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Facial Nonverbal Communication And Deception Detection

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Facial Nonverbal Communication and Deception Detection.
(TITLE)

BY

Teresa Y. Collard

THESIS

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This study investigated the relationship between facial nonverbal communication and deception. Included in the investigation was an examination of the history of deception, but more importantly an attempt was made to provide conclusive evidence that there is a relationship between facial nonverbal (eye contact and smiling) communication of males and females and deception detection.

The study includes a detailed review of literature and a history of deception. It cites authorities in the field of deception detection. The study also includes sources such as St. Augustine and Immanuel Kant.

The hypotheses for the study were as follows:

Hypothesis One: When an individual is engaged in deception, eye contact will increase more than when an individual is engaged in truthtelling.

Hypothesis Two: In a situation where an individual is engaged in deception, smiling will become less prevalent than when an individual is engaged in a situation involving truthtelling.

Hypothesis Three: When placed in a situation where deception is taking place, females will exhibit less eye contact than males.

Hypothesis Four: When placed in a situation where deception is taking place, males will exhibit less eye contact than females.

The study was based on data drawn from twenty interviews.

They participated in a short interviews where they were videotaped behind a two way mirror. The interviewees were told to answer four questions: two honestly and two dishonestly.

The results were gathered from sixty coders. They viewed the videotaped interviews and coded the eye contact and smiles based on instruction they received earlier.

The researcher used a paired t-statistic on each of the hypotheses. Hypothesis One proved significant. It was found there was a significant increase in eye contact when the interviewee was lying. The research proved to be significant at the 0.0001 alpha level. This proved that a relationship does exist between eye contact and deception detection.

The researcher suggests several amendments that could be made to improve the effectiveness of the study. She also calls for more research in the area, due to the fact that the study provides new information in the area of nonverbal communication and deception detection.

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INTRODUCTION

Baliff: Repeat after me! Do you swear to tell the whole truth and nothing but the truth so help you God?

Witness: I swear to tell the whole truth and nothing but the truth so help me God.

To most Americans, this dialogue is probably familiar. It is used in courtrooms across America to ensure that truth is sustained in our judicial system. A witness in violation of this oath perjures her/himself and is subject to imprisonment.

At the time the witness gives testimony before the court, the judge and jury accept it as true. The judicial decision is based upon the testimony. Thus the defendant's guilt or innocence rest with the assumption that the truth will be found and justice will prevail.

If an entire country places so much faith in truth what can be said of truth's status in society? As children we are informed that, "honesty is the best policy" and "the truth will never hurt you." We are indoctrinated about the merits of being truthful. Even Walt Disney's Pinnochio sets an excellent example for children. The case of his wooden nose growing when he tells a lie acts as a powerful deterrent against lying in small children.

In a country where Christianity plays a dominant role in individuals' lives, it is no wonder that truth is valued very highly. To lie is to disobey God and such disobedience

is not often tolerated in Christian religions.

Truth, it would seem is stressed in almost everyone's life. It serves as a guiding force to keep us in harmony internally, with other people and with deity. Of course, the important thing is to be able to know when one is being told the truth and when one is being deceived.

Throughout history, truth has been an area for reflection and concern. Bacon wrote, "Certainly, it is heaven upon earth to have man's mind move in charity, rest in providence, and turn upon the truth (Of Truth & Bok, 1979, p.250)." When Bacon wrote this he was stressing the importance of truth and the need for deception to vanish from existence in an individual's life. Honesty is not always the easiest goal to achieve in one's life, however, most ancient writers felt that it was the best goal.

St. Augustine wrote the following in order to state his position on lying.

> "But every liar says the opposite of what he thinks in his heart, with purposes to deceive. Now it is evident that speech was given to man, not that men might therewith deceive one another, but that one man might make known his thoughts to another. To use speech, other than for its appointed end, is a sin. Nor are we to suppose that there is any lie that is not a sin, because it is sometimes possible, by telling a

lie, to do service to another (St. Augustine, The Enchiridion & Bok, 1979, p.34)."

The author makes it clear that no exception should be made for deception. Speech, he wrote, was not given to man for the purpose of decieving another and if it is used in such a way it is deception. Clearly, St. Augustine did not accept any type of deviation from honesty.

In his eightfold hierarchy, St. Augustine placed different categories of lying on a continuum. They were arranged from the worst, most harmful to the least harmful. Although he distinquished between most harmful and least harmful, all lies in his eyes are wrong. He believed the only difference in lying was that the least harmful would receive pardon more readily. An example from his hierarchy is, "The first type of lie is a deadly one which should be avoided and shunned from afar, namely, that which is uttered in the teaching of religion, and the telling of which no one should be led under any condition (St. Augustine, On Lying & Bok, 1979, p. 265)." This is just an example from his hierarchy, which continues to press on in that same course.

Thus, the stage was set early in history by St. Augustine. He allowed no lying, and Christianity followed his lead. However, he was not the only person who wrote about deception. Not long after Augustine, men began trying to find ways to get around the truth without actually lying.

How does one define deception? Many studies on lying

and deception seen to operationalize the act as: the conscious alteration of information a person believes to be true in order to significantly changes another's perceptions from what the deceiver thought it would be without alteration. Deception is ubiquitous. Yet, it is also relative. Thus, what is said to be false could also be true given the 'correct' circumstances and people (Knapp & Comadena, 1979, p.271).

One typical avoidance tactic was the use of mental reservations. Bok (1979, p.37) explained the way that the use of mental reservation was used. "(You would say) something misleading to another and merely add a qualification to it in your mind so as to make it true, you cannot be responsible for the misinterpretation make by the listener." Thus, the use of mental reservations became an accepted and widely adopted practice.

Throughout history men have argued a person whether a person should tell the truth at all times at all times or if it is all right to misrepresent the truth. The debate continues today. Often people ask, "Is it ever okay to tell a lie?" St. Augustine would say no, there is no justification for lying . There are even individuals who believe that no lie will be pardoned and all should be prohibited (Bok, 1979, p.48).

One such individual was Immanuel Kant. Kant wrote, "Truthfulness in statements which cannot be avoided is the

formal duty of an individual to everyone, however great may be the disadvantage occuring to himself (herself) or to another (Kant, 1949 & Bok, 1979, p.286)." Thus, Kant accepts absolutely no reasons for lying. Kant and his followers believed that truth, above all things, should prevail. Kant continued with this explanation, "Therefore

> whoever tells a lie, however well intentioned he might be, must answer for the consequences, however unforseeable they were, and pay the penalty for them even in a civil tribunal. This is because truthfulness is a duty which must be regarded as the ground of all duties based on contract, and the laws of these duties would be rendered uncertain and useless if even the least exception to them were admitted (Kant, 1949 & Bok, 1979, p. 287)."

In Kant's opinion, a person must be prepared to tell the truth at all times.

Kant seems to view the world in black and white only, while in actuality it is colored in various shades of gray. It is a very difficult task for one to be a follower of honesty, but it is even more difficult when one must be honest at the sake of another individual.

How does one draw the line between lying and telling the truth? This question is not easily answered. It would appear that lying is situational. For example, a mother would lie to save the life of her child; a friend will avoid

the truth if it is only going to hurt another friend; priests and doctors cannot disclose information about a confidence they have with a parishioner or a patient. Thus, lying and deception are common in our world, if not overtly accepted.

Years ago things were more simple. There was no television to bombard people daily with different forms of deception. Forms such as advertisments and other types of media which use subtle duplicity at their main tool for misleading innocent viewers.

People are caught up in what becomes a mind game between honesty and deception. One might ask, "What is the harm in telling a lie if it would save another individual from harm?" Individuals find it easy or more acceptable to persuade themselves that a lie told for the good of another is not wrong. Thus, deception becomes a more accepted practice.

How often has it been said, " Society is doomed, There are no morals left. I can't trust anyone to tell the truth. I can't sort out the truth for the lies." These types of statements indicate the gravity of the situation. Lies are becoming accepted.

Researchers hypothesize that man used different forms of deception as an intergral part of human biology and natural selection (Knapp & Comadena, 1979, p.270). Yet, however old deception is, the study of it is still

relatively young.

The ancients wrote about deception but they never stopped to study it. Questions such as, "Why do people deceive? How is deception received by others? etc.," have recently been asked by researchers. These researchers are trying to find a common bond or link that will aid society in understanding deception and its detection.

REVIEW OF LITERATURE

Deception Detection

The ability to determine whether or not someone is deceiving another is very intriguing to most individuals. Over the past twenty-five years, that intrigue has brought with it research in the area of deception detection. Researchers have begun delving into the subject in order to derive significant conclusions.

People have different perceptions of deception. Hopper and Bell (1984) recognized these differences and decided to develop a taxonomy for deception. Back stabbing, cheating, lying, kidding, teasing, forgery, and evasion are all a part of their taxonomy.

> Hopper and Bell (1984) wrote, "To equate lying only with deception also assumes that deception is a verbal activity. While countless studies have investigated nonverbal behaviors that accompany deception, the deception examined has almost invaribly been verbal lies. Yet, many people

> deceive others on a daily basis through nonverbal messages, through context-sensitive implication, or through failure to mention relevant information (p. 289)."

Although most lies are verbal it is the nonverbal forms which help researchers in detecting deception. It is commonplace to smile at someone we are not fond of or to agree to do something which we do not want to do in order to avoid confrontation. While these are merely hypothetical examples, they are forms of nonverbal deception.

There is a definite awareness of the problem of deception. Yet, there is not enough research conducted in the area. What reliable information that is known about deception is greatly outweighed by what is not known. We have little trouble coming up with a problem to solve or a question to answer in the study of deception.

One question to answer involves deception detection. People deceive for many reasons and at many different times. They feel that they can justify the deception. Thus the practice of deception makes them believe that they are able to determine when they themselves are being told a lie." However, the case of deception detection is not quite that simple.

Knapp and Comadena (1979, p.272) suggest that deception is mutually negotiated. They believe that both the deceivers and the deceived play and intergral part. An

individual may feel that s/he is an innocent victim of deception, yet this might not be totally true. The values, life style, etc., of the deceived play a role in her/his deception.

It may be that s/he makes it easy for others to decieve her/him. Another case could be that the individual wants to be deceived. However, the majority of research on deception has not explored the role of the deceived, rather it has been more interested in pin-pointing and understanding the deceiver.

In 1963, Gustafson and Orne began conducting studies in the area of deception detection. There first study tested the effects of motivation on deception detection. The researchers agreed that if a subject was instructed to lie, than s/he "will give a large physiological response during lying because s/he anticipates serious consequences if s/he fails to deceive (Davis, 1961, p.163)."

Gustafson and Orne found that the subjects motivated to deceive were more easily detected than those not motivated to deceive (1963, p. 411). Thus researchers have drawn similar conclusions regarding the effects that motivation has on lying.

Ekman and Friesen (1969 & Hocking et. al. 1979, p. 34) believe that it is more difficult for the deceiver to hide her/his deception when s/he thinks serious consequences will result from her/his detection. This research strengthens

Gustafson and Orne's findings. It encourages the belief that motivation has a great deal to do with deception detection. It would seem that if a person is nervous about deception detection s/he is more likely to give off cues that indicate the use of deception.

A 1964 study by Gustafson and Orne examined the effects of stimulus presentation on deception detection. They found that the optimum conditions for detection "would be found in a situation where the subject must prove s/he is innocent (the guilty person model), where s/he is very highly motivated to deceive (heightened response to critical items), and where s/he 'knows' exactly where s/he must deceive (1964, p. 387)." The study gave conditions that make deception detection more likely.

It appears that if an individual has more at stake then s/he is more determined to hide deception. This could cause the individual to emit signals that point toward deception. This becomes a vicious cycle. If the individual gives off physiological and nonverbal signals, then s/he is more likely to fall into the situation which promotes detection.

Are there specific cues given off when individuals are involved in deception? Cody and O'Hair (1983) investigated positive identification of these cues. In their study the authors sought to discover if there were any significant differences between male and female facial gestures when

lying was involved. The researchers found no significant difference.

One area researchers are exploring is determining the ability of observers to detect deception. Such researchers have arranged studies in various settings involving deceptive behavior in order to operationalize what occurs (Brandt, Miller, & Hocking, 1980, p. 99).

Brandt, Miller, and Hocking (1981, p. 100) developed two general conclusions based upon such deceptive studies. The conclusions they found are: "(1) Without the aid

> of mechanical equipment (polygraphs, tape recorders, etc.), untrained observers accurately identify deceivers and truthtellers only about half or slightly more than half the time; and (2) persons viewing deceitful and truthful communicators through various modes of presentations vary in judgmental accuracy, though there are conflicting findings regarding which mode facilitates judgmental accuracy most (p. 100)."

Polygraph machines have been used a great deal in the study of deception detection. These machines have become known as lie detectors. However, what about human lie detectors? Paulo, Zuckerman, and Rosenthal have conducted research in the area of human lie detectors. They set out to answer the question, "What makes a message appear to be

a lie to a human observer?" They stated,

> "Probably at times a global quality or overall impression, such as the communication seeming a bit strained or a bit too pleasant arouses suspicion. Other times the tip off may be a specific cue, such as an awkward gesture or a sidelong glance. The way particular cues are put together- especially when they appear to contradict each other may also serve to deflate an observers trustfulness (Paulo, Zuckerman, & Rosenthal, 1980, p. 135)."

This indicates that the observer detects the lie not only from verbal cues but also from nonverbal cues. The observers ability to determine whether or not an individual is honest or not correlates with her/his ability to read people.

It would be worthwhile to point out the fact that most studies conducted with human lie detectors use those individuals who have no relational history with the individuals they are observing. Brandt, Miller, and Hockings (1981, p. 100) also make this point. They cite Knapp (1978), who felt that a base line relationship helps the observer to detect deception more accurately. This would seem to be a natural conclusion.

If the observer is familiar with the deceiver then s/he will more easily be able to identify abnormal behavior. Thus, it would seem that the observer would be biased. If

s/he is not familiar with the person in the experiment s/he is more likely to have nonbiased identification of deceivers.

In a study by Hockings and Leathers, (1980, p.122), it was suggested that deceivers vary in their ability to monitor their own nonverbal behavior effectively. The ability to monitor one's behavior acts as a prerequisite to actually controlling the behavior. The individuals who are able control the behavior thus make the job of the observer more difficult. However in the case of the moderately controlled behavior, the deceptive individual will probably over-compensate by using more rather than fewer gestures.

Context plays a very important role in detecting deception. Each experiment is contextually different, thus it is necessary to consider those differences. Knapp and Comadena (1979, p.272) noted in their study that context is a factor that should be considered before accepting all results as the same. Time, occasion, awareness, and the actors are some of the factors they considered. However, they felt that each played an important role.

Hockings, Bauchner, Kaminski and Miller (1979) agreed with Knapp and Comadena (1979). They wrote, "We agree with their caveat that it would be a mistake to unquestionably lump conclusions from all studies using the deception construct together without carefully considering these contextual differences (p. 45)."

Eye Contact and Smiling

Throughout the ages people have been told, "Look into my eyes and say that!", or "The eyes are the mirrors to the soul." These statements imply that eye contact is a major factor in deception detection. Eye contact has been measured in several studies, but the results have been inconclusive. It is thought that this is due to certain individuals ability to control their nonverbal behavior. Knapp, Hart, Dennis (1974) found that during deception, eye contact was significantly shorter in duration and had a tendency towards fewer glances during the time of deception ($p= 0.096$).

However, there have also been studies that relate less eye contact during deception to different personality types (Exline, Thibaut, Hicky & Gumpart, 1970 & Knapp & Comadena, 1979, p. 274). This could be exemplified by members of certain American Indian tribes, who will not make direct eye contact because it is thought to be insolent. Other researchers go so far as to say that no one can gauge deception by pupil dilation variation (Clark, 1975). These studies indicate that there is a need to look into the relationship of eye contact and deception detection communication in various cultures.

In spite of the amount of data, researchers surely should not give up on the area. Hockings and Leathers (1980) conducted a study where they found that eye contact

was significantly shorter during deception than during truthtelling. This study seemed to correlate well with Knapp et. al. cited earlier.

Smiling, is an area of concern to researchers when studying deception detection. It is a common belief that smiling during occasions when deception is possible tends to make the person look guilty. How often has it been said, "Smile! It makes people wonder what you are up to." How often in the media does one see the 'bad guy' smiling due to his lies and deception? It appears to be very common among the J.R. Ewing type of 'bad guys'.

Research indicated that when a person is engaged in deception they tend to smile less. Feldman, Devin, Sheehan, & Allen (1978 & Knapp and Comadena, 1979, p. 279) found that liars smile less than those who honestly answer questions. Others believe that smiling does not accurately predict deception. They feel that the smile can have a lot to do with negative and positive effects of the situation.

Knapp and Comadena (1979, p. 279) consider the amount of smiling a poor indicator for deception detection. However, smiling contributes a great deal to the visual cues that person sends out in a situation that requires lying.

It is a natural concern for people to wonder if one gender deceives more or if they are detected more often. In a study by Cody and O'Hair (1983, p. 182), it was predicted

that males would engage in less eye contact while lying than their female counterparts. The researchers hypothesized that there would be more smiling among women when lying. However, the authors found no significant difference between the sexes in these areas. Knapp and Comadena (1979, p. 279) stated that gender does play a role in deception but this dealt more with message types and not with visual cues. There are few verifiable studies in the area. Researchers are still trying to develop tools and measuring methods to more accurately assess the cues and weigh the subsequent data. Therefore, there is a void in the area of gender related deception in regards to visual cues.

Hypotheses

The hypothesis that have been chosen for this study are as follows:

Hypothesis One: When an individual is engaged in deception, eye contact will increase more than when an individual is engaged in truthtelling.

Hypothesis Two: In a situation where an individual is engaged in deception, smiling will become less prevalent than when an individual is engaged in a situation involving truthtelling.

Hypothesis Three: When placed in a situation where deception is taking place, females will exhibit less eye contact that males.

Hypothesis Four: When placed in a situation where

deception is taking place, males will exhibit less eye contact than females.

The independent variables for the study were gender and deception. The dependent variables were eye contact and smiling.

METHODOLOGY

Interviewees

The interviews consisted of twenty students who were enrolled in a basic speech course at a small midwestern university. The group consisted of sixteen females and four males.

The members of the group received a reward for participation in the experiment. Each individual received bonus points in her/his speech class.

Subjects

The subjects consisted of sixty students. All of the subjects were enrolled in a basic speech course at a small midwestern university. Each subject received bonus points in her/his class due to her/his participation.

Procedure

Interview:

The basis of the study was an interview situation. Those individuals placed in the interviewee section were asked to participate in a short interview.

The interview was designed to last approximately five minutes. It was based on four questions. They were as

follows:

1) What is your favorite thing to do here at Eastern?

2) What is your major and why did you choose it?

3) What is your grade point average and how hard has it been to maintain?

4) How do you feel about having to take general requirements outside of your major.

The interviewer asked each of these questions. If the interviewer was having difficulty in meeting the time limit, then he would ask standard probes such as, "How often do you participate in the activity?", "How have you maintained your g.p.a.?", etc.

The interviewer was a partial confederate. He was aware of the purpose of the study, yet he did not know what was going to happen in the interview situation. The interviewer underwent a small training/practice session. The practice session was used to make the interviewer feel comfortable in the interview situation.

A few minutes prior to each interview the interviewee met with the researcher for instructions. Each was told that s/he would be participating in an interview situation. All of them were asked to lie in response to questions number two and three. S/he was then taken to the room where the interview was to take place.

Some of the interviewees exhibited concern about the person interviewing them knowing they were lying. These

individuals were assured that the interviewer was not aware of the fact that they were lying. Once the interviewees heard this they were fine.

The cosmetic appearance of the interview room was very similar to that of a normal classroom with tables. However, the table where the interviewee sat was facing a two way mirror. A chair was placed on either side of the table. The interviewer sat with his back to the mirror and the interviewee sat directly facing it.

Placed in the center of the table was a microphone. When the interviewee enter the room the researcher explained that the microphone was hooked into an elaborate sound system that would allow for better sound quality. The researcher than informed the interviewees to speak clearly because they were going to be taped.

During the interview the interviewees were videotaped through the two way mirror. However, they were not aware that the taping was taking place. The cameraman had been trained to place the camera at an angle so that it would give the impression that the interviewee was looking directly into the camera. Thus the camara was getting approximately the same view as the interviewer.

The microphone was used to pick up sound on the tapes. This was done to make it easier to tell when the interviewee had completed an answer. The tape was used to code the interviewees' eye contact and smiles.

After the interview was over the interviewer sent the interviewee back to the researcher. At this time the researcher asked the interviewee if s/he had lied. This was used only as a validity check to make sure that the subjects actually lied. The researcher also informed the interviewees about the videotape.

Coding Session:

The coding session was completed in two- two hour sessions. Each subject coded all twenty interviews. The subjects were divided into two groups of thirty. This eliminated the problem of overcrowding in the room where the interviews were coded.

Before the subjects began coding the interviews they were briefed on the procedure. The researcher discussed the study's operational definitions of eye contact and smiling. This helped to ensure that the coders coded similar reactions.

The coders were given coder sheets for coding eye contact and smiles. The coder sheets were broken down by questions and the subjects coded each question for each interview. This meant that for each time the interviewee broke eye contact or smile the subjects marked it on the sheet.

This was the basis of the coding sessions. The coders did not have difficulty understanding what was expected of them.

Tabulation:

After the subjects had viewed all the interviews, the researcher collected the coder sheets. Then the marks were tallied so that they could be used for the statistics.

Each interview was tabulated on its own merit and there were sixty sheets for the one interview. The researcher first combined the scores for the honest answers and the deceptive answers separately. Then the scores for the truthful answers were combined and averaged. The same was done for the deceptive answers. These scores were then ready to be placed into the computer for computation.

RESULTS

The research was analyzed by using a t-test. This test best fit the purpose of the study. Once the coder sheets were averaged for each interview the sample was relatively small. This made the t-statistic well suited due to the fact that it works best with small samples and it compares two groups. This would enable the research to be generalized towards a larger population.

Due to the fact that the data on truth and lying come from the same individuals, a paired t-test was chosen. This would strengthen the results. It is also a more reliable statistic for the information.

The results from the test showed that results were varied. The researcher had chosen a .05 alpha level for the hypotheses. Thus, one of the four hypotheses was

significant.

Hypothesis One: It was found that there was a significant relationship between eye contact and deception. The results indicated that this was significant at the 0.0001 alpha level. The table below illustrates this.

Table One

Eye Contact and Deception

Paired T-Test Results

Sample size	=	20
Mean of deception	=	7.334
Mean of truth	=	9.5903
Mean difference	=	-2.2563
t-statistic	=	-5.203302
degrees of freedom	=	18
Two tailed probability	=	0.0001

Hypothesis Two: It was found that in this study smiles and deception were not related. The results were not significant. The level at which the data was significant was 0.258. This did not match with the previously determined alpha level thus it was not accepted as significant. The results for the hypothesis are shown on table two.

Table Two

Smiling and Deception

Paired T-Test Results

Sample size	=	20
Mean of deception	=	3.993351
Mean of truth	=	4.2641
Mean difference	=	-.27075
t-statistic	=	-1.165479
Two tailed probability	=	0.258

Hypothesis Three and Four: The relationship between the independent and the dependent variables as related to gender did not prove to be significant. When data was applied to the t-test a relationship proved to be nonexistant. The t-tests showed that with 18 degrees of freedom the test would not be significant at the .05 level. Rather they would be significant at the .30 level. The scores for the t-tests were below 1.0 and they needed to be at least 2.101 to be significant.

As a whole the results indicate that only one of the hypotheses was significant. The others did not reach the stated alpha level and thus they cannot be accepted as significant. However, they did prove that there is a relationship between nonverbal communication and deception.

DISCUSSION

The purpose of this research was to identify the relationship between an individual's nonverbal communication (eye contact and smiles) and the use of deception. The results suggest that when deception is used eye contact does change and it can be predicted.

The first hypothesis states : When an individual is engaged in deception, eye contact will decrease more than when an individual is engaged in a situation involving truthtelling. This proved to be significant at the 0.0001 level. It appears that when individuals are lying they tend to use more direct eye contact. This could have evolved from the belief that establishing eye contact in a situation calling for truth, indicated honesty. Thus, individuals overcompensate for their deception by increasing the amount of eye contact in the deceptive situation.

Over the years researchers have been trying to establish a link between eye contact and deception, until now they have been unsuccessful. Results of this study indicate that eye contact plays a pivotal role in a situation involving deception detection.

Smiling, on the other hand, does not seem to be a factor in deception detection. It was the researcher's belief that smiling would be less evident in a situation involving deception. This, however, proved to be a false assumption. The research indicated that there was little

difference between the deceptive situation and the truthtelling situation.

This would seem to indicate that people do not knowingly or unknowingly change their smiling behavior during situations involving deception. This indicates that smiling behavior might be situational. Although an individual is lying, the situation might call for humor rather than seriousness, thus making it situational.

The hypothesis concerning gender did not prove to be significant. It could be that nonverbal communication in deception is not gender related. The fact that neither gender proved to be different from the other would serve as an indication that this is true. Yet, there are other reasons that might be more likely.

One explanation could be that the sample did not facilitate a study of gender traits. While there were sixteen females in the study, there were only four males that participated. Thus, the sample was not represented evenly. Even though the t-test accounts for unbalanced samples, it would not be wise to assume that four people could represent an entire population.

While not all of the hypotheses proved to be significant, the researcher was satisfied with the results of the study. Eye contact's role in deception is very important to reseachers. This study has provided a starting point for further research on the topic.

OBSERVATIONS AND RECOMMENDATIONS

In reviewing the study, many useful modifications become apparent. There are several changes that could be made in the study to enhance its effectiveness.

In regard to the subjects, the amount of participants was sufficient. However, the training could have been more intensive. It would have been advisable to spend half of the first coding session explaining and practicing the process. This could have facilitated the process and made the coding easier.

It was a mistake on the part of the researcher not to have had equal numbers of males and females in the interview section. This possibly hurt the study and it could have been avoided. Yet, the sample would have been more representative of the population if it had been equal.

The interview might have been better if there were two interviewers: one male and one female. This could make a difference in the way the interviewees responded to the questions. This would allow for another hypothesis, also.

Humans as lie detectors in society does not seem to be practical and/or a reliable method of determining the truth. Although for years they have attempted to do so. Hence, this area needs to be explored more thoroughly A possible study for the future could be to have interviews, similar to those used in this study, be judged by individuals on the basis of truth and deception.

Have the subjects detect who is lying and base the judgment on the interviewees' eye contact and smiles. This would allow for assessment of humans' ability to detect deception.

Nonverbal communication and deception seem to be correlated. The fact that the study was able to prove that eye contact plays a part in deception detection should be reason enough to continue conducting this type of study. There is a need for more research on deception detection.

It was mentioned earlier in the paper that this is a relatively new field. Consequently, it is going to take researchers time to devise reliable research tools. Once this is done, and the research proceeds in orderly fashion there will be much value in such studies.

There needs to be a broadened understanding of deception and its detection, but even more necessary is the understanding of nonverbal communciation's effect on it. This study has provided only a few insights on the topic. Hopefully, it will be a form of support for the practical framework.

Everyone wants to know what makes people lie. More than that though, everyone would like to be able to detect when someone is deceiving them. Researchers in the field of deception are trying to make deception detection a reality. With time and effort this should be possible. Hopefully, this paper will serve as a catalyst for more research. We need to answer these remaining questions so we can accurately

detect and assess deception in verbal and nonverbal communication.

BIBLIOGRAPHY

Augustine. Enchiridion, on faith, hope and love. H. Paolucci, (Ed.). Chicago: Henry Regency, 1961.

Augustine. (1962). On lying. In treatises on various subjects. volumns 14 and 16. R. J. Deferrari (Ed.). Fathers of the Church. New York: Catholic University of America.

Bacon, F. (1910). Of truth. In essays civil and moral. London: Ward, Lock, & Co., 1910.

Bok, S. (1979). Lying: Moral choice in public and private life. New York: Vintage Books.

Brandt, D. R., Miller, G. R., & Hockings, J. E. (1980). The truth-deception attribution: effects of familarity on the ability of observers to detect deception. Human Communciation Research, 6, 99-110.

Clark, W. A. (1975). "A comparison of pupillary response, heart rate, and G. R. S. during deception." Paper presented at the meeting of the Midwestern Psychological Association, Chicago.

Cody, M. J. & O'Hair, H. D. (1983). Nonverbal communication and deception: differences in deception cues due to gender and communciation dominance. Communication Monographs, 50, 175-192.

Ekman, P., & Friesen, W. (1969). Nonverbal leakage cues to deception. Psychiatry, 32, 88-106.

Exline, R., Thibaut, J., Hicky, C., & Gumpart, P. (1970). Visual interaction in relation to machiavellianism and an unethical act. P. Christie & F. Geis (Eds.). Study in Machiavelliamism . New York: Academic Press, 53-75.

Feldman, R. S., Devin-Sheehan, L., & Allen, V. L. (1978). Nonverbal cues as indicators of verbal dissembling. American Educational Research Journal, 15, 217-231.

Gustafson, L. A., & Orne, M. T. (1963). Effects of heightened motivation on the detection of deception. Journal of Applied Psychology, 47, 408-411.

Gustafson, L. A., & Orne, M. T. (1963). Effects of task and method of stimulus presentation of the detection of deception. Journal of Applied Psychology, 48, 383-387.

Hocking, J. E., Bauchner, B. P., Miller, G. R., & Kamanski, E. P. (1976). "Detecting deceptive communication from verbal, visual, and paralinguistic cues." Paper presented at the annual convention of the International Communication Association, Portland.

Hockings, J. E., & Leathers, D. G. (1980). Nonverbal indicators of deception: a new theoritical perspective. Communication Monographs, 47, 119-131.

Hopper, R., & Bell, R. A. (1984). Broadening the deception construct. Quarterly Journal of Speech, 70, 288-300.

Kant, I. On supposed right to lie from benevolent motives. In the critiques of practical reason and other writings in moral philosophy. L. W. Beck (Ed.). Chicago: University of Chicago, 1949, 346-350.

Knapp, M. L. (1978). Social intercourse: from greeting to goodbye. Boston: Allyn & Bacon.

Knapp, M. L., & Comadena, M. E. (1979). Telling it like it isn't: a review of theory and research on deceptive communications. Human Communication Reasearch, 5, 270-285.

Knapp, M. L., Hart, R. P., & Dennis, H. S.(1974). An explanation of deception as a communication construct. Human Communciation Research, 1, 15-29.

Paulo, B. M., Zuckerman, M., & Rosenthal, R. (1980). Humans as lie detectors. Journal of Communication, 30, 129-139.