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Understanding and Assessing Nonverbal Expressiveness: The Affective Communication Test

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The concept of nonverbal emotional expressiveness was explored through the development of a 13-item self-report Affective Communication Test (ACT). Studies reported here show the ACT to be a reliable and valid measure of individual differences in expressiveness or what is sometimes called "charisma." In the course of the validation, expressiveness was shown to be a likely element of social influence in face-to-face interaction, a logical extension of past approaches to a basic element of personality (exhibition), and a valuable construct in approaching current problems in nonverbal communication research. The measure (and the concept it represents) suggests a new approach for personality research on emotional expression, studies of individual differences in nonverbal communication, and research on the process of face-to-face interaction.

From common observation of slick and dull salespersons, charismatic and monotone politicians, impassioned and muttering clergy, and eloquent and wearisome professors, it is clear that there are marked individual differences in expressiveness. Although some of these differences are in verbal fluency, the essence of eloquent, passionate, spirited communication seems to involve the use of facial expressions, voice, gestures, and body movements to transmit emotions. Nonverbal communication modifies and extends verbal messages by allowing the quick, powerful, and yet subtle transmission of the affective elements so important to interpersonal relations (Argyle, 1975; LaFrance & Mayo, 1978). Expressive persons seem somehow to use non-

verbal cues to move, lead, inspire, or captivate others.

In psychology, the study of nonverbal expression of emotion has a long history, dating back to Darwin (1872/1965), who wrote that "the force of language is much aided by the expressive movements of the face and body (p. 354)." Almost all of this research focuses on issues of *recognition*, such as judgments of emotion from facial expression (Ekman, Friesen, & Ellsworth, 1972). Although individual differences in expressiveness could have important implications for recognition studies (if, e.g., an unexpressive person were chosen as the stimulus person to be judged), this factor has rarely been taken into account (cf. Buck, 1975, 1977). In recent years, methodological refinements have produced measures of an individual's ability to understand nonverbal communication (e.g., Rosenthal, Hall, DiMatteo, Rogers, & Archer, 1979) that have led to important approaches to the emotional subtleties of social interaction. However, there has been surprisingly little study and no standard measurement of the process complementary to nonverbal sensitivity, namely, nonverbal expressiveness.

Expressive people are easy to recognize but difficult to describe. Cult leaders may be said

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to succeed because of "charisma," and actors may be hailed as "spirited," but explanations usually go no deeper. Expressive people can transmit emotion and thrill or excite others, but the components and correlates of this ability are not known. This article addresses a number of basic questions concerning affective communication.

Part of the difficulty in understanding expressiveness arises from the conflicting frameworks of different researchers. In an attempt to approach the various aspects of expressiveness from one clearly defined perspective, we developed a self-report scale called the Affective Communication Test (ACT). Using this scale, the concept of expressiveness was explored through a series of validation studies, which constitute the main body of this article. As will be seen, expressiveness is strongly related to dramatic flair and has important implications for various aspects of personality and social psychology.

Research was undertaken in four main areas. First, pilot testing and reliability studies were conducted to determine whether a short and simple self-report scale was a practical approach to this topic. These efforts were encouraging, and so a full range of validity studies was conducted. Second, the relationships between nonverbal expressiveness and aspects of interpersonal relations were investigated. It was anticipated that expressiveness would be characteristic of people in certain occupations that involve social interaction and social influence such as sales, teaching, acting, and politics. Sex differences were also examined. Third, the links between expressiveness and traditional approaches to personality were explored. Following in the research traditions concerning personal expressive style and notions of needs or tendencies to excite or thrill others, we searched for personality trait counterparts to emotional expression. Fourth and finally, the ties between nonverbal expressiveness and nonverbal communication skills were studied. That is, videotape studies examined the link between expressiveness and acting (posed emotional sending).

In summary, this article reports the development of a brief paper-and-pencil measure of individual differences in nonverbal expres-

siveness. In the course of the validation, a number of important questions concerning the concept of expressiveness and its psychological implications were addressed. These include the social characteristics of expressive people, the personality of expressive people, and the relationship between expressiveness and laboratory research on individual differences in nonverbal communication skills.

Measuring Expressiveness

Although the idea of nonverbal expressiveness is an old one, the topic is not well researched. In part, it seems that the concept could not be scientifically studied until basic progress in understanding nonverbal communication occurred. Only in the past decade has systematic attention to facial expressions, gestures, and related cues created the conceptual climate prerequisite for a refined analysis of expressiveness. However, during the past decade, two additional factors have limited the study of expressiveness. The first factor is a certain degree of conceptual ambiguity. Expressiveness has been used to mean different things including acting ability, natural sending ability, communication ability, emotionality, femininity, extraversion, responsiveness, and empathy. The second factor is the absence of standard, convenient measuring instruments. Either ad hoc measures are created and definitions change accordingly, or the concept is ignored entirely. These two problems can be addressed through the development of a new measure of expressiveness.

On those occasions when nonverbal expressiveness has been studied, it has been generally necessary to employ a group of observers to function as judges or receivers. If the judges could recognize the emotion, the subject was said to be a good sender (e.g., Zuckerman, Lipets, Koivumaki, & Rosenthal, 1975). The use of judges is costly and unwieldy. Furthermore, judgments obviously vary as a function of the judges. The present research therefore attempted to develop a paper-and-pencil measure that is easily administered. Such a measure, if validated, could be usefully employed in a number of studies involving nonverbal communication,

especially when the use of judges is not feasible.

Since it is generally believed that nonverbal cues function mostly outside awareness, it seems possible that people may not know their own expressiveness. That is, if we are generally not continuously aware of such matters as whether our eyebrows are flashing, we may have little conscious knowledge of whether we are communicating emotion. However, most people receive feedback in social interaction and probably can report whether they can make a friend feel comfortable or entertained, whether they draw a lot of attention to themselves at parties, and so on. Thus, some self-report scales in this area such as Snyder's (1974) self-monitoring scale with items like "I have never been good at games like charades" (true-false) can reasonably be expected to show some validity. In fact, such self-report measures will likely prove useful in the short run as we attempt to gain a greater conceptual understanding of individual differences in nonverbal communication. It does make sense on a priori grounds to assume some self-awareness of expressiveness.

Pilot Testing

Our conception of expressiveness was first refined through pilot or preliminary testing. A number of psychologists and psychology students generated behavior-related self-report items that they thought would measure expressiveness. Items were administered to small groups of students, and those that were ambiguous or showed little variance were eliminated. Remaining items were administered to 32 students, and item intercorrelations were computed. A sample item was "The tempo of my voice remains the same, even when I am excited."

As a preliminary validity check, a short scale was constructed of items that led to high internal consistency and test-retest reliability, and the scores were compared to ratings of the subjects' expressiveness given by their teaching assistants; the correlations were encouraging. As desired, scores were also found to be related to the Exhibition scale of Jackson's (1974) Personality Research Form (PRF) (described later). Encouraged that

Table 1

The Affective Communication Test^a
Self-Description Questionnaire

-
1. When I hear good dance music, I can hardly keep still.
 2. My laugh is soft and subdued.
 3. I can easily express emotion over the telephone.
 4. I often touch friends during conversations.
 5. I dislike being watched by a large group of people.
 6. I usually have a neutral facial expression.
 7. People tell me that I would make a good actor or actress.
 8. I like to remain unnoticed in a crowd.
 9. I am shy among strangers.
 10. I am able to give a seductive glance if I want to.
 11. I am terrible at pantomime as in games like charades.
 12. At small parties I am the center of attention.
 13. I show that I like someone by hugging or touching that person.
-

* Directions may be obtained from the authors.

such a self-report scale could be reliable and valid, we proceeded to use the items on the preliminary scale as the basis for generation of a new pool of potential items.

Test Construction

Forty-six items were selected, and a self-report questionnaire was constructed. Several versions were made so that the order in which the items were presented was counterbalanced. Also, about half of the items were worded in the reverse direction so that a negative response indicated expressiveness.

College students were recruited to fill out the questionnaire, which consisted of 9-point response scales. Ambiguous items were then eliminated, and markedly skewed or low variance items ($M < 3$ or > 7 , $SD < 2.1$) were deleted from the scale. Interitem and item-total correlations were computed on the remaining items and a short, reliable scale was constructed. Items deleted at this final stage included: "I like to go to sad movies and cry," "I am photogenic (attractive in pictures)," and "I like to make speeches."

The ACT. The Affective Communication Test (ACT)¹ is a paper-and-pencil, self-report

¹ The ACT may be reproduced for research purposes without permission.

Table 2
*Descriptive Statistics for the Affective
 Communication Test*

Statistic	Sample 1 ^a	Sample 2 ^b
<i>M</i>	71.2	71.3
<i>Mdn</i>	71.1	71.3
Mode	69.0	68.0
Minimum	28.0	25.0
Maximum	114.0	116.0
<i>SD</i>	16.4	15.2
Skewness	-.1	.1

Note. Possible minimum = 13; possible maximum = 117.

^a *n* = 289. ^b *n* = 311.

measure of individual differences. It consists of 13 items. For each item the subject indicates on a 9-point scale from -4 to +4 the extent to which the statement is true or false as it applies to him or her. For example, the first item (which is answered on a scale of "not at all true of me" to "very true of me") is "When I hear good dance music, I can hardly keep still." (See Table 1.)

The ACT is scored by adding the scores on the individual items after first adding 5 points to each item (to eliminate negative numbers) and reversing the scores for the six items worded in the opposite direction. (Items 2, 5, 6, 8, 9, and 11 are reversed.)

The norms for the ACT from two large samples (of students) are presented in Table 2. Subjects in the first sample ranged in age from 16 to 53, with a mean age of 22.3 and 22% age 24 or older. The distribution of scores is symmetrical and of useful range.

The ACT was developed on and was expected to be used with college students primarily. However, for a short scale, the ACT turned out to be a better scale than expected. Given no evidence that the ACT is not valid with other populations, researchers should not refrain from the cautious use of the ACT with other groups of people.

Reliability

Internal consistency. Coefficient alpha for the 13-item ACT for a sample of 289 undergraduates was equal to .77. (This coefficient compares favorably with the Kuder-Richard-

son (K-R) 20 coefficient of .70 found for the 25-item self-monitoring scale; Snyder, 1974.)

Test-retest reliability. A sample of 44 students was administered the ACT on two occasions, 2 months apart. The test-retest correlation was .90 ($p < .001$). A second sample of 38 was given the ACT with a separation of one week between testings. The correlation was .91 ($p < .001$).

The reliability of the ACT is excellent, especially for a research tool (as opposed to a standardized, applied test) and one of such short length (cf. Nunnally, 1978, chap. 7).

Ratings by Friends: A First Validity Study

A primary means of validation for the ACT involved judgments by friends. It was anticipated that a person's friends would be knowledgeable about his or her expressiveness, even after allowing for the likelihood of differing definitions of the term *expressiveness*. Especially important is the fact that friends' ratings are relatively free of biases introduced by subject self-report measures.

Each of 68 undergraduates who had completed the ACT was given three rating forms with stamped envelopes and was instructed to distribute the forms to three friends. The instructions on the rating form directed the friend to complete the ratings *in private* and mail the form back directly to the experimenter. Complete confidentiality was assured; under no circumstances would the ratings be revealed.

The rating forms contained 9-point bipolar scales on which the friends rated the subject on the degree to which he or she is "expressive with face," "expressive with body," "expressive with voice," and would "make a good actor." These four questions were positively intercorrelated (r ranged from .48 to .69) and so were summed to provide a more reliable index.

At least one rating form was returned for 61 of the 68 subjects (90%); 56 subjects (82%) had two or three forms returned. The friends' ratings were averaged for each subject.

As desired, there was a significant and non-trivial relationship between the ACT scores and the ratings of expressiveness by subjects'

friends, $r(59) = .39$, $p < .01$. This correlation is especially impressive given the various sources of error introduced by such unavoidable factors as the imperfect knowledge of the friends, the fact that subjects selected their own raters (according to their own criteria), the probability that the friends may have tried to make the subject look good, and the small number of raters. The relationship held true for both males, $r(22) = .43$, and females, $r(35) = .30$. Thus, at the very least, the ACT captures some of what friends understand to be a person's degree of nonverbal expressiveness.

Although a short, self-report measure, the ACT seems valid in the sense that it reflects the perceptions of others concerning one's expressiveness. This is fortunate, since expressiveness is partly communication to others. Important, related validity questions thus concern whether the ACT is related to aspects of interpersonal relations. This matter is the topic of the next section of this article.

Expressiveness and Interpersonal Relations

It was hypothesized that expressiveness is the essential characteristic of those people able to move, inspire, or captivate others. Thus, the expressiveness measure (the ACT) should be able to predict such behaviors. In particular, we expected that expressiveness would be related to lecturing, political skills, theatrical experiences, influence and social interaction in various occupations, and certain other aspects of interpersonal relations. Nine questions on a questionnaire addressed these issues.

Lecturing. In a clever demonstration of the possible dominance of style over substance, Naftulin, Ware, and Donnelly (1973) seduced experienced educators into believing that they had learned worthwhile material from a lecture by "Dr. Fox" despite the fact that the lecturer had conveyed irrelevant, meaningless, and conflicting content, though in an engaging professional style. Since the words made little sense, it presumably was something about the nonverbal expressions of the lecturer that made an impression. Since expressive people probably tend to gravitate toward or to be selected for lecturing, we expected that the ACT would be related to

whether someone had ever lectured. Hence, students were asked if they had ever lectured to a group of people (Question 1).

Political charisma. That certain leaders exert influence through charisma or their gift to inspire others is an old and fundamental notion in sociology (e.g., Weber, 1968), but the *psychological* characteristics of charismatic leaders are little studied. Nonverbal expressiveness was hypothesized to be a component of the social skill called political charisma. Hence, subjects were asked directly whether they were or had ever been an elected official of any organization (Question 2).

Theatrical experience. It was expected that people who are nonverbally expressive would be more likely to have an interest in professional acting. Furthermore, it seemed probable that people with training and experience in stage acting would be more expressive. Thus, a key validity question involved acting training and experience. Subjects were asked whether they had ever had a major part in a stage play or show (Question 3) and whether they had ever taken an acting class (Question 4).

A different sample was asked about the extent to which they have been involved in acting or drama (on a 9-point scale from never to constantly involved; Question 5). (A validation study directly relating acting and the ACT using videotape is described later in this article.)

Social interaction in occupation. Although the people we studied were at least part-time students, about half held part-time jobs. It was thought that expressive people might select and be selected for employment that involved working with and influencing people. Subjects were asked what type of work they did presently (Question 6) and what they planned to do after college (Question 7).

Occupations were rated by four independent judges on a 5-point scale assessing the degree to which a given occupation required social skills. For example, counselors, ministers, diplomats, and insurance salesmen received a high rating, whereas cooks, geologists, forklift operators, and electronics assemblers received a low rating. The interjudge reliability, coefficient alpha (with judges as "items"), was .91.

Table 3
Expressiveness and Interpersonal Relations

Question	Overall			Males			Females		
	<i>r</i>	<i>df</i>	<i>p</i>	<i>r</i>	<i>df</i>	<i>p</i>	<i>r</i>	<i>df</i>	<i>p</i>
1 (lecturing)	.19	278	.001	.19	124	.05	.22	150	.01
2 (political charisma)	.20	286	.001	.25	130	.01	.12	151	.14
3 (stage show)	.23	277	.001	.26	125	.01	.21	147	.01
4 (acting class)	.33	286	.001	.32	129	.001	.33	152	.001
5 (acting experience)	.27	64	.03	small sample					
6 (occupation)	.27	162	.001	.39	71	.001	.16	86	.14
7 (future occupation)	.22	229	.001	.13	100	.19	.29	124	.001
8 (sales)	.14	282	.02	.25	125	.01	.06	152	<i>ns</i>
9 (labworkers)	.04	280	<i>ns</i>	-.05	126	<i>ns</i>	.11	149	<i>ns</i>

Note. For consistency, all effects are reported as *r* rather than some as *t*.

Salespersons. It was anticipated that effective salespersons would tend to be non-verbally expressive, especially those salespersons involved in face-to-face persuasion. Although none of the ACT items is directly related to persuasion, it seemed likely that emotional communication is an important element of many persuasive or captivating appeals. This line of thought was encouraged by a case study in which we sent an ACT to the number one Toyota salesman in the United States (an ad claimed), a man who had sold over 1,300 cars in 1 year. This top salesman scored 99, a very high score, suggesting that expressiveness is indeed characteristic of top salesmen.

In an attempt to examine persuasiveness systematically, subjects were asked whether they had ever worked as a salesperson whose job it was to convince people to buy something (e.g., used car or encyclopedia salesperson) (Question 8).

Labworkers. Finally, it was also expected that the opposite might be true of laboratory work. That is, it was predicted that students who spend a lot of time in scientific laboratories or interacting with a computer (as reported on a 9-point scale) would tend to be relatively low in expressiveness (Question 9).

Method

A questionnaire containing eight of the above nine questions was administered to 300 undergraduates, 54% of whom were females. A different sample of 68 students responded to Question 5. All students also completed the ACT.

Results

The results for the questionnaire studies of interpersonal relations are presented in Table 3. As predicted, expressiveness as measured by the ACT was significantly related to lecturing (expressiveness means of 74.8 vs. 68.6), political charisma (means of 74.2 vs. 67.8), stage acting, acting class, acting experience, occupation, future occupation, and sales in the expected manner. However, no association was found with time spent working in scientific laboratories.

Degree of Social Interaction: Physicians and Patients

It was expected that expressive people would tend to interact with lots of people or have many followers. One setting in which we could test this prediction with archival data (other than self-report data) involved physicians and their patients. In a family-practice clinic setting where each resident (physician) is responsible for certain families, the number of patients seen by a physician is considered a measure of the physician's popularity. Of course, patient load may be merely a measure of efficiency, but in many medical settings, there is consensus that certain physicians are always in demand.

Twenty-five family-practice residents (physicians) were administered the ACT. Each physician's patient load was measured as the sum over 6 months of the number of patient visits per month, corrected by the number of

days assigned to clinic work. Physicians in this setting were not required to see a pre-assigned number of patients.

The correlation between the ACT and popularity (patient visits) was .52 ($n = 25$, $p < .01$). Thus, expressive physicians were more likely to have a greater number of patients.

Sex Differences

Although the evidence is not overwhelming, past research has tended to find that adult females are slightly more expressive (in the sense of better communicators of emotion) than adult males (Buck, Miller, & Caul, 1974; Hall, 1979; see also Hoffman, 1977, regarding empathy; Hall, Note 1).

In the construction of the ACT, individual items were not examined for the existence of sex differences. However, sex differences on the ACT emerged. In one sample of 132 males and 155 females, the mean scores were 69.1 and 72.8, respectively, $t(285) = 1.9$, $p < .07$; $r = .11$.² In a second sample of 137 males and 174 females, almost identical means were found, 69.8 for males, 72.6 for females, $t(309) = 1.7$, $p < .11$; $r = .09$. (All p values are for two-tailed tests.) Thus, the ACT is consistent with research showing slightly more expressiveness for females and provides some further evidence for this phenomenon. It should be noted that this finding is in contrast to the observation that women tend to score lower than men on extraversion (Eysenck & Eysenck, 1968a, 1968b).

Evidence of sex differences in nonverbal communication raises a number of challenging questions concerning socialization and the nature of masculinity-femininity (e.g., Buck, 1977; Hall, 1979). For example, it may be the case that boys learn to mask their emotional expressions. The findings of the present research program encourage further efforts in these directions. In the present article, results are reported separately for males and females when sex differences appear of possible importance.

Discussion

The ability to inspire or captivate others is important to various occupations. For exam-

ple, such skills seem important for effective leadership and teaching. On the other hand, such qualities seem to characterize effective quacks and charlatans of all kinds. A better understanding of emotional communication is necessary for addressing both sides of the coin.

The ACT examines such notions as "slickness" and "charisma" in terms of individual differences in nonverbal emotional expressiveness. The results thus far are encouraging. The ACT could reliably distinguish people on a number of dimensions of social interaction. By reducing vague notions like slickness to measurable differences in communication, constructs such as expressiveness can provide the basis for systematic research into important questions concerning the role of emotion in interpersonal relations.

Although expressiveness definitely seems related to social interaction and influence, it may be that another dimension such as Machiavellianism is actually accounting for the observed relationships. Therefore, we next undertook the study of the correlation between the ACT and other more traditional personality measures.

Expressiveness and Personality

Nonverbal expression has long been linked to personality through the notion of personal expressive style. In fact, many of the ACT items have been suggested by one or more writers over the years as an important element of personal style. For example, the item concerning laughter ("My laugh is soft and subdued") was singled out by Murphy (1947) who referred to "the rippling or stifled quality of the laughter" (p. 633) as an element of personality.

Since Allport and Vernon (1933) identified a general factor of expressive movement called *emphasis* (voice intensity, movement during speech, writing pressure), there have been scattered studies encouraging pursuit of the present line of research. Allport (1961)

² Correlation coefficients (r) with categorical variables (dummy coded) are reported to provide a measure of strength of association that can be readily compared to the many other correlations reported in this article.

repeatedly stressed the importance of paying sufficient attention to the expressive aspect of behavior (*how* we are doing something), instead of only studying the coping aspect of behavior (*what* we are doing). However, Allport was interested in all aspects of expressive style, from dancing to handwriting, rather than in emotional communication.

Like many of his contemporaries, Murray (1938) analyzed psychological behavior in terms of drives or needs—desires for mental or emotional satisfaction. One of the basic needs was called *exhibition*. This need was seen as related to ambition and accomplishment but in the sense of emotional communication—a need to excite, amuse, stir, shock, or thrill others. Jackson's (1974) Personality Research Form, developed from Murray's system of needs, also included exhibition as a basic element of personality, but it was seen as a trait. People high on exhibition are colorful, spellbinding, noticeable, expressive, dramatic, and showy. Thus, exhibition was expected to be highly related to the ACT. It is important to note that the present research attempts to continue study of this basic aspect of personality by viewing exhibition not as a need or a trait but as a communication—specifically the nonverbal communication of emotion. Thus, attention is shifted to interpersonal interaction, that is, how one person may stir or excite others.

Related research concerning expressiveness and personality has been conducted in the context of the internalizer–externalizer dimension (Buck, 1975, 1977; Buck et al., 1974). (For an integrative review of this personality research, see Buck, 1979.) In this paradigm, a sender is shown arousing stimuli, and expressiveness is defined in terms of the accuracy of a hidden observer in judging the spontaneous nonverbal expressions of emotion. Expressiveness so defined has been found to be correlated with being rated as sociable, talkative, and emotionally open but also with being impulsive and dominating. A similar pattern of correlations was found in a research program that defined expressiveness in terms of posed or acted emotional communication (Friedman, DiMatteo, & Taranta, in press). Good “actors” were also dramatic, adventurous, dominant, impulsive, and playful (as

measured by the PRF). Such robust findings indicate that emotional responding may be a key element of personality. Thus, it was expected that the ACT might show a similar pattern of relationships to other personality traits, specifically to the relevant traits of the Personality Research Form.

Two other broad, pervasive dimensions of personality of probable relevance to expressiveness are extraversion–introversion and neuroticism–stability (Eysenck & Eysenck, 1968a, 1968b). Extraverted people (outgoing, impulsive, and uninhibited) do not tend to keep their feelings under tight control. Expressiveness is certainly not identical to extraversion, but they may be related in that people who communicate emotions well to others seem to be more likely to be sociable and express feelings. People high on (Eysenck & Eysenck's, 1968a) neuroticism are emotionally labile and overresponsive. Such neurotic people might also be expressive if it is high emotional responsivity that underlies expressiveness. However, emotionally responsive and unstable people are not necessarily good at communicating emotion to others.

Based on the Murray (1938) and Jackson (1974) formulations, expressive people (high on ACT) were expected to be colorful and dramatic but not emotional, touchy, or moody. Expressive people are conceived of as being outgoing and sociable rather than thoughtful and controlled and as active and impulsive rather than anxious and sober. Thus, ACT was expected to be positively correlated with extraversion and uncorrelated or negatively correlated with neuroticism.

Other Measures of Convergent and Discriminant Validity

It is important to ascertain the relationship between the ACT and other common, reliable personality tests both to establish the discriminant validity of the scale and to gain a clearer understanding of the concept. These other scales of interest were the Marlowe–Crowne Social Desirability Scale, the Machiavellian Scale, the Taylor Manifest Anxiety Scale (TMAS), the Rotter Internal–External (I–E) Locus of Control Scale, the Cooper-Smith Self-Esteem Inventory, and the Snyder

Self-Monitoring Scale. Predictions, if any, concerning correlations between these scales and the ACT are mentioned as the results are presented.

Method

Two groups of subjects, all college students, were used to study the relationship between the ACT and personality. The first sample consisted of 76 students who volunteered as a means of satisfying a course requirement. They participated in small groups and were administered the following measures: the Exhibition and Affiliation scales of the PRF, the Marlowe-Crowne Social Desirability Scale, the TMAS, the Coopersmith Self-Esteem Inventory, the Machiavellianism scale, the Rotter I-E scale, the Self-Monitoring Scale, and the ACT.

The second sample, 31 males and 37 females, was part of a study involving videotaping (see later). In the first of two sessions, they were administered the full Personality Research Form, the Eysenck Personality Inventory, the Self-Monitoring Scale, and the ACT.

Results

ACT and the Personality Research Form

The ACT was expected to be highly though not perfectly correlated with the personality trait *exhibition* and to show a predicted pattern of relationships with other PRF traits. The correlations between the ACT and the PRF are shown in Table 4. Individuals scoring highly on the ACT also were high on exhibition and tended to be affiliative, dominant, and somewhat achieving, playful, and not socially proper. ACT scores were not related to impulsivity.

To a striking degree, the pattern of correlations that emerged parallels the findings of previous research that used actual observations of expressiveness. The observed pattern thus further validates the ACT and increases our confidence that expressiveness can be viewed as related to certain basic elements of personality.

ACT, Extraversion, and Neuroticism

The correlations between the ACT and the Eysenck Personality Inventory are also presented in Table 4 (bottom). As expected, the ACT and extraversion were correlated. The

ACT and neuroticism were slightly negatively correlated, suggesting that expressiveness is not due to emotional responsiveness. These findings are consistent with those of Cunningham (1977).

Other Measures

Social desirability. As a measure of expressiveness, the ACT should not be highly related to social desirability, a tendency to describe oneself in favorable ways (Crowne & Marlowe, 1964). However, the ACT is also a self-report scale with some items that seem to reflect popularity, a socially desirable attribute. The correlation between ACT and social desirability was .22 ($N = 76$, $p < .06$). Thus, ACT does contain a small element of social desirability.

Machiavellianism. Machiavellianism, or the tendency to manipulate others for selfish reasons, might be thought to be related to expressiveness, since the nuances of face-to-face communication are central to both concepts and both involve an element of ambition (cf. Christie & Geis, 1970). On the other hand, communication does not necessarily seem to be related to desire to manipulate; for example, salesmen and politicians may be manipulative without being charismatic or charismatic without being manipulative. The correlation between the ACT and Machiavellianism was .08 ($N = 71$, *ns*). The ACT does not seem to encompass any element of manipulative intent.

Manifest anxiety. Trait anxiety (Taylor, 1953) was not expected to be related to ACT, although it might be suggested that very anxious people are emotionally expressive. The ACT was found not to be related to the TMAS ($r = -.17$, $N = 76$, *ns*).

Internal-external locus of control. An individual's belief that he or she is or is not the master of his or her own fate (internal vs. external control; Rotter, 1966) was not expected to be strongly related to expressiveness. The correlation with ACT was $-.28$ ($N = 76$, $p < .05$). Individuals with an internal locus of control tended to be more expressive. This correlation was not predicted but may be related to social influence; some people

Table 4
Personality and the Affective Communication Test (Correlations)

Scale	Sample			
	1 (<i>n</i> = 68)	1 (males) (<i>n</i> = 31)	1 (females) (<i>n</i> = 37)	2 (<i>n</i> = 76)
Jackson PRF				
Achievement	.28*	.30	.28	
Affiliation	.42***	.44*	.34*	.40***
Aggression	.10	.18	.09	
Autonomy	-.03	-.13	.19	
Dominance	.45***	.48**	.45**	
Endurance	.15	.05	.24	
Exhibition	.60***	.49**	.76***	.62***
Harm avoidance	-.11	-.03	-.29	
Impulsivity	.13	.02	.23	
Nurturance	.21	.37*	-.04	
Order	.05	.17	-.16	
Play	.24*	.27	.24	
Social recognition	-.27*	-.26	-.32	
Understanding	.07	.22	-.03	
EPI				
Extraversion	.52***	.55***	.46**	
Neuroticism	-.26*	-.45*	-.11	
Lie	.03	.04	.00	

Note. PRF means Personality Research Form; EPI means Eysenck Personality Inventory.

* $p < .05$. ** $p < .01$. *** $p < .001$.

may feel both that they want to and can captivate those around them.

Self-esteem. Self-esteem, an individual's judgment of his or her worth (Coopersmith, 1967), was not expected to be strongly related to expressiveness. The correlation between the ACT and the Coopersmith Self-esteem Scale was .27 ($N = 75$, $p < .05$). Individuals with a high self-esteem tended to be more expressive.

Although the correlations between the ACT and manifest anxiety, locus of control, and self-esteem were all small, together they suggest that expressive people may tend to be better adjusted interpersonally, a finding not inconsistent with the results reported earlier concerning interpersonal skills.

Expressiveness and Self-Monitoring

One of the few sound attempts to measure the performance aspect of expressiveness is the research on *self-monitoring* undertaken by Snyder (1974, 1979). The paper-and-pencil Self-Monitoring Scale (SMS) attempts to dis-

tinguish people on the basis of whether they are concerned with the social appropriateness of their affective behaviors, whether they can tell what behaviors are appropriate in a social situation, and whether they can and do express appropriate affects and conceal inappropriate feelings. Although research has shown the SMS to be of value when issues of self-presentation are involved (Snyder, 1979), several studies have shown little relationship between sending ability and the SMS (Cunningham, 1977; Zuckerman, Hall, DeFrank, & Rosenthal, 1976).

It is important to distinguish self-monitoring from the concept of nonverbal expressiveness. Self-monitoring is a multifaceted hypothetical construct whose central components involve issues of intent, perceptiveness, deception, and appropriateness. Thus, the scale includes items such as "I would not change my opinion (or the way I do things) in order to please someone else or win their favor" (true or false), and "I may deceive people by being friendly when I really dislike them." However, expressiveness as defined in the pres-

ent context refers more basically to communication than monitoring. A loud-mouthed boor might be low in self-monitoring but high in expressiveness. A shy adolescent might be sensitive to what he or she does and what others think but unable to communicate effectively. Nevertheless, to some extent the concepts of self-monitoring and expressiveness overlap. A stage actor might be high and a schizophrenic low on both.

The correlation between the two paper-and-pencil scales, the ACT and the SMS, was investigated in two samples by giving students both scales during the same testing session.

Expressiveness (ACT) seems only slightly related to self-monitoring. In one sample of 68 subjects, the correlation was .21 (*ns*), small but positive. A second sample showed similar results ($r = .14$, $N = 76$, *ns*; males, $r = .09$; females, $r = .19$). Expressiveness seems to have little to do with the desire and ability to control one's communications so that they are appropriate. This finding may be seen as consistent with those reported earlier showing expressiveness to be related to exhibition, dominance, and extraversion.

Discussion

As a psychometric instrument (a personality test) the ACT does well, particularly given the limitations of an economical self-report measure. It seems that expressive people may in general be enthusiastic but uncontrolled. That is, they may tend to express their feelings comfortably, effectively, and with disregard for social conventions.

On a priori grounds, it seemed likely that some high correlations would be found between expressiveness and certain personality traits. For example, there is increasing evidence that extraversion is related to a number of nonverbal behaviors. One might be tempted to conclude that we are "only" measuring extraversion or exhibition. But for a number of reasons, such correlations are encouraging rather than troubling. In the first place, such correlations were not and will not be perfect; it is assumed that expressiveness will ultimately prove a more reliable and valid construct for many purposes. But that is an empirical question. More important is the idea

that expressiveness is a social interactional counterpart of certain traits. It is not necessary to think about cause and effect until a finer understanding is achieved. Does an extravert become expressive, does an expressive person become an extravert, or do the two concepts develop from the same underlying forces? The possibility of such questions refreshes our traditional concept of traits.

Expressiveness and Nonverbal Communication Skills

Recent years have seen increased attention to individual differences in nonverbal communication skills (e.g., Rosenthal, Note 2). As mentioned earlier, this work has often begun with traditional personality variables, but it has been extended to the areas of emotional control and social perception. A major goal of such research is an understanding of the structure of nonverbal communication abilities, paralleling the search for a structure underlying personality traits (e.g., Cunningham, 1977).

Although the ACT was developed to address broad issues in the definition and social importance of expressiveness, it is also a new measure of individual differences in a nonverbal communication ability. Hence, the relationship between the ACT and acting ability or posed emotional sending (as determined by the accuracy of judges' ratings) is of special interest.

Acting

Actors and acting have been of great intellectual interest ever since the origins of theater in ancient Greece over 2,000 years ago. However, as Miller (1972) points out, it is not the playwright's words but rather the actor's addition of *nonverbal* cues to the lifeless verbal scripts that is the essence of theater. Part of a stage actor's skill is the ability to portray another person. However, different from this aspect of acting and closer to our present concerns is what is often called *interpretation*. This process involves the rendering of a part to bring out the meaning in one's own personal way. To some extent all social life may be seen as the playing of

social roles, and the management of one's face and voice is the key to dramaturgical discipline (Goffman, 1959). In many social interactions interpersonal success or failure depends on one's ability to bring out the full meaning of one's thoughts and feelings through appropriate nonverbal expressions.

Is expressiveness related to acting ability? As Izard (1977, p. 82) points out, awareness of emotional expression is a matter of degree, a continuum from voluntary to involuntary. He notes that persons expressing sympathy or children exaggerating distress generally do not have complete awareness and voluntary facial control. In such cases, it is difficult to distinguish acting from expressiveness. Furthermore, since proprioceptive feedback from the face is so closely tied to emotion, feeling may easily become relevant to cases of voluntary (posed) expression. This is not to say that some people in certain situations cannot "put on a happy face" that has no relationship to the times they involuntarily express the emotion happiness, but only that present evidence suggests that voluntary and involuntary expressiveness may be substantially related in many situations. Recent research has found moderate to large correlations between posed sending and spontaneous sending (Cunningham, 1977; Zuckerman et al., 1976).

The expected relationship between expressiveness (as measured by the ACT) and acting ability (posed emotional sending) is influenced by conflicting factors. On the one hand, professional actors and those who would make good actors do often seem both emotionally expressive and able to act or communicate emotion at will. On the other hand, all expressive people would not make good actors. For example, an expressive preacher such as Billy Graham may be able and willing to communicate joy when he is joyful but unable to communicate joy when he is angry or depressed. On the contrary, an expressive person may be one who tends to communicate accurately whatever emotion he or she is experiencing.

There is evidence that females are better than males at communication through posed emotional expression (Zuckerman et al., 1975) and that preschool boys learn to inhibit their natural overt emotional expressions

(Buck, 1977). There are probably substantial socialization factors affecting expression. Although there are obviously individual differences in expressiveness among both males and females, different relationships between the ACT and posed emotional sending for the sexes might be expected. Therefore, the present research used both male and female actors (senders) and analyzed the results separately for males and females.

Method

Subjects and Recruitment

The subjects or actors were 37 female and 31 male undergraduate students. To insure a wide range of ACT scores, we drew from a population that had been pretested on the ACT and recruited students from each decile of ACT scores. Each subject participated in two sessions, a personality testing session (described earlier) and a videotaping session. Subjects gave their informed consent to be videotaped and were paid for their efforts. People with serious speech or physical impairments that might influence aspects of their expressiveness were excluded from study.

Procedure

The subject entered a large, partitioned studio containing Sony $\frac{1}{2}$ -in. videotape recorders and black and white cameras; video monitors were hidden from view. The subject engaged in a period of natural interaction and then certain role-playing exercises in front of the cameras (as part of a different study) and so was somewhat accustomed to being taped by the time the present study began. One male and one female experimenter conducted each session.

The subject was seated in a chair about 8 ft. (2.4 m) from the camera, which was focused on his or her head and shoulders. Sound was recorded by a Sony EMC-16 microphone attached to the subject's collar. Subjects were told that this research involved an investigation of how people express emotions even when not necessarily feeling the emotion. Subjects were to imagine that they were communicating an emotion to another person and to then try to express that emotion. Since we were interested in nonverbal expression, the verbal content of the communication was held constant. This was accomplished in one of two ways. On some trials, the subjects tried to communicate emotion while saying one of two verbally neutral sentences. These sentences were "I haven't seen you for a while" and "Do you really want to do this?" Although such standard content sentences are relatively natural, it was thought that the words might sometimes interfere with certain emotional communications. Hence, on other trials,

the subjects endeavored to express emotion while saying part of the alphabet, "A, B, C, D, E, F, G."

Seven categories of emotion were employed (cf. Ekman et al., 1972). These were happiness, sadness, anger, disgust, surprise, fear, and neutral.

Each subject was given a set of 21 cards, which contained the combinations of the two sentences and the alphabet with the seven emotions. The order of presentation was counterbalanced across subjects. The subject was instructed to read aloud the emotion printed at the top of the card, think about the emotion, look into the camera, and say the sentence while expressing the emotion. The camera was left operating, and the subject proceeded at his or her own pace until all 21 communications had been expressed.

Judgments

To determine the actors' (subjects') abilities to communicate posed emotion accurately, their attempts were shown to naive raters (judges). The acting was divided into three parts, the first content standard sentence, the second content standard sentence, and the alphabet. The acted segments were then edited onto three separate stimulus videotapes. Each segment was 3 sec long and there were 4.5 sec for judging. Each stimulus tape was about 1 hour long with the approximately 475 segments (68 actors \times 7 emotions) in random order.

Judges were instructed to decide which emotion the person on the videotape was expressing in each segment. They did so on an answer sheet that listed the seven possible emotions for each segment. Judges viewed the tapes in small groups. They were instructed to judge each segment independently and to avoid showing any reactions of their own. To increase motivation, a cash prize was promised for the best (most accurate) judges.

Reliability of judges' ratings. To insure that judges tended to agree with each other and thus form a reliable scale, each judge was assigned a 0 or 1 as to whether the emotion was correctly judged for each trial, and the reliability statistic K-R 20 was computed for the judges involved in rating the second sentence (treating judges as items). As desired, the judgments were reliable: K-R 20 = .89. (The first and second sentences were judged by 26 students each. Seventeen students judged the alphabet sending.)

Dependent Measure

As in previous research, the actors' sending abilities were defined as the proportion of judges who correctly identified the emotion intended. However, a question arose concerning the issue of emotion categories (cf. Ekman et al., 1972; Friedman, 1979). Untrained judges will often confuse certain similar emotions and emotion labels. For example, disgust might be seen as anger. Such a judgment is correct in the sense that the communication is not seen as

being in a very different category of emotion such as happiness or surprise. We assumed such confusion was at work in this study, since the overall level of communication accuracy in preliminary analyses was around 35% rather than at the 60%-70% level expected on the basis of previous research. A table of judges' errors confirmed that certain systematic, common confusions were being made. Thus, we scored a judgment as correct if it was happiness or surprise when happiness was expressed, surprise or happiness when surprise was expressed, anger or disgust for anger, disgust or anger for disgust, and fear or surprise when fear was expressed. Sad was confused with several related emotions, and so only a judgment of sadness was considered correct.

Results

The correlations between abilities to send the various emotions accurately were consistently positive but sometimes low. Hence, correlations with the ACT were computed separately for each emotion as well as using total (sum) sending scores. Multiple regression analysis was also employed but was limited in utility by the relatively low subject-to-variable ratio.

The correlation between posed sending ability on Sentence 1 and on Sentence 2 for the seven emotions ranged from .36 to .69 ($Mdn = .55$). For total posed sending, the correlation between the two sentences was .84. Thus, people who could express emotion when saying the first sentence also could do so when saying the second sentence; therefore, the two scores were averaged to provide a more stable estimate of posed sending ability. Alphabet sending was considered separately.

The means and standard deviations for posed sending accuracy showed that untrained subjects had substantial ability to enact or pose emotions to a camera in such a way that judges would later be able to identify the correct emotions. It was also apparent that there was substantial variation in ability.

An interesting place to begin consideration of the substantive findings concerns the communication of neutral affect. If the ACT is measuring emotional expressiveness rather than self-control, a reversal should occur on the expression of neutral affect with standard content sentences. That is, people low on the ACT should score high on (do well at) expressing neutral, since they are generally more neutral. On the other hand, highly expressive

Table 5

Correlations Between the Affective Communication Test and Posed Emotional Sending Abilities

Variable	Emotion							Total including neutral	Total excluding neutral
	Happy	Angry	Sad	Surprised	Disgusted	Fearful	Neutral ^a		
Content standard sentences									
Total sample	.12	.12	.16	.17	.08	.13	.22*	.22*	.18
<i>N</i>	68	68	68	68	66	67	66	64	65
Males	-.13	-.02	.10	-.15	-.15	.00	.18	-.07	-.09
<i>n</i>	31	31	31	31	30	30	30	29	29
Females	.35**	.15	.23	.51***	.22	.24	.16	.47***	.42***
<i>n</i>	37	37	37	37	36	37	36	35	36
Alphabet									
Total sample	.07	.13	.06	.20	.30**	-.00	.02	.26**	.24*
<i>N</i>	68	67	68	67	68	67	67	65	65
Males	.02	-.04	.09	.10	.28	.06	.15	.08	.13
<i>n</i>	31	30	31	30	31	30	30	28	28
Females	.03	.24	.06	.27*	.23	.06	-.07	.26	.26
<i>n</i>	37	37	37	37	37	37	37	37	37

^a Neutral is scored in the reverse direction; a high number means subject is poor at sending "neutral" (i.e., is expressive).

* $p < .10$. ** $p < .05$. *** $p < .01$.

people will likely express their feelings of the moment even when asked to be neutral. Such was the case. There was a negative correlation, $r(64) = -.22$, $p < .08$, between subjects' scores on the ACT and judges' detection of "neutral" being expressed. Expressive people had a relatively difficult time appearing neutral. In subsequent analyses the scoring of neutral was reversed and totals were computed with and without neutral.

The correlations between expressiveness (as measured by the ACT) and posed emotional sending are presented in Table 5. Overall, the ACT is positively correlated with acting abilities, but the effects are small.

Striking sex differences emerged. For females, a strong relationship, even stronger than expected, emerged between the ACT and acting ability. But for males the correlation was zero or was even slightly negative. Males did vary in their ACT scores and in their posed sending ability, but the two were not related. It is possible that the males in this study were atypical in their acting ability. Or perhaps males were unwilling to act in this situation despite apparent cooperation. However, it may be that males who are not gen-

erally expressive have nevertheless acquired the skill to pose certain emotions when necessary. Or, assuming social norms for males inhibit the cultivation of expressiveness, expressive males, embarrassed because they have not been successfully socialized to be unexpressive, may be especially nervous when asked to show certain emotions in front of a camera. Thus, this finding again raises many of the challenging questions concerning expressiveness and socialization that have emerged in recent years. The major question as to whether expressiveness is related to posed emotional sending ability must for now be answered yes for females but apparently not for males. These correlations between the ACT and acting scores for females are high for this type of research: A short self-report test is predictive of ability to accurately pose emotion as determined by judges' assessments of short videotaped communications.

These data were further explored with multiple regression analyses. Due to the relatively small number of cases (subjects), regressions were limited to three predictor variables. Relevant equations with standardized beta weights are presented in Table 6. The results

were the same: The ACT is clearly positively related to posed emotional sending, but the effects are small to moderate and differ between the sexes.

Discussion

Expressiveness was clearly related to acting ability, although the relationship was not strong. Expressive people do seem better able to communicate posed emotion. The fact that the relationship was clear only for females raises a number of questions for future research. The ACT was established as valid for males in the studies of friends' ratings, social success, and personality correlates; something seems special about acting. If this sex difference is replicated in future research, a central substantive question would seem to be whether expressiveness and acting naturally are correlated unless separated by sex role socialization practices, or whether special aspects of the environment serve to produce the correlation within females (cf. Buck, 1977; LaFrance & Mayo, 1978, chap. 12).

The fact that a self-report paper-and-pencil test could predict judges' ratings of people's brief emotional communications to a camera is an element of validation for the present approach. However, it is also now more apparent that expressiveness is in no way synonymous with acting ability.

General Discussion

Charisma is usually defined as a special ability and desire to inspire, lead, or elicit the devotion of others. Although there have always been charismatic characters involved in selling, governing, or entertaining, the concept seems especially important in our age of mass telecommunications. However, it has received little study. The research program reported in this article set out to explore the communication of emotions from the perspective of individual differences in nonverbal expressiveness. It can be concluded that much of what is meant by charisma can be understood in terms of expressiveness. The source of charisma, such as that of a charismatic cult leader, is often claimed to be the personality and needs of the followers or the social structure of the leader-follower relationship. The present conception shifts attention to the nonverbal communication of the leader.

By way of the validation studies, the focus provided by the ACT has led to a refined understanding of the concept of expressiveness. That is, simultaneous attention to the social, personality, and nonverbal skill correlates of expressiveness has produced a balanced picture of the construct. For example, the relationship of the ACT to theatrical experience, social influence, lecturing, political charisma, and so on, points to the importance of emotional communication in such matters

Table 6

Three Predictor Variable Multiple Regressions: The Affective Communication Test (ACT) on Posed Emotions

Item	R	Adjusted ^a R ²
Allowing "neutral" as a predictor		
Sentences: ACT = .24 Neutral + .19 Surprise + .16 Sad	.35	.08
Alphabet: ACT = .32 Disgust + .14 Surprise + .13 Neutral	.37	.09
Not allowing "neutral" as a predictor		
Sentences: ACT = .19 Sad + .23 Surprise - .10 Disgust	.27	.03
Alphabet: ACT = .32 Disgust + .15 Surprise - .08 Anger	.36	.08
Sentences separately by sex (not allowing "neutral")		
Males ACT = -.40 Disgust + .22 Anger + .14 Sad	.32	.00
Females ACT = .58 Surprise + .33 Sadness - .13 Anger	.60	.30

^a Adjusted R² is a more conservative estimate of the percentage of variance explained; it takes account of the number of predictors and the number of cases.

but also raises the possibility that expressiveness is sociability, has a manipulative element, and/or is a function of acting ability. However, the personality and videotape measures indicate that expressiveness cannot be equated with manipulative ability, anxiety and emotionality, or pure acting ability. And it is not mere sociability. Rather, expressiveness is more closely related to a healthy dramatic flair, a desire to excite or captivate others. Furthermore, the fact that expressiveness seems related to but by no means identical with ability to pose emotions suggests that increased care must be taken when the term *sending ability* is used in nonverbal communication research.

Indeed, one of the most important conceptual clarifications that has emerged from the present research concerns the meaning of the term *sending ability*. At times, sending ability has been seen as social skill, controlled by conscious intent, involving the putting on or disguising of one's feelings to manipulate others. At other times, sending ability has been viewed as some sort of natural window through which one accurately reveals one's feelings. The present studies clarify one important sense of sending ability. Expressiveness is closely related to Murray's (1938) concept of exhibition. It is in part a need to make an impression, a desire to be seen and heard. Yet, it is more than a need; it is also the ability to succeed in this ambition through communication. Expressiveness is more closely related to exciting others than to manipulating others. Although it does involve the transmission of emotions, there is also a strong element of interpersonal success involved. Thus, this refined conception sheds light on both older, vague notions like charisma (with which expressiveness seems closely related) and newer precise concepts like self-monitoring (with which expressiveness is not closely related).

Implications

A number of promising applications may result from a focus on the construct of expressiveness, especially in terms of individual differences.

First of all, nonverbal expressiveness seems

to have implications for the self-attribution of emotion (Schachter, 1959; Schachter & Singer, 1962). In times of anxious uncertainty, people may look to others for labels for their internal arousal. Which others do they look to and which people have the greatest influence as standards for social comparison? The notion of individual differences in expressiveness encourages research into such matters.

A second and related implication emerged from some of our laboratory sessions. In this and related research, we often ask groups of judges to view and rate various videotapes. In some of these sessions, the judges are serious and dedicated, whereas in others a feeling of boredom sometimes develops, despite efforts to control such error variance. In conducting these sessions, we generally give the ACT to all the judges. We have noticed through informal observation that the tone of the judging session seems to be heavily influenced by the feelings (positive or negative) of the high ACT person in the group. This informal observation suggests that expressiveness may also be important to the spread of emotion through a group. Collective behaviors such as panic (Smelser, 1962) depend on social comparison and emotional communication and may be encouraged or discouraged by the presence of expressive people at key positions in the group.

The construct of expressiveness also has various implications for the study of the dynamics of individual differences. There is increasing evidence that emotional expressiveness is systematically related to various dimensions of personality including exhibition and extraversion and is itself an important aspect of personality. Although such notions have a long history in personality psychology, they take on a new vitality with the modern focus on nonverbal emotional *communication* rather than on needs or traits. This new conception also helps blur the distinction between personality and social psychology as attention is directed to the effects of differences in expressiveness on interactions with others.

A good example concerns the effect of one person's expectations on the other person's behavior, a major topic of research in psy-

chology and education. The provocative research of Rosenthal (1976; Rosenthal & Jacobson, 1968) has shown that experimental subjects may act to fulfill their experimenters' expectations, and students may sometimes progress according to their teachers' expectations. Although the expectancy effect has been replicated many times, it has also often failed to replicate (Rosenthal, 1976; Rosenthal & Rubin, 1979). Because of the important implications of this effect for education and scientific inquiry, it is desirable that the precise mechanism(s) underlying the expectancy effect be identified so that its occurrence can be predicted and controlled. At present, a promising explanation seems to involve subtle transmission of expectancies through nonverbal communication (e.g., Zuckerman, De-Frank, Hall, & Rosenthal, 1978). Thus, we might predict that experimenters or teachers who are nonverbally expressive should be better able to communicate their approval or disapproval to their subjects or students. It has been almost impossible to test this explanation systematically without a convenient measure of expressiveness. With such a measure, investigators of expectancy can routinely test for a strengthening of the effect among expressives, that is, use the ACT as a blocking variable.

In the clinical literature, an important factor influencing the success of treatment is the therapist's empathy (e.g., Truax & Carkhuff, 1967). Empathy is defined in different ways by different investigators, but one common element seems to be the clinician's ability to express nonverbally his or her feelings and understanding to the client (Smith-Hanen, 1977). Although definitions of empathy involving one's ability to take the role of another may be theoretically important, a good deal more research is needed on the actual communication processes in an empathic relationship. Expressiveness, with its focus on emotional communication, may help provide this emphasis.

Finally, the construct of expressiveness and the ACT may be of use in enhancing personality research on nonverbal communication skills. With the recent proliferation of studies of individual differences in nonverbal commu-

nication (e.g., Knapp, 1978, chap. 12), it is becoming possible to achieve some precision in both constructs and measures. There is a need for research that employs various measures and studies several aspects of nonverbal abilities. The ACT, which is easy to administer, promises to be of value in refining our understanding of such matters.

It is important to remember that expressiveness is part of a general communication process, much of which is verbal. Returning to Darwin's notion that expressive cues aid the force of language, it is apparent that nonverbal cues should not be considered a language in themselves. Although an expressive charlatan may relegate words to double-talk, such situations are not the mode. Nonverbal cues may modify and interact with verbal cues (Friedman, 1979) but cannot carry complex information by themselves. As expressiveness becomes better understood, it will become increasingly necessary to examine the words that accompany the nonverbal cues.

The success of the ACT in predicting a wide range of social and psychological attributes suggests that we have begun to tap a powerful variable. With more reliable measurements, more complex experimental designs, and conceptual refinements based on the current results, it seems likely that the construct of expressiveness will have a great deal of explanatory power.

Reference Notes

1. Hall, J. A. *Gender, gender roles, and nonverbal communication skills*. Paper presented at the meeting of the American Psychological Association, Toronto, Canada, August-September 1978.
2. Rosenthal, R. (Chair). *Symposium on personal correlates of skill in nonverbal communication*. Symposium presented at the meeting of the American Psychological Association, Toronto, Canada, August-September 1978.

References

- Allport, G. W. *Pattern and growth in personality*. New York: Holt, Rinehart & Winston, 1961.
- Allport, G. W., & Vernon, P. E. *Studies in expressive movement*. New York: Macmillan, 1933.
- Argyle, M. *Bodily communication*. New York: International Universities Press, 1975.

- Buck, R. Nonverbal communication of affect in children. *Journal of Personality and Social Psychology*, 1975, 31, 644-653.
- Buck, R. Nonverbal communication of affect in pre-school children: Relationships with personality and skin conductance. *Journal of Personality and Social Psychology*, 1977, 35, 225-236.
- Buck, R. Individual differences in nonverbal sending accuracy and electrodermal responding: The externalizing-internalizing dimension. In R. Rosenthal (Ed.), *Skill in nonverbal communication*. Cambridge, Mass.: Oelgeschlager, Gunn & Hain, 1979.
- Buck, R., Miller, R. E., & Caul, W. F. Sex, personality, and physiological variables in the communication of emotion via facial expression. *Journal of Personality and Social Psychology*, 1974, 30, 587-596.
- Christie, R., & Geis, F. *Studies in Machiavellianism*. New York: Academic Press, 1970.
- Coopersmith, S. *The antecedents of self-esteem*. San Francisco: Freeman, 1967.
- Crowne, D. P., & Marlowe, D. *The approval motive*. New York: Wiley, 1964.
- Cunningham, M. R. Personality and the structure of the nonverbal communication of emotion. *Journal of Personality*, 1977, 45, 564-584.
- Darwin, C. *The expression of emotions in man and animals*. Chicago: University of Chicago Press, 1965. (Originally published, 1872.)
- Ekman, P., Friesen, W. V., & Ellsworth, P. *Emotions in the human face: Guidelines for research and integration of findings*. New York: Pergamon Press, 1972.
- Eysenck, H., & Eysenck, S. *Manual for the Eysenck Personality Inventory*. San Diego: Educational and Industrial Testing Service, 1968. (a)
- Eysenck, H., & Eysenck, S. *Personality structure and measurement*. San Diego, Calif.: Knapp, 1968. (b)
- Friedman, H. S. The interactive effects of facial expressions of emotion and verbal messages on perceptions of affective meaning. *Journal of Experimental Social Psychology*, 1979, 15, 453-469.
- Friedman, H. S., DiMatteo, M. R., & Taranta, A. A study of the relationship between individual differences in nonverbal expressiveness and factors of personality and social interaction. *Journal of Research in Personality*, in press.
- Goffman, E. *The presentation of self in everyday life*. Garden City, N.J.: Doubleday Anchor, 1959.
- Hall, J. A. Gender, gender roles, and nonverbal communication skills. In R. Rosenthal (Ed.), *Skill in nonverbal communication*. Cambridge, Mass.: Oelgeschlager, Gunn & Hain, 1979.
- Hoffman, M. L. Sex differences in empathy and related behaviors. *Psychological Bulletin*, 1977, 84, 712-722.
- Izard, C. E. *Human emotions*. New York: Plenum Press, 1977.
- Jackson, D. N. *Personality Research Form manual*. New York: Research Psychologists Press, 1974.
- Knapp, M. *Nonverbal communication in human interaction*. New York: Holt, 1978.
- LaFrance, M., & Mayo, C. *Moving bodies: Nonverbal communication in social relationships*. Monterey, Calif.: Brooks/Cole, 1978.
- Miller, J. *Plays and players*. In R. Hinde (Ed.), *Nonverbal communication*. Cambridge, England: Cambridge University Press, 1972.
- Murphy, G. *Personality: A biosocial approach to origins and structure*. New York: Harper, 1947.
- Murray, H. (Ed.). *Explorations in personality*. New York: Oxford University Press, 1938.
- Naftulin, D., Ware, J., & Donnelly, F. The Doctor Fox lecture: A paradigm of educational seduction. *Journal of Medical Education*, 1973, 48, 630-635.
- Nunnally, J. C. *Psychometric theory* (2nd ed.). New York: McGraw-Hill, 1978.
- Rosenthal, R. *Experimenter effects in behavioral research* (enlarged ed.). New York: Irvington, 1976.
- Rosenthal, R., Hall, J. A., DiMatteo, M. R., Rogers, P. L., & Archer, D. *Sensitivity to nonverbal communication: The PONS test*. Baltimore: Johns Hopkins University Press, 1979.
- Rosenthal, R., & Jacobson, L. *Pygmalion in the classroom*. New York: Holt, Rinehart & Winston, 1968.
- Rosenthal, R., & Rubin, D. B. Interpersonal expectancy effects: The first 345 studies. *The Behavioral and Brain Sciences*, 1979, 1, 377-415.
- Rotter, J. B. Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 1966, 80(1, Whole No. 609).
- Schachter, S. *The psychology of affiliation: Experimental studies of the source of gregariousness*. Stanford, Calif.: Stanford University Press, 1959.
- Schachter, S., & Singer, J. Cognitive, social and physiological determinants of emotion. *Psychological Review*, 1962, 69, 379-399.
- Smelser, N. *Theory of collective behavior*. New York: Free Press, 1962.
- Smith-Hanen, S. Effects of nonverbal behaviors on judged levels of counselor warmth and empathy. *Journal of Counseling Psychology*, 1977, 24, 87-91.
- Snyder, M. The self-monitoring of expressive behavior. *Journal of Personality and Social Psychology*, 1974, 30, 526-537.
- Snyder, M. Cognitive, behavioral, and interpersonal consequences of self-monitoring. In P. Pliner, K. Blankstein, & I. Spigel (Eds.), *Advances in the study of communication and affect* (Vol. 5). New York: Plenum Press, 1979.
- Taylor, J. A. A personality scale of manifest anxiety. *Journal of Abnormal and Social Psychology*, 1953, 48, 285-290.
- Truax, C., & Carkhuff, R. *Toward effective counseling and psychotherapy*. Chicago: Aldine, 1967.
- Weber, M. *On charisma and institution building*. Chicago: University of Chicago Press, 1968.
- Zuckerman, M., DeFrank, R. S., Hall, J., & Rosenthal, R. Accuracy of nonverbal communication as

- a determinant of interpersonal expectancy effects. *Environmental Psychology and Nonverbal Behavior*, 1978, 2, 206-214.
- Zuckerman, M., Hall, J., DeFrank, R., & Rosenthal, R. Encoding and decoding of spontaneous and posed facial expressions. *Journal of Personality and Social Psychology*, 1976, 34, 966-977.
- Zuckerman, M., Lipets, M., Koivumaki, J., & Rosenthal, R. Encoding and decoding nonverbal cues of emotion. *Journal of Personality and Social Psychology*, 1975, 32, 1068-1076.

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