Preferences of High- and Low-hope People for Self-referential Input

C.R. Snyder, Anne B. LaPointe, J. Jeffrey Crowson, Jr., and Shannon Early

University of Kansas, Lawrence, USA

High-hope and low-hope research participants (males and females), as pre-selected on the basis of a dispositional self-report scale, choose freely between brief audiotaped messages that varied in depressive content. In the first experiment, the messages were of either positive or negative content. High-hope as compared to low-hope persons preferred listening to the positive tapes (no differences related to Gender), and this Hope main effect remained after the shared variance related to depression and positive and negative affectivity were removed. In a modified replication, the contents of the tapes were comprised of successful or unsuccessful goal-attainment statements related to hopeful thinking. High-hope as compared to low-hope persons again preferred to listen to the successful goal pursuit messages (no differences related to Gender), and this Hope main effect on listening choices remained after the shared variances related to depression, positive and negative affectivity, and self-esteem were removed. Implications are discussed.

INTRODUCTION

Historically, hope has been characterised as thoughts or feelings reflecting the perception that good things will happen (see Snyder, 1994a,b). The difficulties with these previous definitions of hope, however, are that they are fairly general in nature and are not easily measured. In response to these criticisms, Snyder and his colleagues (Snyder et al., 1991) have

proposed that hope can be conceptualised in terms of a goal directed thinking process in which the person considers two related components—pathways and agency thoughts. Pathways thoughts involve the perceived ability to produce one or more workable routes to a desired goal. Agentic thinking relates to the perceptions that one can initiate and sustain movement along the chosen pathways toward a goal. More specifically, hope is defined (Snyder et al., 1991, p. 571) as a ''cognitive set that is based on a reciprocally derived sense of successful (a) agency (goal directed determination) and (b) pathways (planning of ways to meet goals)''. To successfully meet goals, both agentic and pathways thoughts are necessary.

Before describing the present hope model in more detail, it may be useful to describe how it differs from related theories of optimism. First, there is the theory of optimism as articulated by Scheier and Carver (1985), in which the focus is generalised positive outcome expectancies. Such optimism is similar to the agency component of hope theory, but the Scheier and Carver theory does not directly tap the pathways thought processes (see Snyder, 1994a). Second, Seligman (1991) and his colleagues have defined optimism in terms of persons who make external, variable, and specific attributions for their negative life outcomes. As such, the optimistic explanatory style emphasises a psychological distancing for previous bad outcomes, whereas hope emphasises the acquisition of desired goals (see Snyder, 1994a).

This new definition of hope has been used to develop the trait Hope Scale (Snyder et al., 1991), which taps the goal-directed thinking that applies across situations and times. Higher hope as measured by the dispositional Hope Scale has been related to elevated optimism, perceived problem-solving capabilities, perceptions of control, positive affectivity, competitiveness, self-esteem, and generalised positive goal expectancies, as well as lower scores of indices of anxiety, negative affectivity, and depression. Overall, high-hope as compared to low-hope persons think positively about themselves, set higher goals, and select more goals. Further, high-hope people approach goals with the belief that they have a good likelihood of reaching them, and they focus on success. Low-hope people, conversely, believe they lack the necessary pathways for their goals, and doubt they can use any available pathways they may have. Additionally, low-hope people set easy or extremely difficult goals; perceive they have a low chance of reaching their goals; have a sense of uncertainty and failure about their goals; and, experience negative emotions when pursuing their goals (see Snyder, 1994b for all hope correlates).

Although these studies reveal several benefits that accrue to hopeful thinkers, it is important to consider the nature of such thinking. Borrowing from Swann's (1983) self-verification theory, in which it is posited that

people are motivated to process self-referential information so as to support their previously existing self theories, as well as our own reality negotiation theory about the motive to preserve one's self-theory (Snyder & Higgins, 1997), we posit that hope-related content should affirm one's dispositional hope. Thus, higher- as compared to lower-hope persons should have an affinity for such pathway thoughts as ''I can solve this problem'', and agentic thoughts such as ''I can do it''. If these notions about self-referential thinking are operative, then high-hope people should prefer to hear positive self-statements, whereas low-hope people should be more likely to process self-statements that have more negative content.

Though there has been no test of high-hope people's preference for positive self thoughts, the depression literature has touched on similar issues. According to Beck (1976), for example, depressed persons' negative views of their futures should predispose them to attend and retrieve negative self-referent material, whereas nondepressed people should do likewise with positive material. Following this logic, Crowson and Cromwell (1995) allowed depressed and nondepressed people to choose between taperecorded messages with either positive or negative self-related statements. Results showed that the nondepressed people chose to listen mostly to the positive statements, whereas the depression group showed no differences in tape preferences.

Depression theory and research can be understood in terms of hope theory (Snyder, 1994b). When people encounter profound and continued blockages of important goals, they eventually experience despair and a giving up of goals. This loss of hopeful goal-thoughts is very similar to depression-related thinking. On this issue, research suggests that goal blockages cause subsequent depression-related emotions (Diener, 1984; Snyder, Sympson, Ybasco, Borders, & Higgins, 1996), rather than the reversed causal sequence (i.e. depression-related emotions → goal blockage).

Hope theory predicts differential attention to and recall of self-referential input that varies in favourability. Accordingly, the hypotheses were that higher- as compared to lower-hope persons as measured by the dispositional Hope Scale would: (1) prefer to listen more to positive than negative self-referential statements; and (2) recall and generate more of the positive and less of the negative statements. There are two counter-explanations for these predictions. First, both hope theory and cognitive theories of depression predict a different attention to and recall of self-referential input varying in favourability. Therefore, a measure of depression also was given in Study 1. Second, the hope effects may be related to mood. Bower (1985) posited that positive mood makes it more likely that one will notice more positive stimuli, as well as to recall and have better access to positive memories. As such, it may be that mood drives the differential selection

and recall of positive and negative self-referential statements by high- and low-hope people. Thus, affectivity measures also were employed in Study 1.

STUDY 1

Method

Design

The design was a 2 × 2 factorial, with the between-subject independent variables of Hope (low, high) and Gender (male, female), and the major dependent variables of time spent listening to and the recall of positive rather than negative self-referential statements.

Research Participants

Subjects were introductory psychology students. At the start of the 1994 Autumn semester, the Hope Scale was given to approximately 500 students in a mass testing session. Scales were arrayed separately by gender from highest to lowest mean total scores. Moving from the top of the distribution downward, those males and females with the highest scores were recruited via telephone; similarly, moving from the bottom upward, those with the lowest scores were recruited. The four Hope × Gender groups consisted of: 8 high-hope males, $M = 62.13$; 8 high-hope females $M = 61.88$; 8 low-hope males, $M = 31.13$; and 9 low-hope females, $M = 35.78$.

Measures

Hope Scale.   This 12-item dispositional measure contains four items tapping agency for goals (e.g. ''I energetically pursue my goals'' and ''I meet the goals I set for myself''), four items tapping pathways (e.g. ''I can think of many ways to get out of a jam'' and ''There are lots of ways around any problem''), and four distracters. The scale has an 8-point response continuum from 1 (definitely false) to 8 (definitely true). The total is the sum of the agency and pathways items scores. Snyder et al. (1991) report that the scale has adequate internal and test-retest reliabilities; moreover, the agency and pathways components can be identified separately, yet are slightly correlated (*r*s of .30–.40). Items for the two components are aggregated because the theory posits the necessity of both; relatedly, confirmatory factor analyses have verified the existence of an overarching hope process undergirded by the two components (Babyak, Snyder, & Yoshinobu, 1993). The Hope Scale also evidences

concurrent and discriminant validity, as well as discriminant utility in predicting goal-related outcomes beyond other measures.

Beck Depression Inventory. The Beck Depression Inventory (BDI; Beck, Ward, Mendelsohn, Mock, & Erbaugh, 1961) is an internally consistent and well-validated 21-item self-report trait measure of depressive thinking. Every item consists of four statements, with respondents being told to "choose the answer that best describes how you feel right now" (on a scale of 0–3). (Scores are from 0–63.)

Positive and Negative Affect Schedule. The Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988) is comprised of two 10-item scales measuring positive and negative affectivity. The scales have high internal consistency, are uncorrelated, and responses are stable over time. They also have excellent convergent and discriminant validity. For the present study the respondents were asked to indicate "how they feel right now".

Experimental Questionnaire. Four questions were developed with regard to choice of tape. They include: "Did you prefer to listen to one taperecording versus the other?" (Yes; No); "If you did prefer listening to one tape, which one?" (Positive; Negative); "If you had to listen to only one tape for a full 10 minutes, which one would you choose?" (Positive; Negative); and "Which recording seems to reflect how you are feeling right now?" (Positive; Negative). Also, two items allowed participants to rate the effects of the tapes on them. A first item read: "On the following scale, please rate how the negative recording made you feel" (1 = *Very Negative*, to 5 = *Not at all negative*). A second and related item read: "On the following scale, please rate how the positive recording made you feel" (1 = *Very Positive* to 5 = *Not at all Positive*).

Apparatus and Materials

Taperecorder Switching/Timing Apparatus. The machine used by Crowson and colleagues (1995) was utilised. A toggle switch on the table enables the person to choose between two taped messages.

Audiotapes. One tape with the positive and one with negative self-referent statements used by Crowson and Cromwell (1995) were employed. On each 30min tape, there was a repeated sequence of 30 depression statements by a male speaker. Statements were adapted from the Automatic Thoughts Questionnaire. The positive version (ATQ-P;

Ingram & Wisnicki, 1988) consisted of statements, such as ''My life keeps getting better'', and the negative version (ATQ-N; Hollon & Kendall, 1980) consisted of statements, such as ''Why can't I ever succeed?''

Procedure

The subject was greeted by the experimenter, seated, and asked to read and sign the consent form. Thereafter, the BDI and the PANAS were completed. Participants then were given written and verbal instructions. Following the procedure described previously by Crowson and Cromwell (1995), participants were told they would be listening to ''statements that people sometimes say to themselves during the day''. They could choose between the two tapes, switching as often as they liked from one to the other by using the toggle switch (not coded as to the tape presented, but subjects immediately understood which tape it was after one ''toggle''). (Starting with the positive or negative tape was counterbalanced across subjects.) Subjects also were told that after about 10min, the tapes would stop and that they would be asked to fill out some additional forms. (Note that the subjects only listened to the tapes for 10min in the first portion of the experiment, although enough tape was available to listen to 30min of each type of statements.) Following this, the participants simply would listen to one tape for 10min (the toggle switch was removed). After these instructions, the participant was left alone. The experimenter started both the computer and tapes simultaneously. The tapes were then both shut off at the same time, and the subject was asked to fill out the experimental questionnaire regarding tape preferences, and an empty page with the following instructions written at the top: ''Please list *all* the sentences and phrases you can remember from the tapes. List as many of *both* the negative and positive messages as you can. You can list them in any order.'' On completing these, the participant listened only to the positive tape for 10min to increase the likelihood that he/she would be uplifted at the end.

Results

Hypothesis 1: Higher Dispositional Hope and Listening Preferences for High-hope Statements

Listening Preferences on Tape Selection Task.   Although subjects had a total of 600 seconds to apportion in their listening to positive or negative tapes, only the time spent listening to the positive tape was selected because of the focus on affirming, hope-related content. However, these results will parallel time spent listening to the negative tapes (to achieve the time spent listening to the negative tape, the positive tape time is subtracted from the

600 total seconds). A 2 (Hope: low, high) $\times$ 2 (Gender: male, female) analysis of variance on the amount of time chosen to listen to the positive tape (out of 600 possible seconds) yielded the predicted Hope main effect [$F(1,29) = 6.43$, $P = .017$], which reflected the high-hope subjects listening longer to the positive tape ($M = 451.21$ sec, SD = 155.62) than did the low-hope subjects ($M = 308.35$ sec, SD = 163.02). Within each level of Hope, the high-hope subjects listened to the positive tape ($M = 451.21$ sec, SD = 155.72) longer than the negative tape ($M = 148.79$ sec SD = 155.72), [$t(15) = 3.88$, $P < .001$]; the low-hope subjects were roughly equal in the times spent listening to the positive tapes ($M = 308.35$ sec, SD = 164.00) and negative tapes ($M = 291.65$ sec, SD = 163.20) [$t(15) = .21$, n.s.]. Neither Gender nor the interactions were significant.

Listening Preferences on Experimental Questionnaire.   These questions helped to elucidate the listening preferences. The first question: "Did you prefer to listen to one tape recording versus the other?" (Yes; No; or, No Response) revealed that 100% (16/16) of high-hope participants preferred a tape, whereas 76.47% (13/17) of low-hope persons preferred a tape (chi-square = 4.28, $P = .038$). On the second question: "If you did prefer listening to one tape, which one?" (Positive; Negative; or No Preferred Response), 100% (16/16) of high-hope participants preferred the positive tape, whereas for low-hope persons, 23.53% (4/17) gave no preferred response, 17.65% (3/17) preferred the negative tape, and 58.82% (10/17) preferred the positive tape (chi-square = 8.36, $P = .015$) (the chi-square was high/low hope $\times$ no preference/positive preference/negative preference). On the third question: "If you had to listen to only one tape for a full 10 min, which one would you choose?" (Positive; Negative; or No Response), 100% (16/16) of high-hope persons selected the positive tape, and 70.59% (12/17) of the low-hope people selected the positive tape (chi-square = 5.54, $P = .019$). On the fourth question: "Which recording seems to reflect how you are feeling right now?" (Positive; Negative; or No Response), 100% (15/15; note that one person did not respond to this item) of high-hope persons said the positive tape reflected their current feelings, and 46.67% (7/15) of low-hope people said the positive tape reflected their current feelings (chi-square = 10.91, $P < .001$).

Listening Preferences when Shared Variances of Other Variables are Removed.   To ascertain whether the Hope effect in listening preferences was lessened when considering the shared variances related to depression and affectivity, several hierarchical regressions were conducted in which Hope level was entered at Step 2 as a dichotomous (high, low) variable after previously entering the other continuous variables at Step 1. To

summarise all of these results, the hope effects were not lessened by the BDI or PANAS scores either individually or together.

Hypothesis 2: Higher Hope Persons' Recall of More Positive and Less Negative Statements

Recalled Items on the Memory Task.   The memory items were examined for differences between the higher- and lower-hope groups in the frequencies of positive and negative recalled items. Two graduate students independently rated the items listed in the memory task as recalled (positive or negative) or fabricated (positive or negative). Statements exactly (or almost exactly) the same as ones on the tape were counted as recalled. Statements dissimilar to those on the tape, or that mixed messages, were counted as fabricated. The ratings of the two raters correlated .97, $P < .001$. Two items on which the raters did not agree were deleted from subsequent analyses.

A 2 (Hope: low, high) $\times$ 2 (Gender: male, female) analyses of variance on the recall of ATQ-Positive items revealed no significant results ($P = .13$ in predicted direction for Hope main effect). For the recall of ATQ-Negative items, however, there was a significant effect of Hope [$F(1,29) = 7.56$, $P = .01$], reflecting the fact that the high-hope persons recalled fewer of the items ($M = 1.06$, SD = 1.12) than the low-hope persons ($M = 2.58$, SD = 2.00). Because item recall may be a function of time spent listening to each tape, it is relevant to first remove this variance via regression procedures. When this was done, the high-hope group still recalled fewer negative items than the low-hope group [$\Delta R^2 = .14$, $t(30) = 2.29$, $P = .029$].

To follow the potential role of BDI scores in this Hope and recall of negative items relationship further, a series of regressions was performed. These regressions indicated that the BDI scores explained (77% of variance) the higher hope persons' propensities to recall fewer of the negative items.

Applying similar logic to the PANAS positive and negative scores, when either was entered in the first step of regression equations, the effects of Hope on recall of negative items generally remained for positive and negative effect, thereby undermining the explanatory role of affectivity.

Fabricated Items on the Memory Task.   An analyses of variance on fabricated items indicated that the Hope groups did not differ significantly on the fabrication of the positive items [$F(1,29) = 2.38$, $P = .134$], high-hope ($M = 2.81$, SD = 2.23), low-hope ($M = 1.88$, SD = 1.05), but they did differ significantly in their fabrication of negative items [$F(1,29) = 4.04$, $P = .054$], with the high-hope persons fabricating fewer negative items

(M = .44, SD = .73) than the low-hope persons (M = 1.41, SD = 1.73). Because this negative item fabrication may be a function of time spent listening to each tape, the variance related to listening time was removed. Listening time entered at Step 1 did not predict fabricated recall of negative items [R^2 = .05, $t(33)$ = −1.30, n.s.), and Hope entered at Step 2 did not augment the prediction (ΔR^2 = .08, $t(33)$ = 1.65, P = .11]. Neither Gender nor the interactions were significant for any of the preceding memory analyses.

Additional Analyses on the Impact of the Positive and Negative Tapes

The last two experimental questionnaire items were analysed for differences between the two hope groups in how each tape in the listening preferences phase of the experiment affected their mood. The first item produced no significant differences, although descriptively the high-hope subjects did not rate the negative tape as having as negative an impact (M = 3.13, SD = 1.19) as did the low-hope subjects (M = 2.71, SD = 1.45). The second item produced a significant Hope effect [$F(1,31)$ = 8.60, P = .006], such that the positive tape made the high-hope group (M = 1.69, SD = .87) feel more positive than the low-hope group (M = 2.69, SD = 1.20).

Overview of Results

The overall correlations of the major variables in Study 1 are presented in Table 1.

TABLE 1
The Intercorrelations of the Major Variables in Study 1

		1	2	3	4	5	6	7	8
Hope	1								
Listen to positive tape	2	.42**							
Depression	3	−.62***	−.19						
Positive affectivity	4	.52**	.20	−.47**					
Negative affectivity	5	−.39*	−.11	.70***	−.21				
Recall positive	6	.06	−.02	−.09	.04	−.22			
Recall negative	7	−.42**	−.18	.57***	−.21		.57***	.01	
Fabricate recall negative	8	.27	.34	−.19	.31	−.06	−.18	−.27	
Fabricate recall positive	9	−.35*	−.23	.56***	−.17	.23	.03	.08	.29

Notes: The Hope variable is the dichotomous grouping of low/high hope as measured by Hope Scale scores.

BDI = Beck Depression Inventory; Positive and Negative Affectivity = PANAS ± subscales.

* P < .05; ** P < .01, *** P < .001.

Discussion

The present results support hypothesis 1 that low-hope and high-hope individuals respond differently to self-referential statements of positive and negative content. The high-hope group chose to listen mostly to the positive tape, as did those in Crowson and Cromwell's (1995) nondepressed group; and, the low-hope group was split nearly equally in their self-selected tape choice, as was the case for the depressed group in the 1995 study. The questionnaire results also buttress the high-hope persons' actual listening preferences: 100% of the high-hope people reported that they: (1) preferred the positive tape; (2) would listen only to the positive tape if they had to pick just one; and (3) believed the positive tape reflected their ongoing feelings. The listening preferences of higher-hope persons for positive tapes remained when the shared variances related to depression and positive and negative affectivity were statistically removed, thereby negating the possible counter-explanatory role of these latter variables.

Turning to the memory results, the significant recall effects were produced more markedly for the negative as compared to the positive statements. In particular, the high-hope relative to low-hope persons recalled fewer of the negative items, and this held even when corrected statistically for differential listening time. Likewise, for negative fabricated items, the high-hope relative to low-hope people produced significantly fewer items, and again, this effect was not influenced when actual listening times were removed via regression. These memory results suggest that when people lose hope, they become less able to filter out the negative, and the negative becomes more accessible in memory. Their high-hope persons may have the ability to block out negative stimuli, and the low-hope persons, although still able to take in the positive, not only cannot block out the negative but, additionally, absorb and recall (accurately) more of it. The scores on the BDI served to explain the Hope main effects both on the recall of negative items and the fabricated negative items. This suggests that the low-hope people may share some of the thought processes of depressed persons in the area of recalling actual or imagined negative self-referential statements.

The responses for the high-hope subjects seemed to be fairly consistent throughout the various dependent measures. In accordance with hope theory, the higher-hope persons stated that they presently felt positive, and that they usually felt this way; moreover, they preferred the positive tape, and this preference was mirrored in their actual tape selections. Moreover, they seemingly distanced themselves from the negative self-referential information by choosing not to listen to the negative tape as much as did the low-hope persons; similarly, they recalled and fabricated fewer negative self-referential statements than did the low-hope persons.

The responses of the low-hope group portrayed an inconsistent picture. The low-hope research participants by their own report are varied, with almost 50% usually feeling positive and about 50% usually feeling negative. Of those who stated that they had a tape preference, over three-quarters reported that they preferred the positive tape. Yet, when given an actual choice of tapes to listen to, the listening times were split nearly evenly between the positive and negative tapes. Further, relative to high-hope people, the low-hope persons were less likely to report that the positive tape made them feel good. Moreover, although they were able to recall and fabricate positive statements about as well as the high-hope group, they were much more able than the high-hope group to attend to, recall and fabricate the negative self-referential messages.

STUDY 2

The second study was designed to expand the previous findings where the self-statements that served as the dependent variable were made with high- and low-depression persons in mind. In Study 2, the self-referential statements were developed expressly from hope theory in order to reflect the type of goal-related messages that high- and low-hope people would employ. Therefore, the present study served as a replication of Study 1, with the major modification being that the self-referential audiotaped messages were related to hope (high and low) rather than depression. The hypotheses were that higher-hope as compared to lower-hope people would: (1) prefer to listen more to positive than negative self-referential statements; and (2) recall and generate more of the positive and less of the negative statements. Further, as in Study 1, the effects of hope were tested in relation to depression and affectivity self-report indices, as well as self-esteem. Self-esteem was added because it bears similarity to hope, depression, and affectivity.

Method

Design

The design was a 2×2 factorial, with the between-subject independent variables of Hope (low, high) and Gender (males, females). The major dependent variables were time spent listening to and the recall of high-hope versus low-hope self-referential statements.

Research Participants

At the beginning of the autumn 1995 semester, the Hope Scale was given to 700 students at mass testing. Scales were separated by gender and arranged from highest to lowest scores. Moving from the highest down-

ward, the 12 men and women with the highest scores were recruited via telephone; conversely, moving from the lowest upward, the 12 men and women with the lowest scores were recruited by telephone. The mean scores for each of the four cells were: 12 high-hope females $M = 60.00$; 11 (one no-show) high-hope males $M = 59.70$; 12 low-hope females $M = 43.99$; and 11 (one no-show) low-hope males $M = 40.64$.

Measures

The same measures from Study 1 were used, along with the State Self-Esteem Scale, which is a 20-item index that Heatherton and Polivy (1991) developed to measure overall esteem; it has displayed internal consistency and construct validity.

Apparatus and Materials

Recording and Switching/Timing Apparatus.   The same system as in Study 1 was used.

Audiotapes.   Two 30min audiotapes (a repeated sequence of 30 high- or low-hope statements), one with high-hope and one with low-hope self-referential statements were developed for Study 2 by the senior author (a male) to exemplify both agentic and pathways high- and low-hope content. Examples of such high- and low-hope agency statements are ''Yes, I can'' and ''No, I can't'', respectively; examples of high- and low-hope pathways statements are ''I'm rarely at a loss for options'', and ''I don't seem to have options'', respectively.

Procedure

The participants reported individually to a laboratory, were greeted by the experimenter, and were seated. Thereafter, the procedure paralleled that of Study 1.

Results

Hypothesis 1: Higher Dispositional Hope and Listening Preferences for High-hope Statements

Listening Preferences on Tape Selection Task.   The amount of time (out of 600 possible seconds) chosen to listen to the high-hope tape was examined in a 2 (Hope: low, high $\times$ 2 (Gender: male, female) analysis of

variance. The only significant finding was the predicted main effect of Hope [$F(1,42)$ = 9.02, P = .004], reflecting the fact that the high-hope persons (M = 522.53sec, SD = 110.00) choose the positive tape significantly more than the low-hope group (M = 408.16sec, SD = 144.70). Within each level of Hope, the high-hope subjects chose to listen to the positive tape (M = 522.53sec, SD = 110.00) longer than to the negative tape (M = 77.47sec, SD = 109.99), [$t(22)$ = 9.71, P < .001], and the low-hope subjects also spent more time listening to the positive tapes (M = 408.16sec, SD = 144.70) than the negative tapes (M = 191.84sec, SD = 144.72) [$t(22)$ = 3.58, P = .002].

Listening Preferences on Experimental Questionnaire.   The four experimental questions were examined to elucidate the actual listening preferences. The first question: ''Did you prefer to listen to one taperecording versus the other?'' (Yes; No; or No Response) revealed that 100% (23/23) of high-hope participants preferred a tape, whereas 82.61% (13/17) of low-hope persons preferred a tape (chi-square = 4.38, P = .036). On the second question: ''If you did prefer listening to one tape, which one?'' (Positive; Negative; or No Preferred Response), 100% (23/23) of high-hope participants preferred the positive tape, whereas for low-hope persons, 89.47% (17/19; note that 4 persons did not respond to this item) preferred the positive tape (chi-square = 2.54, P = .111). On the third question: ''If you had to listen to only one tape for a full 10min, which one would you choose?'' (Positive; Negative; or No Response), 100% (23/23) of high-hope persons selected the positive tape, and 91.30% (21/23) of the low-hope people selected the positive tape (chi-square = 2.09, P = .148). On the fourth question: ''Which recording seems to reflect how you are feeling right now?'' (Positive; Negative; No Response), 95.65% (22/23) of the high-hope persons said the positive tape reflected their current feelings, and 78.26% (18/23) of the low-hope people said the positive tape reflected their current feelings (chi-square = 3.07, P = .08).

Listening Preferences when Shared Variances of Other Variables are Removed.   To ascertain whether the Hope effect in listening preferences was lessened when considering the shared variances related to other variables, several regressions were conducted. Overall, when variances related to the BDI, PANSAS, and State Self-Esteem were removed separately or together, hope still augmented the predictions significantly at Step 2.

Hypothesis 2: Higher Hope Persons' Recall of More Positive and Less Negative Statements

Recalled Items on the Memory Task.   Memory items were examined first between the high- and low-hope groups in regard to the frequencies of high- and low-hope recalled items. Two graduate students independently rated the items listed in the memory task as recalled (high-hope or low-hope) or fabricated (high-hope or low-hope), and there was virtually identical agreement (the two instances of disagreement were discarded); therefore, the utilised data reflect 100% agreement. The statements exactly (or almost) the same as ones on the tape were counted as recalled, whereas statements that were not similar, or that mixed messages together, were counted as fabricated.

Regarding the recall of high-hope statements, the 2 (Hope: low, high) $\times$ 2 (Gender: males, females) analysis of variance produced the Hope main effect in the predicted direction (i.e. high-recalled more than low-hope persons [Ms = 4.52 (SD = 2.57) and 3.22 (SD = 2.71), respectively], but it did not reach statistical significance [$F(1,42)$ = 2.61, P = .114]. In regard to the recall of low-hope statements, the 2 (Hope: low, high) $\times$ 2 (Gender: males, females) analysis of variance produced the predicted Hope main effect (i.e. high-hope persons recalled fewer items than low-hope persons [Ms = .83 (SD = .98) and 2.39 (SD = 3.59), respectively] [$F(1,42)$ = 4.14, P = .048]. Because item recall may be a function of time spent listening to each tape, however, listening time variance was removed by regression procedures, thereby revealing that listening time explained (69% of the variance) the hope-low-hope content recall relationship.

Fabricated Items on the Memory Task.   Turning to the fabricated high-hope statements, the predicted main effect of Hope was obtained [$F(1,42)$ = 4.39, P = .041], such that high- as compared to low-hope persons made up more positive statements [Ms = 2.83 (SD = 3.01) and 1.30 (SD = 1.30), respectively]. Subsequent regressions supported the role that initial listening time played in this relationship; accordingly, analyses on high-hope fabricated statements were not undertaken. For the fabricated low-hope statements, the usual 2 (Hope: low, high) $\times$ 2 (Gender: male, female) analysis of variance produced no significant main effects or interactions.

Additional Analyses on the Impact of the Positive and Negative Tapes

The last two items on the questionnaire were analysed for differences between the two hope groups in rating how each tape in the listening preferences first phase of the experiment affected their mood. When the

first item regarding negative impact of tapes was entered into a 2 (Hope: low, high) × 2 (Gender: male, female) analysis of variance, no significant effects resulted. On the second item pertaining to feelings, a significant effect of Hope emerged, [$F(1,42) = 10.11$, $P = .003$], such that the high-hope persons rated the positive tape as having a more positive impact ($M = 1.74$, SD = .97) than did the low-hope subjects ($M = 2.65$, SD = 1.15).

Overview of Results

The overall correlations of the major variables of Study 2 are shown in Table 2.

DISCUSSION AND CONCLUSION

The results of Study 2 support the previous findings that low-hope and high-hope individuals respond differently to self-referential statements varying in positive and negative content. More specifically, these findings mirror those on high-hope versus low-hope people, who preferred to listen to positive, self-affirming messages over messages with a negative content. The present results showed that both the low-hope and the high-hope people preferred to listen to the high-hope tape content, but that the high-hope people did so to a significantly greater degree. The difference in Study 2 is that the dependent variable items were changed specifically to reflect hope content.

That the listening preferences of high-hope as compared to low-hope persons for the high-hope tapes remained when the shared variance related

TABLE 2
The Intercorrelations of the Major Variables in Study 2

		1	2	3	4	5	6	7	8	9
Hope	1									
Listen to high hope	2	.42**								
Depression	3	−.27	−.40**							
Self-esteem	4	.30*	.37**	−.67**						
Positive affectivity	5	.63***	.22	−.42**	.39*					
Negative affectivity	6	−.16	−.29*	.53***	−.72***	−.27				
Recall high hope	7	.25	.23	−.16	.21	−.02	.08			
Recall low hope	8	−.29*	−.53***	.35*	−.36**	−.29*	.18	.20		
Fabricate recall high hope	9	.31*	.33	−.26	.08	.29	−.06	−.16	−.18	
Fabricate recall low hope	10	.02	−.12	−.01	−.17	.09	.26	−.19	.20	.49***

Notes: The Hope variable is the dichotomous grouping of low/high hope as measured by Hope Scale scores.

BDI = Beck Depression Inventory; Self-esteem = Self-Esteem Scale; Positive and Negative Affectivity = PANAS ± subscales.

* $P < .05$; ** $P < .01$; *** $P < .001$.

to depression and positive and negative affectivity were removed also repli- cates the Study 1 findings. Additionally, Study 2 used a state index of self- esteem, and this also was ruled out as a counter-explanation for the listening preference effect related to hope. These results, together with the previous ones, suggest that the goal-directed thinking as tapped by the dispositional Hope Scale may be a more crucial determinant of listening preferences than other related constructs that may be assumed to drive such effects.

One interesting finding is that the low-hope people in Study 2 also expressed a preference for the high-hope tapes, although they were not as marked in their preference as were high-hope persons. If one examines the last experimental question pertaining to how the positive, high-hope tape makes people feel, the low-hope people are at the neutral or ambivalent point in their responding. In this regard, the present findings are consistent with the growing literature on positive biases (Taylor & Brown, 1988) in that normal persons typically gravitate toward self-referential information that is slightly positively biased, whereas non-normal persons (e.g. those with low hope or elevated depression) are more likely to be ''accurate'' in their processing of such information (called depressive realism, see Dykman, Abramson, Alloy, & Hartlage, 1989). It should be noted, however, that when the six experimental questions are considered together, the low- hope people are favourably disposed toward high-hope statements.

The memory results reveal that the high-hope as compared to low-hope people tended to remember accurately more of the high-hope statements and significantly recalled less of the low-hope statements. In this regard, it is as if the high-hope people are riding a ''wheel of fortune'' in regard to self-referential feedback.

Unlike Study 1, in Study 2, the BDI did not play a role in regard to the relationship of dispositional hope and the recall of low-hope statements, and the fabrication of high-hope statements. Perhaps this was the case because the target statements in Study 2 were expressly made to exemplify hope rather than the depression content of the statements in Study 1. Nevertheless, the shared roles of hope and depression in the recall process warrant further future research so as to explicate their joint operations. If, as we conclude in the previous paragraph, high-hope people are in a positive cycle regarding self-referential thinking, then it also can be said that low-hope people may find themselves in a ''wheel of misfortune''. How hope and depression are intertwined in this latter cycle offers an important potential focus for future research.

REFERENCES

Babyak, M.A., Snyder, C.R., & Yoshinobu, L. (1993). Psychometric properties of the Hope Scale: A confirmatory factor analysis. *Journal of Research in Personality*, *27*, 154-159.

Beck, A.T. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.

Beck, A.T., Ward, C.H., Mendelsohn, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, *4*, 53–63.

Bower, G.J. (1985). Mood and self-efficacy: Impact of joy and sadness on perceived capabilities. *Cognitive Therapy and Research*, *9*, 507–525.

Crowson, Jr., J.J., & Cromwell, R.L. (1995). Depressed and normal individuals differ both in selection and in perceived tonal quality of positive-negative messages. *Journal of Abnormal Psychology*, *104*, 305–311.

Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*, 542–575.

Dykman, B.M., Abramson, L.L., Alloy, L.B., & Hartlage, S. (1989). Processing of ambiguous and unambiguous feedback by depressed and nondepressed college students: Schematic biases and their implications for depressive realism. *Journal of Personality and Social Psychology*, *56*, 431–445.

Heatherton, T.F., & Polivy, J. (1991). Development and validation of a scale for measuring state self-esteem. *Journal of Personality and Social Psychology*, *60*, 895–910.

Hollon, S.D., & Kendall, P.C. (1980). Cognitive self-statements in depression: Development of an automatic thoughts questionnaire. *Cognitive Therapy and Research*, *4*, 383–395.

Ingram, R.E., & Wisnicki, K.S. (1988). Assessment of positive automatic cognition. *Journal of Consulting and Clinical Psychology*, *56*, 898–902.

Scheier, M.F., & Carver, C.S. (1985). Optimism, coping, and health: Assessment and implications of generalized outcome expectancies. *Health Psychology*, *4*, 219–247.

Seligman, M.E.P. (1991). *Optimism*. New York: Knopf.

Snyder, C.R. (1994a). Hope and optimism. In V.S. Ramachandran (Ed.), *Encyclopedia of human behavior* (pp. 535–542). Orlando, FL: Academic Press.

Snyder, C.R. (1994b). *The psychology of hope: You can get there from here*. New York: Free Press.

Snyder, C.R., Harris, C., Anderson, J.R., Holleran, S.A., Irving, L.M., Sigmon, Yoshinobu, L., Gibb, J., Langelle, C., & Harney, P. (1991). The will and the ways: Development and validation of an individual-differences measure of hope. *Journal of Personality and Social Psychology*, *60*, 570–585.

Snyder, C.R., & Higgins, R.L. (1997). Reality negotiation: Governing one's self and being governed by others. *Review of General Psychology*, *1*, 336–350.

Snyder, C.R., Sympson, S.C., Ybasco, F.C., Borders, T.F., & Higgins, R.L. (1996). Development and validation of the state hope scales. *Journal of Personality and Social Psychology*, *70*, 321–335.

Swann, W.B., Jr. (1983). Self-verification: Bringing social reality into harmony with the self. In J. Suls & A.G. Greenwald (Eds.), *Psychological perspectives on the self* (Vol. 2, pp. 33–66). Hillsdale, NJ: Erlbaum.

Taylor, S.E., & Brown, J.D. (1988). Illusion and well-being: A social psychological perspective on mental health. *Psychological Bulletin*, *103*, 193–210.

Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, *54*, 1063–1070.