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ABSTRACT

This study examines the possibility that ability to avoid detection of deceptive behavior via nonverbal behavior might be related to an individual's role-taking skill. Sixty-one 5 to 12 year-old boys and girls were led to be verbally deceptive or truthful by saying that they either had enjoyed or not enjoyed an unpleasant experience or had enjoyed or not enjoyed a pleasant experience. Untrained adult judges then rated whether they thought the children were being truthful or deceptive. It was hypothesized that the children's role-taking skill would be positively correlated with their ability to avoid detection by the adult judges. Results indicate a positive relationship between the ability to take the perspective of others and success at avoiding detection. The awareness that one's nonverbal behavior during social interaction has an impact on the perception of others appears to be an important factor influencing the ability to control nonverbal cues. Children who are better able to take the perspective of others in the role-taking task were also more effective at controlling their nonverbal behavior. (Author/MP)

Children's Ability to Deceive: Who Does it Best?

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I recently paid a visit to the National Archives in Washington, where it is possible to listen to what are called the "Presidential Tapes"--to most of us, better known as the "Nixon Watergate Tapes." I went in two capacities: one as a curious tourist and citizen, but the other as a social scientist interested in inadvertent cues to deception. Would I be able to tell when Nixon was lying, merely by attending to his pauses, heavy breathing, or increases in pitch? The answer of course--based upon my subjective impressions--was negative. I couldn't tell the truth from the lies, although I did have my suspicions.

This incident led me to reflect on why it is that we do have trouble detecting deception in others. Although there are many reasons, one has to do with the fact that most people learn early on in life that, under some circumstances, lying is entirely appropriate behavior. We try to teach our children to politely smile and graciously receive gifts that they hate at first sight. We tell them not to mention their aunt's bad breath, or their uncle's obesity, and to say that they enjoy an undercooked piece of pie. And, at some point, they usually do learn to be deceptive convincingly.

The research that I am going to discuss today examines the question of when and how children develop the ability to be verbally deceptive effectively. The work concentrates on nonverbal behavioral concomitants of deception, and it has as its basic hypothesis that the ability to use and control nonverbal behavior while being deceptive verbally is a developmental skill. This hypothesis seems reasonable, based on a number of kinds of evidence. As children develop, they grow both in cognitive ability (e.g., Piaget & Inhelder, 1969) and fine muscular control (Charlesworth & Kreutzer, 1973). Furthermore, as children gain more awareness of the social ecology and become less egocentric, they develop the skill to put themselves in the

position of an observer and see the situation from the observer's point of view. Flavell and associates have referred to this ability, in reference to verbal communication skill, as "taking the role of the other" (Flavell, Botkin, Fry, Wright, & Jarvis, 1968).

Role-taking skills would seem to be particularly critical in developing control over nonverbal behavior during social interaction. Role-taking theory assumes that the skill to be an effective interactant in social situations rests upon the ability to take the "other" (the interactant) into account. The individual must not only possess a set of attributes or performance skills in a given situation, but he must also be aware of the nature of the impact that various alternative behaviors will have upon the other. Thus, an individual must have a sensitivity towards the presence of an interactant.

Research by Flavell and others (e.g., Feffer, 1959; Selman & Byrne, 1974; Urberg & Docherty, 1976) has shown a clear developmental sequence in role-taking ability. Pre-school children appear to have relatively little knowledge that there can be variation in perspective from that of their own view. Sensitivity grows throughout middle childhood, however, and by the time the individual reaches adolescence, he or she is much more successful in taking the role of the other into account. It should be noted, though, that even adults vary in their role-taking ability.

The development of role-taking skills would seem to be clearly related to the ability to manage nonverbal behavior while being deceptive. In order to be deceptive successfully, an individual must possess not only the skill to control his or her behavior, but the awareness that such nonverbal behavior could have an effect upon others. Relating this to the role-taking literature, it would seem reasonable that role-taking ability would be

correlated with the ability to control nonverbal behavior while being deceptive, and that skill in controlling nonverbal behavior would show a developmental progression. Specifically, it seems reasonable to expect that there would be an increase, concomitant with growth of role-taking skills, in the ability to encode and control nonverbal behavior.

Although theoretically compelling, the notion that there are changes in the use and control of nonverbal behavior during middle childhood has received little direct, or even indirect, empirical support. Most of the research relating to the development of nonverbal behavior in children has attempted to show how a particular emotional state is displayed differentially at various age levels. Spawned primarily by Darwin's (1872) view that there is a phylogenetic continuity of facial expressions for specific emotion-evoking situations, the nature of this research is exemplified by the observations of Spitz (1963), who has outlined a progression of nonverbal encoding during the first year of life and how it relates to infants' emotions. Overall, there is now a reasonably large body of research on the development of nonverbal behavior as it relates to the expression of emotions.

In contrast, very little research has looked at the development of the management of nonverbal behavior. There is some indirect evidence that increasing age leads to more proficiency in the control and use of nonverbal behavior that comes from a study of a role-playing nature by Odom and Lemond (1972). They asked children in kindergarten and fifth grade to encode poses representing eight emotions. There was a clear developmental trend: the older subjects were more successful in producing the appropriate expressions (as determined by adult raters), suggesting that the older children had greater proficiency in the encoding and control of their the nonverbal behavior. However, few studies have directly addressed the issue

of what changes occur in the ability to spontaneously manage nonverbal behavior.

In the present study, we examined the possibility that ability in the avoidance of detection via nonverbal behavior would be related to an individual's role-taking skill. We led children to be verbally deceptive by saying that they either had enjoyed an unpleasant experience or had not enjoyed a pleasant experience. They also were led to produce truthful responses. Untrained adult judges then rated whether they thought the children were being truthful or deceptive. We also determined children's role-taking skills through the use of an objective measure. Our basic hypothesis was that the children's role-taking skill would be positively correlated with their ability to avoid detection by the adult judges.

Method

Stimulus persons

The children who acted as stimulus persons ranged in age from 5 to 12 years, with approximately equal numbers at each year. There were 32 males and 29 females, and each child was individually observed.

Procedure. When the children arrived at the experiment, they were administered a variant of Feffer's Role-Taking Task, a measure of role-taking skill (Feffer, 1959). The task consisted of showing subjects a picture containing three individuals and having them tell a story about the picture as a whole. Subjects were then asked to pretend that they were one of the people in the picture and to describe how they would feel and what was happening to them. This same procedure was then carried out for each of the other figures in the story. Each subject was asked to do this for two different pictures.

The subjects' responses were tape recorded and transcribed. Two scorers coded the data according to criteria described by Feffer (1959). Basically, scoring consisted of assessing subjects' ability to take the perspective of others as indicated by changes in description of characters from the initial story. The scoring also took into account the level of sophistication of the description of the actors. Reliability for the scores was high and statistically significant. Scores ranged from 10.5 to 37.75, were approximately normally distributed, and had a mean of 23.42 and standard error of .79.

After completing the role-taking task, the children were told that the prupose of the experiment was to sample two drinks and attempt to convince an interviewer that both drinks either tasted good (positive verbalization condition), or that both drinks tasted bad (negative verbalization condition), regardless of how the drinks actually tasted. The children were told that they should pretend to like (or dislike) both drinks in order to "fool" the interviewer in a game-like situation. It was explained that they would taste each drink and then respond to a set of questions concerning how much they enjoyed them. A practice trial in which each child sampled each drink and answered a question similar to those that were to be asked by the interviewer insured that all children thoroughly understood the procedure before being interviewed. The children were reminded to be as convincing as possible when answering questions in order to "fool" the interviewer.

Each child participated in both the truth and deception conditions. All children were given a sweetened grape drink mixed according to directions and an identical drink mixed without sugar. The children who were told to answer the questions as if they enjoyed both drinks (positive verbalization condition) were therefore lying after tasting the unsweetened drink and

telling the truth after tasting the sweetened drink. Conversely, those who were asked to pretend that both drinks tasted bad (negative verbalization condition) were being truthful when talking about the unsweetened drink and deceptive while discussing the sweetened drink. The children tasted each beverage immediately before being asked questions about the drink. The order in which the drinks were sampled was random, as was assignment to either condition.

After both interviews were completed, the children were asked about their true opinions of the two drinks, using a seven-point Likert-type scale. The younger children were given instructions on the use of the scale. All children rated the sweetened drink more positively than the unsweetened drink. Therefore, the children were aware that they were being truthful or deceptive in the respective conditions. After the experiment the children were assured that they had completed the experimental task successfully.

During each of the two interviews, a camera recorded the face and neck of the child.[1] The children were aware of being videotaped. Fifteen-second silent segments of each child's responses while being truthful and deceptive were then transcribed from the original tapes onto a new tape, in a random order. Each segment showed a child responding to the same questions from the interviewer.

Twelve untrained male and female observers were recruited from undergraduate psychology classes to view the silent videotape clips. Each observer saw all the clips at a 1.5 hour session. Observers judged each segment on a forced choice scaled labeled "truthful" or "pretending." The procedure involved in making the videotapes was briefly described, so that judges were aware that the children were either being truthful or deceptive

while answering questions about a drink that may have actually tasted either good or bad. Observers received a choice of extra class credit or $5 for participation in the study. To increase motivation, they were promised that the most accurate observer would receive an additional $20.

Two scores were derived for each stimulus person. One was a deception ability socre, which consisted of the percentage of observers who identified as being truthful a stimulus child who was actually deceptive. Thus, higher scores indicate more success at being deceptive on the part of the child. The deceptive ability score represents the major datum for each child. The second score was a truthful ability score, which represented the proportion of the observers who correctly identified as truthful a stimulus person who was indeed truthful. Although no predictions were made regarding the relationship between role-taking skill and this latter measure, it seemed important to consider these data.

Results

The basic hypothesis of this experiment asserted that there would be a positive relationship between role-taking ability and ability to be deceptive successfully. The most direct test of this hypothesis is the correlation between subject's role-taking scores and their deception scores. Because stimulus persons' role-taking scores were highly correlated with age, $r(59) = .486$, p .01, partial correlations, removing the effects of age, were carried out. As predicted, the partial correlation between role-taking ability and deception score was positive, $r(59) = .291$, p .02. Thus, higher role-taking abilities were associated with being more successful at being deceptive. It is also interesting to note that the relationship

between stimulus person's age and deception scores was not significant; there was a zero-order correlation, $r(59) = -.032$, p = n.s.

To determine if sex of stimulus person or type of verbalization were related to success at deception, an analysis of variance was carried out by dividing role-taking scores into three groups, low, medium, and high, and assigning each person to one of the groups. Using age as a covariate, a between subjects analysis of covariance examined the factors of role-taking level, type of verbalization, and sex of stimulus person. The only significant effect on the analysis was for role-taking score, $F(2, 54) = 3.02$, p .056. As would be expected, of course, the means increased linearly: M(low) = .47, M(medium) = .49, and M(high) = .60. What these figures mean conceptually is that the stimulus persons with the lowest role taking ability were identified as being deceptive 47% of the time when they were deceptive, while those in the highest group were more successful at avoiding detection, with 60% of the role-taking to observers being fooled into thinking that deceptive stimulus persons were honest. It should be noted that in only the highest role-taking group were the stimulus persons able to avoid detection at better than chance levels, $t(22) = 1.86$, p .05.

Analysis of truthful ability scores. The success at which observers were able to identify stimulus persons being truthful was not related to role-taking ability. Neither the correlations nor differences due to sex of subject and type of verbalization found on an anlaysis of covariance were significant.

Discussion

The results of the study provide support for the hypothesized relation-

ship between role-taking ability and skill at avoiding detection while being deceptive. Both the partial correlation and the analysis of covariance, each of which removes the effects of age, indicate a positive relationship between the ability to take the perspective of others and success at avoiding detection. The awareness that one's nonverbal behavior during social interactions has an impact on the perception of others appears to be an important factor infleuncing the ability to control nonverbal cues. Children who are better able to take the perspective of others in the role-taking task were also more effective at controlling their nonverbal behavior.

The hypothesized relationship between role-taking ability and nonverbal communication assumes that skill in taking the perspective of others is causally related to the effective control of nonverbal cues. We suggested that in order to control nonverbal behavior successfully, the individual must not only have the ability to produce appropriate nonverbal behavior, but must know when and how to do it. As in any correlational study, however, it is impossible to unequivocally demonstrate a direct cause and effect relationship. Role-taking ability is obviously related to numerous aspects of cognitive processing in a highly complex manner. It is conceivable that some other type of cognitive ability, which is highly correlated with role-taking skill, is responsible for the observed relationship. However, the nonsignificant correlation between age and success at avoiding detection, in spite of the fact that age and role-taking scores were highly correlated, suggests that role-taking is an important factor in determining the ability to control nonverbal cues. Cognitive skills of all types presumably increase with age, and thus statistical procedures that remove the effects of age might be expected to control for the effects of extraneous cognitive factors.

Nevertheless, the possibility that other factors are responsible for

the observed relationship cannot be ruled out. For instance, one specific alternative explanation for the present findings is that some general ability, such as social competence, may influence both role-taking scores and the ability to avoid detection. Children who are more skillful socially in general may be able to construct a story from various perspectives more easily, as well as being more successful at avoiding detection.

We should note that, in general, it was not particularly easy to tell when any of the stimulus children were being deceptive. For most of the children, identification of when they were deceptive was at chance levels--except for the best role-takers, who were thought to be more truthful when they were lying than the other stimulus children. Thus, generally the children were pretty good liars (at least in the eyes of the adult judges).

Given that role-taking ability seems to be related to ability to be deceptive, our results may provide a clue as to why some adults may be better than others in managing their nonverbal behavior. We can hypothesize that adults who tend to be more aware of the impact of their behavior on others may be more adept in the use of nonverbal communication. Both Snyder's (1974) self-monitoring measure and the Feningstein, Scheier, and Buss (1975) public self-consciousness measure purport to tap an individual's tendency to consider the impact of one's behavior on others. Although DePaulo and Rosenthal (1979) report only small relationships between deceptive skill and scores on the self-monitoring scale, our results suggest that there ought to be a positive relationship between one's scores on these scales and ability to control nonverbal cues. Future research with adults might well examine this hypothesis, which may ultimately lead us to an explanation of what it is that distinguishes a good liar from a bad one.

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Footnote

[1]For purposes of another analysis, a second camera was also used to record body movements.