Happiness, depression, and the Pollyanna principle

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People give precedence to pleasant over unpleasant events, a ubiquitous tendency called the Pollyanna principle. Thus, pleasant items are "spewed" early in list-generating tasks, and the more positive member of an antonym pair is uttered first. Not everyone does this. We have demonstrated modest correlations between the Pollyanna tendency on an antonym pair-generation task and two happiness measures; a list-generation task yielded Pollyanna principle results, but the two tasks were uncorrelated, and the list task was not correlated with happiness. Scores on the Beck Depression Inventory correlated negatively with happiness but not with either Pollyanna measure.

Matlin and Stang (1979) have summarized a large and varied literature under the rubric of the Pollyanna principle. In general, when following the Pollyanna principle people give precedence to pleasant over unpleasant events. Matlin and Stang see manifestations of this tendency in such diverse phenomena as people's overestimating the size of valued objects, avoiding looking at unpleasant pictures, communicating good news more frequently than bad, and so on. In addition, certain routine verbal behaviors seem also to follow the Pollyanna principle. For example, in generating lists of words, people tend to place pleasant items earlier in the list than unpleasant items. Similarly, when asked to generate pairs of polar opposite personality traits, the first member of each pair tends to be the more positively evaluated one (e.g., "good-bad").

As with any group tendency, there are likely to be some people whose performance deviates from the norm. Thus, in a classroom demonstration of the Pollyanna principle, using the kinds of verbal tasks mentioned above (generating a list of vegetables, generating a list of antonyms), we confirmed its operation in the group data, but there were several subjects whose responses did not conform to the principle, and indeed a few whose behavior seemed to reveal an opposite tendency (i.e., "spewing" negative items before positive ones).

If those who follow the Pollyanna principle are optimists, as Matlin and Stang (1979) suggest, then the deviants from the principle may come from a minority subgroup whose outlook on life is essentially pessimistic. It was the main purpose of the present investigation to test that hypothesis. Lacking a good measure of optimism-pessimism, we turned to two scales that we thought might tap the same variable: a recently developed measure of "psychological well-being," or happiness, developed by Kammann, Christie, Irwin, and Dixon (Note 1) and the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961). A secondary purpose of this study was to determine the degree of correlation between the happiness and depression scales. Our expectation was that in a college population the two measures would be negatively correlated, but not to the extent of being polar opposites. Since the happiness scale (the "affectometer") has only recently been developed, its relationship with other measures has not yet been fully explored. Thus, the present data were intended to shed light not only on a possible source of individual differences in conformity to the Pollyanna principle, but also on the predictive (to Pollyanna performance) and construct validity (relation to the BDI) of this newly devised happiness scale.

METHOD

Subjects

The subjects were 59 students enrolled in an introductory psychology class designated for potential psychology majors. The students knew that they were participating in what was both a demonstration and an experiment, but they were not aware of the purposes of the experiment. Participation was voluntary and anonymous. Subjects indicated gender by writing "M" or "F" on the test booklet, but otherwise they were identified only by number.

Procedure

Each subject was given a numbered, mimeographed booklet and a correspondingly numbered IBM answer sheet. On separate sheets the booklet contained instructions for the two Pollyanna tasks and space on which to write the list of 12 vegetables and the 12 pairs of adjectives (in that order). On the IBM sheets they responded first to two short (12-item) versions of the affectometer and then to the 21 items of the BDI. The first affectometer scale consisted of 12 sentences of the sort "Nothing goes right with me" or "I am content with myself." Subjects responded to each sentence by indicating on a 5-point scale how often, during the past week, they felt that way. The second version contained 12 adjectives of the sort "discontented" or "glowing," to which subjects responded exactly as to the sentences. The BDI items all contained four sentences reflecting various degrees of depressive symptoms; they picked the alternative in each item that best described how they felt during the past week.

When the subjects completed the BDI, the instructions called

for their going back to the list of vegetables and rank ordering them according to how much they liked them (with 1 the most preferred, 12 the least). Then they turned to the 12 pairs of antonyms and circled the member of each pair that was the more positive or complimentary way of describing a person.

Scores

Five scores were obtained from each subject: a Pollyanna score from the vegetables task (Pollyanna 1) and one from the antonyms (Pollyanna 2), two happiness scores (sentences and adjectives), and a depression score. Pollyanna 1 was obtained by summing the ranks of the first six vegetables (the smaller the score, the greater the conformity to the Pollyanna principle: chance = 39). Pollyanna 2 was the number of times the first member of each pair of antonyms was circled (chance = 6). Happiness and depression scores were derived in a manner dictated by the nature of the scales.

RESULTS AND DISCUSSION

Both the vegetables (mean = 34.43; t = 5.1) and the antonyms (mean = 8.84; t = 8.1) task yielded a significant (df = 58; p < .001) Pollyanna effect.

Table 1 gives the intercorrelations among the five scores. It is clear that: (1) Pollyanna 1 (vegetables) and Pollyanna 2 (antonyms) were not correlated, (2) Pollyanna 1 was not related to any of the other measures, (3) Pollyanna 2 was significantly (p < .005), though modestly, correlated (r = .34) with both happiness measures, and (4) the two happiness measures were highly correlated (r = .82), and both were significantly and fairly highly correlated with the BDI (rs = −.58 and −.64).

Both verbal tasks yielded results consistent with the Pollyanna principle, but scores on the two tasks were not correlated, and only Pollyanna 2 was correlated with happiness. The vegetables task may have tapped too many idiosyncratic factors to provide a good measure of individual differences in the tendency to follow the Pollyanna principle. (The variability in scores on Pollyanna 1 was sufficiently high to preclude a "restriction-of-range" interpretation of its failure to correlate with any of the other measures.)

Subjects' sense of well-being (happiness) was predictive of their conformity to one manifestation of the Pollyanna principle. Considering the utter simplicity of the Pollyanna 2 task, the small number of items (12) on which Pollyanna 2 scores are based, the strong group bias in the direction of the Pollyanna principle, and the brevity and simplicity of the happiness scales, the obtained correlation between Pollyanna 2 and the happiness scores, though modest in its strength, is still quite impressive.

It should be noted that when the data were analyzed separately by gender, no significant mean differences were obtained. Moreover, the correlational results for each gender match those of the whole group. The 30 male subjects did seem to generate higher correlations between Pollyanna 2 and the two happiness

Table 1
Intercorrelations (Pearson r) Among Measures of the Pollyanna Principle, Happiness, and Depression

Measure	Polly-anna 2	Happiness Sen-tences	Happiness Adjec-tives	Beck
Pollyanna 1	−.10	.00	.04	−.09
Pollyanna 2		.34*	.34*	−.19
Happiness (Sentences)			.82†	−.58†
Happiness (Adjectives)				−.64†

*p < .005 (df = 57).   †p < .001 (df = 57).

scales (rs = .38 and .55) than did the 29 females (rs = .31 and .23), but the differences were not statistically significant.

Finally, with regard to the relation between happiness as measured by the affectometer and depression as measured by the BDI, the data show that for this sample of college students, the two were highly correlated but were not polar opposites; indeed, the BDI did not and the happiness measures did correlate with Pollyanna 2. Clearly, the happiness scales measure something in addition to depression.

Since the present study was completed, we have become aware of two sets of evidence consistent with our own. First, Kammann (Note 2) reports correlations in the low 70s between long versions of the affectometer and the BDI. Second, Matlin and Gawron (in press), in a study more ambitious than ours, collected data on several Pollyanna tasks as well as on various personality measures, including happiness and optimism. Interestingly enough, although most of the tasks yielded Pollyanna outcomes, they were not intercorrelated. Moreover, several of the Pollyanna tasks were significantly correlated with self-reported ratings of happiness and optimism, but the correlation coefficients were only in the high teens—quite a bit lower than our values.

In short, the pattern of our results is generally consistent with what others have found using somewhat different measures and different subject populations. One thing that clearly is needed for future research is a more homogeneous set of Pollyanna tasks. It would also be desirable to develop a psychometrically sophisticated measure of optimism, perhaps modeled after the affectometer. In the meantime, if one is looking for a brief, intrinsically interesting, nonobvious, easily implemented, and virtually guaranteed-to-work classroom project, we can highly recommend use of the Pollyanna tasks for demonstrating either group tendencies or correlates of individual differences in affective state.

REFERENCE NOTES

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