people (strategy and effort) were also stronger in interpersonal- than in noninterpersonal-failure situations, but not significantly so ($ts \leq 1.38$, $ps > .10$). These results, then, are consistent with the conception of loneliness as primarily an interpersonal problem.

Correlations for situations describing success were not noteworthy, except for the correlations involving the other-circumstances attribution. People with higher loneliness scores used this rather vague attribution more often. Apparently, for lonely people, successes are best explained by vague factors that are not under the subject's control.

Attributional style and depression. Table 3 shows the correlations between the frequency of each attribution and the scores of depression; these correlations showed a similar pattern to those in Table 2. For interpersonal failures, the frequency of ability and trait attributions correlated significantly with the subject's degree of depression. Depressed subjects seemed to ascribe their interpersonal

failures to enduring (unchangeable) personal characteristics. Also, depressed people, like lonely people, ascribed their interpersonal successes more often to the vague other-circumstances attribution.

The correlation between the degree of depression and the frequency of ability attributions was significantly greater for interpersonal failures than for noninterpersonal failures, $t(301) = 2.35$, $p < .05$. The corresponding differences for trait, strategy, and effort attributions, however, were not significant ($ts \leq 1.15$, $p > .10$).

Thus, lonely and nonlonely people, as well as depressed and nondepressed people, differ in their attributional style for interpersonal failures. Lonely people and depressed people tend to attribute such failures to ability and trait factors. This characteristic style for explaining an interpersonal failure supports the hypothesis that the symptoms of loneliness and depression both contain a substantial number of interpersonal features. Furthermore, as the prototypes suggest, loneliness is the more singularly interpersonal; the ability and trait correlations for interpersonal failures are stronger for loneliness than for depression, though only significant for ability, $t(298) = 3.14$, $p < .002$. On the other hand, for noninterpersonal failures, loneliness and depression showed equally minor degrees of correlation with the attributional style.

Previous investigators have not reported a significant difference between interpersonal and noninterpersonal situations. Seligman et al. (1979) distinguished between affiliation

Table 3
Correlations Between Forced-Choice Attributions and Depression by Situation Type (N = 304)

Attributional category	Situation type			
	Failure		Success	
	Interpersonal	Noninterpersonal	Interpersonal	Noninterpersonal
Strategy	-.172**	-.107	-.124	-.109
Ability	.304**	.154*	-.079	-.013
Effort	-.156*	-.111	-.031	.013
Trait	.204**	.115	-.019	-.029
Mood	-.037	.046	-.013	.095
External circumstances	-.014	-.001	.245**	.093

* $p < .01$. ** $p < .001$.

and achievement situations, a distinction that may seem to correspond to interpersonal versus noninterpersonal situations. However, they did not report a difference between the two. It is possible, though, that their affiliation and achievement situations were both interpersonal. For example, one achievement item concerned a situation in which the respondent is unsuccessfully looking for a job; an unsuccessful job search could easily be taken as interpersonal.

Composite measures. Other investigators (e.g., Janoff-Bulman, 1979; Peterson et al., 1981) have described the subject's tendency to make characterological and behavioral attributions. Characterological attributions correspond to ability and trait attributions of the present study; therefore, we summed the frequency of ability and trait attributions into a single measure. For interpersonal failures, the correlations of this measure with scores of loneliness ($r = .516, p < .001$) and with scores of depression ($r = .348, p < .001$) were significantly higher than were the corresponding correlations for noninterpersonal failures ($r_s = .171$ and $.173, p_s < .005$), $t(295) \geq 2.76, p_s < .01$. The difference between loneliness and depression correlations for interpersonal failure was also significant, $t(295) = 3.72, p < .001$. Behavioral attributions correspond to strategy and effort attributions of the present study, therefore, we also summed these to form a single measure. For interpersonal failures, the correlations of this composite measure with loneliness and depression were $-.254$ and $-.257$, respectively ($p_s < .001$); the corresponding correlations for noninterpersonal failure were smaller ($-.191$ and $-.190, p_s < .005$), but not significantly so, $t(295) \leq 1.05, p_s > .10$.²

We also devised an overall composite measure for assessing a subject's tendency to ascribe failures to changeable factors (effort and strategy, rather than ability and trait). For each subject, we calculated a score based on the number of strategy-plus-effort attributions minus the number of ability-plus-trait attributions. This index can be taken as a measure of the subject's perception of the "apparent changeability" of factors contributing to their outcomes. We calculated this measure separately for each of the four types of situations on the ASAT, and correlated it

with loneliness and depression scores. Correlations with this measure were no higher than were those with the simpler measures. For interpersonal failures, the correlation was $-.440 (p < .001)$ with scores of loneliness and $-.350 (p < .001)$ with scores of depression.³

Study 2

According to the results of Study 1, depressed people and lonely people differ from nondepressed and nonlonely people in attributional style for interpersonal failures on factors that we have called ability, trait, effort, and strategy attributions. Because trait attributions were relatively uncommon, the critical list of attributions can be reduced to three. The ASAT was therefore simplified by offering only three attributional alternatives for each situation. In Study 2, we demonstrated that this simplification does not appreciably alter the relationship already reported.

Method

The ASAT was modified in two ways. First, we added enough new items to produce nine items for each type of situation (interpersonal success, interpersonal failure, noninterpersonal success, and noninterpersonal failure). Second, only three attributional choices were offered for each situation, namely, those for ability, effort, and strategy alternatives.

We administered the ASAT, along with the UCLA Loneliness Scale and the Beck Depression Inventory, to approximately 200 students in an introductory psychology class at Stanford University. Of the students who returned the ASAT, 121 completed the Beck Depression Inventory and 117 also completed the UCLA Loneliness Scale. Loneliness and depression were significantly correlated in this sample ($r = .54, p < .001$).

Results and Discussion

For each subject we computed the number of ability attributions for each type of situation. Note that the frequency of behavioral attributions (strategy and effort) is totally determined by the number of ability attri-

² The average reliabilities (K-R 20) of the characterological and behavioral indices of attributional style were .60 and .54, respectively.

³ The average reliability (K-R 20) of the changeability index of attributional style was .57.

butions. For this reason, only the analyses of ability attributions are reported. The K-R 20 reliability of this index of attributional style, averaged across the four types of situations (interpersonal success and failure, noninterpersonal success and failure), was .54. The resulting correlations between this measure and the loneliness scores were similar to those described in Study 1. For interpersonal failures, the correlation was $-.424$ ($p < .001$). None of the other types of situations showed a significant correlation. These correlations ranged from $-.171$ to $.079$ ($p > .05$ in all cases). Thus, lonely people were more likely to attribute their interpersonal failures to the unchangeable factor, ability. As in Study 1, this correlation ($-.424$) was significantly greater than that for noninterpersonal failures ($-.144$), $t(114) = 2.76$, $p < .01$.

We also computed correlations between this measure and scores of depression. The correlation for interpersonal failures was $-.372$ ($p < .001$) and that for noninterpersonal failures was $-.272$ ($p < .005$). The difference was not significant, $t(118) < 1$. The success correlations were both nonsignificant. Overall, these results support the conclusion that loneliness and depression are both interpersonal in meaning but that loneliness is the more singularly interpersonal concept.

General Discussion

An attributional explanation of depression and loneliness contains at least two distinct hypotheses. One is that depressed and lonely people differ in the nature of their attributional style, ascribing interpersonal failures to permanent defects in themselves. Such a self-conception has been predicted explicitly in discussions of depression (Weiner & Litman-Adizes, 1980), helplessness (Abramson et al., 1978), and loneliness (Peplau et al., 1979); it has also been suggested implicitly in discussions of pessimism (Beck, 1967) and lower self-efficacy (Bandura, 1977). The present studies have supported this general attributional analysis, showing that depressed and lonely people ascribe interpersonal failures to relatively permanent (stable) defects in themselves, such as ability or trait deficits, whereas nonlonely and nondepressed people

ascribe such failures to changeable behavioral factors such as strategy and effort. The present results also demonstrated that attributional style differences are particularly evident for interpersonal failures for both the symptoms of loneliness and depression, though depression is also related to noninterpersonal failures.

An attributional model of depression and loneliness also implies that people who ascribe interpersonal failures to a lack of ability become easily discouraged when faced with initial difficulties and show motivational and performance deficits. This hypothesis suggests that attributions can be altered experimentally so as to reduce or eliminate this maladaptive response to failure. It may be possible, for example, to persuade depressed subjects that they can successfully exert more effort or adopt better strategies to overcome prior interpersonal failures. Anderson (in press-a) has reported one successful test of this hypothesis.

Note also that other researchers have postulated and verified that depressed people make different attributions for success than do nondepressed people (Beck, 1967; Peterson et al., 1981; Seligman et al., 1979). The usual finding is that depressed people tend to attribute their successes more to uncontrollable external factors than do nondepressed people. Study 1 replicated these findings for loneliness for both interpersonal and noninterpersonal successes, and for depression for interpersonal successes. Surprisingly, the depression/external circumstances correlation for noninterpersonal success was not significant (but was in the right direction). This result could be due to several causes. It may indicate that depression is primarily a failure problem. More simply, it could reflect either a random fluctuation of the sample statistic, or the different methodology used to assess attributional style. Because we cannot presently distinguish the best explanation, further discussion must await future research.

The present research does not explain the origin of the characteristic attributional style for interpersonal failures. It is possible that depressed and lonely people do exhibit genuine skill deficits in interpersonal situations, leading to the observed attributional style (cf.

Peterson et al., 1981). Gotlib and Asarnow (1979) examined the ability of depressed and nondepressed people on two tasks, an impersonal task and an interpersonal task. Their study showed impaired performance on the interpersonal task but not on the impersonal one. However, we still do not know whether the impaired performance of the depressed subjects reflects a genuine skill deficit, a motivational deficit, or both. A purely motivational deficit could probably be altered through persuasive communications, whereas a skill deficit would require remedial training. Such issues warrant further exploration.

Finally, we would like to comment on a broader methodological issue. In the present studies we have shunned the use of predetermined attributional factors, categories, or dimensions, and formalized scales or measures of attributional style. It is our position that researchers need to determine exactly which attributions are appropriate to their subject population for the particular type of situation under investigation because these "naive attributions" are likely to be different in different situations and in different populations. Once pretesting has shown which attributions are frequently and spontaneously made, the investigator can then adapt his or her theoretical system to the subjects' perceptions of the domain. We are not claiming that understanding the underlying dimensionality of causes is unimportant. On the contrary, our data show that a dimension of changeability or controllability is quite important to our understanding of the attributional styles of lonely and depressed people. We simply wish to emphasize the importance of understanding the causal structure (Anderson, in press-b) of the situations with which we are working. Imposing one's theories from the outset will often lead to confirmation of a theory that is, at best, only partially correct; at the same time, reliance on one's prior theories reduces the opportunity to make new discoveries.

For example, had we used only the four most commonly measured attributional factors in Study 1 (i.e., ability, effort, task difficulty, and luck), over 40% of subjects' attributions would have been forced into less meaningful categories. That is, subjects would have had to force their strategy, trait, and

mood attributions into other categories. The overall effect this would have had on our understanding of attributional styles is, of course, unknown, but we certainly would have been directed away from the importance of strategy attributions, which have proved so valuable in predicting behavioral responses to failure (Anderson, in press-a; Anderson & Jennings, 1980; Jennings, 1979).

More to the point, although we developed two versions of the ASAT in the present studies, we do not claim that the attributional factors we discovered are the "best." They were, however, the most appropriate for our population of subjects and situations. Indeed, the choice of attributional factors, methods of measuring them, and even standard scales (including the two present ones) should be based on the subject population, the situations of interest, and the research goals of the investigator, in addition to more traditional concerns with past reliability estimates and validity data. A choice between the two present versions, for instance, might depend on the situations of interest (the version used in Study 2 samples more situations) or the attributions of interest (the version used in Study 1 samples more types of attributions). In brief, we urge researchers to use flexible and open-ended procedures, like the present ones, to develop their attribution measures. Hopefully, others will find this approach to the study of attributions to be a useful one.

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Received February 9, 1982 ■