CONSTRUCTION OF A NEW SCALE: THE REYSEN LIKABILITY SCALE

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While much is known about the concept of likability, a single encompassing tool to measure likability has yet to be created. The Reysen Likability Scale measures the degree of likability for a target source. Using the current scale, a total of 150 participants rated 12 individuals who were videotaped while reading a paragraph. Tapes differed with respect to whether the people genuinely laughed, faked their laughter, or did not laugh while reading a paragraph. In the present study, the reliability, and convergent and divergent validity of the new scale were assessed. Coefficient alphas for the current scale ranged from .90 to .91. Laughter predicted higher likability ratings which demonstrated convergent validity. Divergent validity was illustrated using Goldberg's (1992) 100-Adjective Big Five Personality Test. Suggestions for research using the new scale are given.

Keywords: Reysen Likability Scale, construction, laughter, Big Five personality factors.

A great deal of research has been dedicated to the topic of likability. While many aspects of what makes a person likeable have been presented, researchers have varied in their measurement of the construct. With the use of the current scale, future reseacrhers can have a valid and reliable measurement tool with which to study features of likability.

Likability has been labeled *a persuasion tactic and a scheme of self-presentation* (Cialdini, 1993; Kenrick, Neuberg, & Cialdini, 2002). Aspects that appear to increase likability include physical attractiveness, similarity to ourselves, compliments, and association. Physically attractive individuals have been rated as more talented, kind, honest, and intelligent (for a review, see Eagly, Ash-

more, Makhijani, & Longo, 1991). Similarity to ourselves increases likability (Byrne, 1971; Carli, Ganley, & Pierce-Otay, 1991; Hogg, Cooper-Shaw, & Holzworth, 1993). Compliments or praise increase likability (Berscheid & Walster, 1978; Byrne & Rhamey, 1965; Drachman, deCarufel, & Insko, 1978).

Though no empirical evidence exists to link likability to laughter, some corroboration has been found. Bachorowski and Owren (2001) played recordings of laughter and had participants rate them on a number of scales including their interest in meeting the person laughing, their support to include the laugh on a laugh track, their affective responses to the laughs, their belief in the laugher's friendliness, and their belief that the person laughing is sexy. Women's voiced laughter was rated more positively than was men's, and men's unvoiced laughter was rated more positively than was women's. Voiced women's laughs were rated sexier and friendlier than was men's laughter (Bachorowski & Owren). This suggests that laughter is associated with aspects of liking.

Likability has been measured in a number of ways. Carli et al. (1991) used three items to measure the construct of likability. Using a 9-point scale, participants rated how satisfied they were with their roommate, how much they liked their roommate, and to what extent they were friends. Drachman, deCarufel, and Insko (1978) used two items to measure likability. Using a 7-point Likert-type scale, participants rated how likeable a person was, and how compatible they were. Byrne (1971) and Byrne and Rhamey (1965) used two items included in the Interpersonal Judgement Scale. Using a 7-point scale participants rated the statements "I feel I would probably like this person" and "I would like working with this person in an experiment". Rubin (1970) used three items included in a scale to measure romantic love. Using a 5-point Likert-type scale, participants rated the statements "Most people would react favorably to Person X after a brief acquaintance", "Person X is one of the most likeable people I know", "Person X is the sort of person whom I myself would like to be". For a review of both Rubin's and Byrne's scales see Berscheid and Walster (1978). The above scales are short and may not be a valid measurement of the construct due to their brevity.

In a classic study by Chaiken and Eagly (1983), communicators who were rated as likeable were more effective in achieving attitude change in participants than were unlikeable communicators. The authors used a list of 12 bipolar adjectives on a 15-point scale to measure likability. The adjectives included likable, knowledgeable, modest, intelligent, approachable, competent, warm, trustworthy, pleasing, sincere, friendly, and unbiased. They performed a factor analysis and found two factors, which they titled *attractiveness* (likable, friendly, approachable, pleasing, modest, warm, and unbiased) and *expertise* (knowledgeable, intelligent, and competent). These two factors were said to measure likability.

The purpose in the present study was to develop a valid and reliable measure of likability more extensive than the scale used by Chaiken and Eagly. The current scale incorporates both the attractiveness and expertise factors described by Chaiken and Eagly into one factor, and additionally requires participants to imagine the target source as part of their lives. This might arguably add validity to the measure because participants rate likability in relation to themselves.

In the present study, individuals in videotaped clips were rated via the current scale. The clips varied with respect to whether or not the individual on the tape laughed. It was proposed that laughing individuals would receive higher likability scores. The prediction of higher scores on the current scale for individuals laughing was proposed to show convergent validity. The current scale was proposed to show divergent validity and not correlate with personality as measured by Goldberg's (1992) 100-Adjective Big Five Personality Test.

METHOD

PARTICIPANTS

A total of 150 California State University Fresno undergraduate students (44 men, 106 women) participated in this study for partial completion of an introductory psychology course credit. The mean age was 19.7 years ($SD = 2.4$).

PROCEDURE

Participants anonymously completed the 11-item questionnaire (Appendix A), aimed at measuring the likability of an individual in a stimulus videotape, 12 times. The tape contained clips of 12 individuals reading a gender-neutral paragraph from a children's story. While reading the paragraph the individuals in the videotape were either shown a humorous photograph to elicit real laughter, or shown no photograph and told to fake their laughter similar to their real laughter, or told not to laugh at all.

Experiment participants were randomly assigned to 1 of 3 groups, each seeing a videotape containing a different set of laughter conditions. For example, in group one, participants saw the first individual really laughing, while group two saw the same individual faking his laughter, and group three saw the individual not laughing. Each laughter condition contained two men and two women. The order of the individuals on the videotape was randomly assigned. The tapes were cropped so that participants could see only the individual's chest and face. The tapes were short, averaging around 30 seconds in length. The survey took approximately 2 to 3 minutes to complete.

Goldberg's 100-Adjective Personality Test was used to measure participant personality and to demonstrate divergent validity. The test has been shown to be a reliable (average coefficient alpha of .79) and valid measure of personality; pos-

itively correlated with the NEO and Hogan personality inventories (Goldberg, 1992). The Big Five is a 5-factor representation of personality. The five factors are: openness, conscientiousness, extraversion, agreeableness, and neuroticism. For a review of the Big Five see McCrae and Costa (1999).

RESULTS

Each question was scored using a 7-point Likert scale format, from 1 = *very strongly disagree* to 7 = *very strongly agree*. All 11 items were positively scored, with higher scores representing higher likability of the target individual. Due to the within-subjects design used, the scale was assessed for each laughter condition. With a total of four possible target individuals per laughter condition, 1 of the 4 target individuals' ratings was randomly chosen for each participant to include in a final analysis for that laughter condition. Two analyses were conducted for each of the three laughter conditions to determine if it was appropriate to sum the 11 items for a single index, and to determine reliability. First, internal consistency was assessed using Cronbach's standardized reliability coefficient. The resulting coefficients were .91 for the real-laughter condition, .91 for the fake-laughter condition, and .90 for the no-laughter condition.

TABLE 1
FACTOR LOADING AND ALPHA COEFFICIENTS IF THAT ITEM WERE DELETED FROM THE REYSEN LIKABILITY SCALE

Item	Alpha if Deleted			Factor Loadings		
	Real[a]	Fake[b]	No[c]	Real[a]	Fake[b]	No[c]
This person is friendly	.91	.91	.89	.70	.74	.78
This person is likeable	.91	.90	.89	.77	.85	.84
This person is warm	.91	.91	.89	.76	.71	.77
This person is approachable	.91	.90	.89	.72	.77	.78
I would ask this person for advice	.91	.90	.89	.71	.75	.80
I would like this person as a coworker	.90	.90	.89	.83	.83	.81
I would like this person as a roommate	.90	.90	.89	.82	.76	.74
I would like to be friends with this person	.90	.90	.89	.84	.82	.78
This person is physically attractive	.91	.91	.91	.63	.60	.45
This person is similar to me	.90	.91	.90	.79	.68	.64
This person is knowledgeable	.92	.91	.91	.55	.60	.50
Overall Alpha	.91	.91	.90			

Note: Responses for each item were on a 7-point Likert-type scale (1 = *very strongly disagree*, 2 = *strongly disagree*, 3 = *disagree*, 4 = *neutral*, 5 = *agree*, 6 = *strongly agree*, 7 = *very strongly agree*). *N* = 150.
[a] rating real laughter; [b] rating fake laughter; [c] rating no laughter

Second, a principal components analysis was applied to each condition. Using Cattell's scree criterion, the real-laughter condition yielded one factor. The factor accounted for 55.1% of the variance. The fake-laughter condition yielded one factor, accounting for 55% of the variance. The no-laughter condition yielded one factor, accounting for 52.9% of the variance. Factor loadings for each of the items and the alphas of each item were deleted for each condition are shown in Table 1.

To assess convergent validity, analyses were conducted to test whether or not laughter type (genuine, fake, or none) correctly predicted likability scores. The items were averaged and repeated-measures analyses of variance (ANOVAs) were conducted. A significant main effect was found for laughter conditions ($F(2, 150) = 30.67$, $p < .00$). Overall, participants rated individuals who laughed – genuine or fake – scored significantly higher on the likability scale than those who did not laugh.

To assess divergent validity, each subscale of Goldberg's 100-Adjective Big Five personality test was correlated with averaged ratings for each laughter condition, separately by gender of target person rated (see Table 2).

TABLE 2
CORRELATION BETWEEN RESPONDENTS' GOLDBERG'S BIG-FIVE 100-ADJECTIVE PERSONALITY
TEST SCORES AND THE REYSEN LIKABILITY SCALE

Big-Five Scale	Men ($N = 44$)			Women ($N = 106$)		
	Real	Fake	No	Real	Fake	No
Extraversion	.16	.04	.10	.03	.03	.07
Agreeableness	.18*	.16*	.04	.21*	.22**	.00
Neuroticism	.03	.07	.02	.12	.11	.01
Openness	.16*	.04	.00	.16	.03	.05
Conscientiousness	.00	.01	.08	.21*	.10	.04

Note: *p < .05, **p < .01

All correlations proved relatively weak. However, some significant correlations appeared. The agreeableness subscale yielded significant positive correlations when the person on the videotape was laughing. Divergent validity was found for four of the five Big Five subscales.

DISCUSSION

In this study evidence was provided for the reliability, and convergent and divergent validity of the Reysen Likability Scale. In this study, 150 participants rated 12 individuals using the current scale. The measure was found to be internally consistent, with one underlying factor. Laughter correctly predicted a person's likability rating which demonstrated convergent validity. The measure appears

accurate in measuring target individuals' likability. Divergent validity was shown using Goldberg's 100-Adjective Personality Test. Four of the five subscales resulted in small correlations with the current scale. The agreeableness subscale was positively correlated to higher ratings of genuine and fake laughter. *Agreeableness* has been defined as *a willingness to defer to others* (McCrae & Costa, 1999). This is understandable; the more agreeable people are, the more they are likely to rate the individual as likeable. This may show convergent validity while the other four subscales demonstrate divergent validity. Thus, the scale is valid.

Limitations in the present study include the sample type, concerns about self-reporting, and the use of repeated measures. As with most studies, the sample consisted of college undergraduates in an introductory psychology class only. Future researchers might extend the sample to provide greater external validity. The scale is not built to screen for socially desirable responding. However, low likability ratings for nonlaughing targets indicate participants were not answering according to social desirability. The method of anonymous testing also aids in eliciting truthful reporting. Lastly, the use of repeated measures complicated the statistical analyses. Future researchers might be well advised to simplify studies by avoiding repeated measures.

The current scale will aid future researchers by giving them a valid and reliable test of likability. The scale is fast and easy to administer. Future researchers may include identifying more factors associated with likability. For example, amount of smiling might also play a role in how much a person is liked. Overall, the scale seems to be measuring one factor: likability.

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APPENDIX A
Instructions: Circle how strongly you agree with each statement.

1. This person is friendly.

| Very Strongly Disagree | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Very Strongly Agree |

2. This person is likeable.

| Very Strongly Disagree | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Very Strongly Agree |

3. This person is warm.

| Very Strongly Disagree | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Very Strongly Agree |

4. This person is approachable.

| Very Strongly Disagree | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Very Strongly Agree |

5. I would ask this person for advice.

| Very Strongly Disagree | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Very Strongly Agree |

6. I would like this person as a coworker.

| Very Strongly Disagree | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Very Strongly Agree |

7. I would like this person as a roommate.

| Very Strongly Disagree | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Very Strongly Agree |

8. I would like to be friends with this person.

| Very Strongly Disagree | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Very Strongly Agree |

9. This person is physically attractive.

| Very Strongly Disagree | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Very Strongly Agree |

10. This person is similar to me.

| Very Strongly Disagree | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Very Strongly Agree |

11. This person is knowledgeable.

| Very Strongly Disagree | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | Very Strongly Agree |