Order Number 9507131

# Perceptions of deceptive behavior and effects of perceptual accuracy in detecting deception in marital types

Wood, James Randall, Ph.D.

University of Kentucky, 1994

U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

DISSERTATION

James Randall Wood

Department of Communication

University of Kentucky

1994

# PERCEPTIONS OF DECEPTIVE BEHAVIOR AND EFFECTS OF PERCEPTUAL ACCURACY IN DETECTING DECEPTION IN MARITAL TYPES

---

DISSERTATION

---

A Dissertation submitted in partial fulfillment of the
requirements for the degree of Doctor of Philosophy
at the University of Kentucky

by

James Randall Wood

Lexington, Kentucky

Directors:

Dr. Pamela J. Kalbfleisch, Associate Professor of Communication and Mass Media,

Dr. Norm Van Tubergen, Associate Professor of Communication,

Lexington, Kentucky

1994

Perceptions of Deceptive Behavior and Effects of

Perceptual Accuracy in Detecting Deception

in Marital types

By

James Randall Wood

Dr. Pamela J. Kalbfleisch
(Co-Director of Dissertation)

Dr. Norm Van Tubergen
(Co-Director of Dissertation)

Dr. Joachim Knuf
(Director of Graduate Studies)

Aug 4, 1994
(Date)

# ABSTRACT OF DISSERTATION

James Randall Wood

The Graduate School

University of Kentucky

1994

# PERCEPTIONS OF DECEPTIVE BEHAVIOR AND EFFECTS OF PERCEPTUAL ACCURACY IN DETECTING DECEPTION IN MARITAL TYPES

---

ABSTRACT OF DISSERTATION

---

A dissertation submitted in partial fulfillment
of the requirements for the degree of Doctor of Philosophy
at The University of Kentucky

By

James Randall Wood

Lexington, Kentucky

Directors:

Dr. Pamela J. Kalbfleisch, Associate Professor of Communication and Mass Media,

Dr. Norm Van Tubergen, Associate Professor of Communication

Lexington, Kentucky

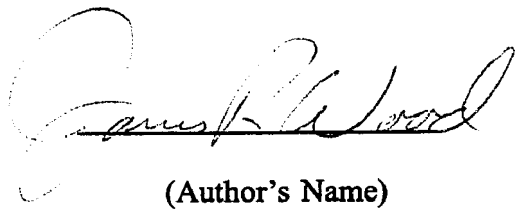
1994

ABSTRACT OF DISSERTATION

PERCEPTIONS OF DECEPTIVE BEHAVIOR AND EFFECTS OF PERCEPTUAL ACCURACY IN DETECTING DECEPTION IN MARITAL TYPES

This dissertation presents a study assessing the configuration, accuracy and utility of perceptions of deceptive behavior in marital types. Marital couples' perceptions of deceptive behavior in spouses and friends as well as beliefs about their spouse's expectations of deceptive behavior were measured with Q analysis. Further, the experimental condition assessed the accuracy of marital couples by having one spouse lie or tell the truth about pictures shown to them by the experimenter. Afterwards each completed a questionnaire to differentiate couple types. Subsequent analyses indicated that couple expectations about deceptive behavior comprised four types. Of the four types, the fourth was significantly more likely to be associated with a marital partner than with someone outside the relationship. Married couples were more likely to expect their partner to show no signs of deceptive behavior, whereas friends were more likely to be expected to show fidgeting and less eye contact among other behaviors. Additionally, the four marital couple types of Traditional, Independent, Separate, and Mixed did not show significant differences in how unique and partner specific their expectations of deceptive behavior in their spouse. Independent marital types were significantly more accurate in detecting factual lies than Mixed couple types. When the deceiving spouses correctly anticipated the target spouse's expectations about deceptive behavior they did not increase their success in deceiving.

In fact, when lying in response to emotional questions, deceiving spouses were less successful. That is, when deceivers accurately predicted the target spouse's expectations of deceptive behaviors, the target spouse made more accurate judgments. The study found that married partners did not consistently and accurately use their expectations about the partners' deceptive behaviors when making veracity judgments. These results indicate that married partners have little awareness of the cues their partners display when lying. Couples should be cautioned about making hasty attributions of deception. In addition, they should clarify the cues they actually use to make these veracity judgments.



(Author's Name)

8-4-94

(Date)

Acknowledgements

I gratefully acknowledge the assistance of all of my committee members who have served me during my work on this dissertation as well as prior to this time in class work and other projects. I thank Dr. Robert Bostrom, Dr. Jack Baseheart, Dr. Rick Hoyle, Dr. Norm Van Tubergen, and Dr. Pamela J. Kalbfleisch. An especial acknowledgement is given to Dr. Kalbfleisch for her encouragement in developing this specific proposal and dissertation work in the area of deception. As a mentor she has offered continual assistance on this project and has laboriously guided my development throughout my graduate study at the University of Kentucky. To my family I owe whatever success I attain in this endeavor. My immediate family has endured the tremendous sacrifice of time and enthusiasm during a special period in their lives. This I can never repay. I am overwhelmingly appreciative for their support and encouragement.

Table of Contents

# Chapter 1

## Statement of the Problem

When individuals attempt to deceive others they are successful roughly 50% of the time (Kalbfleisch, 1990, 1992; Zuckerman, DePaulo, & Rosenthal, 1981). Although it may seem strange, those who know each other intimately are more successful at deceiving each other than are casual acquaintances or friends (Brandt, Miller, Hocking, 1980b; Levine & McCornack, 1991; Stiff, Kim & Ramesh, 1992). Although Comadena (1982) found that marital couples were better than friends or acquaintances ($p < .07$).

Our intuition would lead us to conclude that if someone knows another person well then that person will be better able to detect aberrations from truthful behavior. Because marital couples are not better at this process of detection, there is a need for an explanation. One possible avenue to explore is the perceptions of deceptive behavior that accompany these marital relationships. If our perceptions of spousal deceptive behavior are not different from friends or acquaintances or somehow less accurate, our lack of increased ability to detect deception can be explained. Furthermore, it may be that perceptions of deceptive behavior in spouses is more or less accurate in marital couples that have different communication styles.

Deception research has not explored the role perceptions of deceptive behavior play in married couples' ability to detect deception in a partner. A wealth of literature focuses on deceptive behaviors (Buller & Aune, 1987; Ekman & Friesen, 1974; Zuckerman, et al., 1981), and perceptions of deceptive behavior (Kalbfleisch,

1990, 1992; O'Hair, Cody, Goss, & Krayer, 1988, Zuckerman et al., 1981). In addition research has examined the effects of individual difference variables such as self-monitoring and machiavellianism on both deception and detection skills (Brandt, Miller, & Hocking, 1980a; Brandt, Miller, & Hocking, 1980b; O'Hair & Cody, 1987; Riggio & Friedman, 1983; Riggio, Salinas, & Tucker, 1988;), relative detection accuracy using different nonverbal cues (e.g., face, body, voice, etc.; Ekman, 1985; Ekman & Friesen, 1974; Hocking, Bauchner, Kaminski & Miller, 1979; Kalbfleisch, 1990, 1992; Zuckerman, DeFrank, Hall, Larrance, & Rosenthal, 1979; Zuckerman, et al., 1981) and relative success in detecting deception between strangers, friends and intimates (Brandt et al., 1980b; Comadena, 1982).

Recently research has also focused on deception in intimate relationships including types of deception typical of intimates (Lippard, 1988; Metts & Hippensteele, 1988), motivation for deception in intimate relationships (Kalbfleisch & Vogl, 1993; Lippard, 1988; Metts & Hippensteele, 1988), detection accuracy (Comadena, 1982; Levine & McCornack, 1991; McCornack & Parks, 1986), and consequences of discovered deception (McCornack & Levine, 1990).

This dissertation advances the research on deception in relationships by exploring: (a) the content of married couples' perceptions of deceptive behavior in a partner; (b) the deceiving partner's perception of the target partner's expectations about deceptive behavior; (c) the influence these perceptions may have on the target partner's ability to make accurate veracity judgments; and (d) the effect of marital relationship type on perceptions of deceptive behavior and the ability to make accurate

veracity judgments.

The following chapter reviews literature on deception detection studies with special attention to studies examining judgments of perception and perceptions of deceptive behavior. In addition literature on marital communication and deception in relationships is reviewed. Following the literature review a study is presented in which perceptions of deceptive behavior in marital types is examined. Chapter four presents the results of tests of specific hypotheses and research questions related to the study. Finally, chapter five discusses the results of the study in light of the literature reviewed and presents limitations and future directions for research.

## Chapter Two

## Literature Review

This review begins by examining literature on deception cues and perceptions of deception cues and will provide a context in which to explore perceptions of deceptive behavior in marital relationships. Furthermore, studies of deception in relationships may offer some support for the utility of distinguishing deception in a relational context from deception in stranger contexts. Finally, a review of literature on communication patterns in marital types should focus attention and suggest hypotheses about deception detection and perceptions of deception.

### Perceptions of Deceptive Behavior

Independent behavioral cues associated with judgments of deception. Early studies of deception examined cues that were correlated with deceptive judgments. As noted by Zuckerman et al. (1981) these studies of cues associated with judgments of deception usually involved one of two general research paradigms. The first paradigm requires a group of judges to measure the truthfulness of a communicator's message and a second group of judges to rate the behavioral cues that accompany the communicator's message. These two measures are then correlated. For example, Kraut, (1978, experiment 1) found independent ratings of smiling behavior correlated negatively ($r$ = -.20) with subjects' judgments of truthfulness. In addition, body shifts and speech hesitations were negatively correlated with truthful judgments ($r$ = -.19, $r$ = -.24, respectively).

The second paradigm involves preparing two or more messages and varying

only the cue of interest between the presentation of these two messages. Subjects then rate the truthfulness of these different messages. For example, Kraut (1978, experiment 2) used a videotape of an individual on a supposed job interview being questioned about marijuana smoking. The interviewee behavior was manipulated by mechanically adding a pause to the videotape at key points in her response to questions. Thus, a pause and a no pause condition were created. Subjects then rated the truthfulness of the interviewee's responses in each condition. Another example of this paradigm would be Hemsley and Doob (1978) who manipulated looking (gaze) behavior.

In a meta-analysis of the deception literature Zuckerman et al. (1981) covered studies of nonverbal cues that had been the subject of two or more studies. The meta-analysis discovered eight cues associated judgments of deceptive behavior. This meta-analysis found that people tend to perceive less eye contact, less smiling, shorter response length, slower speech rate, more postural shifts, longer response latency, more speech errors, more speech hesitations, and higher pitch indicative of deception.

These studies typically examine the use of cues across subjects in a "stranger" context. That is, subjects are randomly chosen and no relationship is assumed between the observer and the deceiver in the prepared deceptions. In addition these research paradigms do not examine the awareness observers may have of the cues associated with their judgments of deception.

Perceptions of nonverbal cues associated with deceptive behavior. Zuckerman, Koestner and Driver (1981) examined research participants beliefs about behaviors

accompanying deception and behaviors associated with judgments of deception. This study found these two variables correlated at .44.

Another indication that research participants may have some awareness of the cues they rely on to make veracity judgments is the work of Hemsley and Doob (1978) who examined looking behavior effects on witness credibility. In a post experimental questionnaire research participants who had previously rated the credibility of witnesses who were either averting gaze while being questioned or who were looking directly at the interrogator were asked about nonverbal behaviors they may have used in making their credibility judgments. In the gaze aversion condition, 17 of 21 subjects noticed the looking behavior whereas only 14 of 21 noticed the looking behavior in the gaze maintenance condition.

Hocking and Leathers (1980) reported a survey conducted in 1978 that asked respondents about behaviors they believed were characteristic of a deceiver stereotype. Hocking and Leathers reported the five most commonly marked items from a checklist of 45 behavioral indicators were: defensive gestures, shakiness or trembling, fidgeting, extraneous movements and less eye contact. These behaviors were marked as more excessive than would be expected in a person telling the truth with the exception of eye contact. Four of these behaviors noted by Hocking and Leathers are similar to the body shifts referenced in the Zuckerman et al. (1981) meta-analysis. Thus, there appears to be some correspondence between perceptions people maintain about deceptive behavior and those behaviors exhibited by deceivers when observers make deceptive judgments.

Although there appears to be evidence that judges of deception are aware of the cues associated with the deceptive behavior they are judging, a consistent set of cues used by these judges is not available. There is a lack of consistency in the behaviors identified as associated with perceptions of deceptive behavior. In other words, the various research efforts have not manifested a consistent group of behaviors significantly associated with either judgments of perception or perceptions of deceptive behavior.

For example, Kraut (1978) and Bond, Kahler and Paolicelli (1984) found that observers expected deceivers to smile more, whereas Zuckerman et al. (1979) found that individuals expected deceivers to smile less. Another cue inconsistently associated with perceptions of deceptive behavior is response length. Harrison, Hwalek, Raney, and Fritz (1978) and Kraut (1978) found longer response length was associated with judgments of deception, but Kraut and Poe (1980) found that shorter response length was associated with judgments of deception.

Global perceptions about deceptive behavior. Rather than focus on individual nonverbal cues that perceivers may use in making veracity judgments, Knapp, Cody and Reardon (1987) noted that observers of deception may rely on more global perceptions of deceptive behavior. This would imply that researchers would profit by examining detection in more global terms. The following studies examined perceptions of deceptive behavior using broader categories.

Riggio and Friedman (1983) used a principal axes factor method with an oblique rotation to derive five factors from sixteen nonverbal cues associated with

deception. The factors were facial animation, body contact, eye contact, gestural fluency, and nervous behaviors. When research participants were allowed to see the whole body of the deceiver only two factors, facial animation and body contact, correlated significantly with perceptions of deception. Facial animation consisted of speech rate, head movements and smiling, whereas body contact consisted of hand to head movements.

Riggio and Friedman (1983) suggested that by grouping these nonverbal cues they may be tapping a strategy used by naive observers. In other words, they posit that observers may use groups of cues to get overall impressions. Furthermore, they offered this as a possible explanation for previous conflicting results in relating individual cues to perceptions of deceptive behavior. This is consistent with the suggestion by Knapp et al. (1987), that observers make global assessments of veracity.

In the Riggio and Friedman (1983) study, videotapes were made of individuals either lying or telling the truth. Research participants were then asked to judge whether the individuals in the videotapes were lying or telling the truth. The videotapes were then broken into timed segments and coded for nonverbal cues evidenced by the individuals in the videotapes. Riggio and Friedman (1983) factored these nonverbal behaviors exhibited by deceivers/truth-tellers and correlated these factors with judgments of deception. The data as presented do not provide evidence that subjects were aware of the cluster of cues present when they made judgments of deception.

Although this investigation provides support for examining broader categories

or clusters of cues in judgments of deceptive behavior, it does not provide information about the research participants perceptions of deceptive behavior. As Zuckerman et al. (1981) pointed out, judgments of deception and perceptions of deceptive behavior are not necessarily the same.

A second study indicating the utility of studying global perceptions of deceptive behavior is that of Pryor and Buchanan (1984). These researchers manipulated clusters of nonverbal cues for low, moderate and high anxiety conditions. A "defendant's" behavior was manipulated for these conditions by regulating levels of self-manipulations, eye contact with prosecutor (camera) and nonfluencies. This study was more restricted in the number of cues involved, and it manipulated rather than rated the behaviors. A juror rated the credibility of the defendant under one of the three manipulations or a control condition in which they were provided a transcript of the testimony. Although the trustworthiness of the defendant decreased as the anxious behaviors increased, an extremely high ratio of guilty to not guilty verdicts in the moderate condition as compared to other conditions led to further analysis.

Analysis of the individual items in the trustworthiness scale revealed that two of the items (friendly and pleasant) were much higher than the other items in their mean ratings. Thus, while defendants in this condition were rated low on honesty, virtuous, reliable and intelligent items, they were high on friendly and pleasant items. This effect was found in two different data gathering sessions. Pryor and Buchanan (1984) interpreted this as an indication that friendly and pleasant but not anxious people do not arouse suspicion, whereas friendly, pleasant and anxious people arouse

suspicion and are more likely to be considered guilty.

A third study that used more global behavioral cues found macro level communicator style attributes that correlated significantly with honesty ratings (O'Hair, et al., 1988). This study employed the Communicator Style Measure (CSM) of Norton (1978; 1983) to define the macro level behavioral cues. Specifically, of the ten potential CSM variables, O'Hair et al. (1988) adopted six dimensions that they believed would correlate with honesty ratings: relaxed, attentive, friendly, animated, dramatic, and precise.

Sixteen interviewees previously videotaped in either truthful or deceptive conditions were rated by 385 subjects on the CSM attributes selected for analysis and on four questions measuring honesty. The analysis used stepwise regression equations that significantly predicted honesty ratings for both liars and truth-tellers using the macro level CSM attributes. When not controlling for sex, liars were considered more honest when they were rated as attentive, friendly, low dramatic, and precise. Truth-tellers were considered more honest when attentive, friendly, low dramatic, precise and low animated. This study (O'Hair et al., 1988) found different macro level cues predicting honesty ratings when the sex of the liars or truth-tellers changed or when the sex of the rater was changed. In other words, sex was a significant predictor both for the rater's sex and the liar/truth-teller's sex. For example, males were more likely to rate male liars as honest when they were attentive, but they were more likely to rate female liars as honest when friendly. Females were more likely to rate both male and female liars as honest when they were attentive. Although the regression equations

were significant, the regression coefficients were moderate to small ($R^2$ = .29 male liars attentiveness rating, $R^2$ = .01 female liars relaxed rating). Nevertheless, the study did use subject-originated macro level evaluations as predictors of honesty ratings.

A fourth study examining macro level cues associated with perceptions of deceptive behavior was conducted by Wood (1993). This study directly addressed participants perceptions about deceptive behavior and sought to demonstrate that perceptions of deceptive behavior do not form a singular overall perception.

Wood (1993) demonstrated that individuals possess different clusters of cues for deceptive types. That is, a given individual may have several different configurations of both macro level (such as the CSM variables used in O'Hair et al. 1988) and micro level (individual nonverbal cues such as smiling, eye contact etc.) cues that form a deceptive type of person.

Wood's (1993) work extends Riggio and Friedman's (1983) suggestion that individuals utilize groups of cues in making veracity judgments. This extension revealed that not only do individuals use clusters of cues but that each individual may possess more than one such cluster of cues for deceptive behavior (Wood, 1993).

Wood (1993) used a Q methodology with 64 research participants. Each participant was asked to sort a deck of deceptive cues drawn from (a) the CSM variables of Norton (1974; 1988; cf. O'Hair et al., 1988), (b) micro level cues of deceptive behavior drawn from previous research on correlations of cues with judgments of deception (cf. Zuckerman, 1981), and (c) focus group discussions. There were 72 items in the sorting deck.

Each participant in the Wood (1993) study sorted the items twice. Each sort was designed to tap a different cluster of cues that may be expected of deceivers. The first sort asked research participants to sort considering what behavior they would expect to see in a used car salesperson who knowingly was lying to a customer about a used car. The second sort asked research participants to sort considering what behavior they would expect to see in a self-conscious student being quizzed by a fraternity or sorority committee about infractions of the club with which the individual was associated.

The Q methodology allows for the interrelation of items for each individual rather than across individuals as in traditional R methodology. Thus, rather than discovering a group of cues used by people in general but not necessarily by any one individual, this technique allows for discovering the arrangement of cues for each individual. These arrangements or sorts were then correlated and factored to form types of configurations of cues (Wood, 1993).

In the first sort, Wood (1993) found four types, each with distinguishing features. The first type seemed to most clearly reflect the expected stereotype of the used car salesperson. Behaviors associated with this deceiver included overly dominant, excessive smiling, quick responses, overly friendly, overly attentive, overly dramatic, and fast talking. Thus, it was marked by macro level cues and excessive behaviors.

The second type in this sort was similar to Type 1 but contained typical nervous behaviors such as excessive fidgeting, increased body shifts, and looking

away. In addition it focused primarily on micro level cues rather than the macro level cues (Wood, 1993).

The third type was similar to Type 1 but differed in its focus on vagueness of response and forced smiling, and smiling behavior. The fourth type contained behaviors that were not any different when lying than when telling the truth. It called for smiling, friendly, good communication, leaving an impression, and relaxed behavior (Wood, 1993).

The second sort in Wood (1993) resulted in two types of behavioral expectations about deceptive behavior in the college student. Both types were similar and the second type accounted for only 6 percent of the variance in the solution. These types focused on micro level cues of anxious behavior. These types contained expectations of overly tense, looking away, and excessive fidgeting. They differed in that Type 2 did not include a lack of openness as a macro level variable.

The Wood (1993) study provided a different approach to examining people's perceptions of deceptive behavior by incorporating Q methodology and using different situations as a manipulation to vary perceptions of deceptive behavior. It demonstrates that perceptions of deceptive behavior (a) can be viewed as clusters of cues, (b) that people can easily envision different clusters of cues, (c) that some of these clusters have opposing expectations, and (d) that some people may focus more on macro level cues while others may focus more on micro level cues.

In summary, most studies of perceptions of deceptive behavior have either correlated judgments of deception with cues emitted by deceiver or required subjects

to make some assessment of cues and then a judgment of veracity. Studies have focused on individual nonverbal cues, clusters of nonverbal cues or macro level communicator style variables. Individual cue studies have found conflicting results leading researchers to focus more on clusters or macro level cues as perceptions of deceptive behavior. More recent work has demonstrated that conceptualizations of deceptive behavior are more multifaceted than earlier studies assumed. People are likely to expect different and even contradictory behaviors depending upon the configuration they utilize in assessing deceptive behavior. Finally these studies have used evaluations of strangers' deceptive behavior and have not examined perceptions of deceptive behavior in relationships.

Studies of Deception in Relationships

Differences in personal and impersonal relationships and implications for deceptive studies. Previous research has indicated that deception between individuals in ongoing relationships differs in a number of ways from deception among strangers. Miller et al.(1986) pointed out several differences between personal and impersonal relationships that would likely impact the deceptive communication exchange.

Miller and his associates point out first that in relational deception the duration of the relational history differs. They suggest that in personal relationships this relational history could provide a baseline of typical truthful behavior that can assist either partner in detecting the deception of the other. In other words, relational partners are not required to rely on "stereotypical notions" (Miller, et al., 1986, p. 500) of deceptive behavior. In a pilot study reported by Miller et al. (1986) the researchers

discovered that respondents reported focusing on verbal and nonverbal behaviors of intimates when detecting deception. These same respondents reported focusing more on the story or line they were being told when judging strangers.

A second difference between personal and impersonal relationships is the extent of interaction opportunities (Miller et al., 1986). This opportunity enhances the chances for evaluating probes and questions. However, it may also make such evaluations more difficult. Miller and his associates reason that in relationships the level of personal involvement may cloud one's ability to discriminate and evaluate the other's behavior while engaged in conversation. Passively evaluating a stranger (especially from a videotaped segment as in most research protocols) is different from actively engaging a relational partner because of the cognitive load one has to bear in the topic of discussion and its implications for the relationship.

Buller, Strzyzewski, and Comstock (1991) found that probes indicating the target was suspicious altered the behavior of deceivers. Stiff and Miller (1986) found that different types of probes (negative, positive, and neutral) altered the behaviors of deceivers. Since personal relationships provide more opportunity for probing this makes the deceptive encounters in these relationships qualitatively different from impersonal ones.

A third way personal relationships differ from impersonal ones according to Miller et al. (1986) is the degree of concern for the relational outcome. This defining characteristic of personal relationships would tend to affect motives for deceiving, outcomes of discovered deception, and heighten anxiety over the possibility of being

discovered (Miller et al., 1986).

Studies of the deceiver behavior in relationships. Several studies have examined deception in relationships. This research has investigated motives for deception, types of deception, consequences of deception, ability to detect deception, and ability to infer the truth behind deceptive messages.

First, Metts and Hippensteele (1988) recruited couples in various relationships from casual friends to married couples. There were no differences in the types of deception used; concealment, evasion, and falsification were distributed equally among the couple types. Differences were found in the motives for deception. Casual dating partners were more likely than married partners to lie out of fear of terminating the relationship. They were also more likely than married partners to lie because of fear of damaging the relationship. Finally, friends were more likely than married couples to lie to prevent a partner from borrowing something. Metts and Hippensteele suggest that while formative and tenuous relationships may be characterized by efforts to maintain stability, more developed relationships are more concerned with the partner's image.

Additional evidence of differences in deceptive behavior in various relationship types is found in Lippard (1988). Seventy-four research participants reported instances of deception over a three-week period and described the type of deception, recipient of the deception, and the primary motivation for the deception. Nine hundred forty acts of deception revealed that there were "situational exigencies" (Lippard, 1988, p. 96) that made a certain type of deceptive act likely. Parental questioning makes lying a

reasonable alternative to telling the truth for many teenagers. Other situations were excuses to powerful others, preventing hurt feelings, saving face, and feigning willingness to comply with request to avoid conflict or confrontation.

In addition, Lippard (1988) found that most lies occur in intimate relationships (boy/girl friend, close friend, roommate, parent, spouse, sibling, child) rather than non-intimate ones (casual friend, stranger, boss, subordinate). The very increase in interaction opportunities apparently leads to increases in deception. Lippard also found that deception seemed to work as a power balancing strategy in relationships. The individuals lied to most were parents followed by superiors.

The function of deception in relationships was further explored by Kalbfleisch and Vogl (1993) who examined the utility of deception as a relational maintenance strategy. Kalbfleisch and Vogl (1993) found that deception intended to harm others was related to other antisocial maintenance strategies and negatively related to other types of relational maintenance strategies. Deception that spared the other was least associated with other maintenance strategies and appeared to have the least potential to impact the relationship.

Deceivers in relational communication have been shown to exhibit different nonverbal behavior patterns than deceivers in impersonal relationships (Buller & Aune, 1987). Buller and Burgoon (1994) have argued for two types of deceptive behaviors. In their functional approach to deception, deceivers are believed to emit nonstrategic arousal cues as well as strategic behaviors to camouflage the deception and establish or maintain interpersonal distance with the target.

Following this model Buller and Aune (1987) employed procedures that required forty eight research participants to recruit someone with whom they had an intimate relationship and someone with whom they were friends. Strangers were recruited independently. Research participants interviewed in sequence the stranger, friend, and intimate about their responses to personality scales previously completed. The researchers found that deceptive friends and intimates displayed more immediacy as conversations progressed than did strangers. Specific immediacy behaviors that significantly predicted this trend were gaze behavior and backward lean. Thus, deception in personal relationships differs from deception in impersonal relationships through the strategic behaviors employed in developed relationships to increase immediacy in the conversation.

In summary, studies of the deceiver in relationships has found that motives for deception differ with the level of relational involvement, that more lies are told to those with whom we have developed relationships and that the nature of the relationship itself often promotes deception as a maintenance strategy. Deceivers in relationships have also been found to exhibit different strategic nonverbal cues during deception than strangers.

Studies of target behavior in relationships. Research indicates that intimate relational partners are not as accurate in detecting deception as are friends, whereas friends are more accurate than strangers (McCornack & Parks, 1986; Miller et al., 1981; Stiff, Kim & Ramesh, 1992). Most of the studies of deception detection in relationships have focused on this anomaly.

Brandt, Miller and Hocking (1980b) found that increases in the number of exposures to a person's truthful communication led to greater accuracy in detection over no exposure to this baseline of truthful information. Scholars have assumed that partners in intimate relationships have an increased baseline of information available to utilize in the deception detection process (Miller et al., 1986).

However, in spite of this increase in idiographic knowledge of intimate partners, relational partners are not more accurate in detecting deception in each other. Comadena (1982) examined detection accuracy in friends and intimates and found that there was no significant difference between the two groups, although there was a trend indicating intimates were more accurate ($p < .074$). Miller at al. (1981) found that friends were significantly more accurate than spouses in detecting emotional but not factual lies. There were no differences found among strangers, friends and spouses for detecting factual lies. Taken together these findings indicate that at best there is a cap on the utility of increased relational familiarity in detecting deception.

Since intimate partners do not benefit from the increased availability of baseline information about truthful behavior, some explanation is needed. One explanation is that of McCornack and Parks (1986) who found that relational development leads to greater confidence in honesty judgments, which leads to "truth bias" or a presumption of honesty. Finally, they found that accuracy in judgments of honesty increased as the presumption of honesty increased.

In their study McCornack and Parks (1986) used sixty couples who were neither married nor engaged. Relational development was measured using the Rubin

love scale, an eight item global uncertainty scale from Parks and Adelman (1983), and two items asking subjects to report the percentage of their time spent with their partner over the last two weeks and the number of days in the past two weeks they had communicated with their partner. These measures were combined to form an index of relational development. Truth bias was measured by McCornack and Parks (1986) as the ratio of the number of judgments of truth as opposed to the number of false judgments.

This bias is believed to be a natural outcome of the effects of relationship development. The rationale for the truth bias is that the positive regard relational partners have for each other leads them to have increased confidence in their judgments. This increase in confidence is reflected in a way consistent with the general positive regard the individual has for the partner. Since the partner and the relationship are regarded positively and the confidence in assessing the partner and the relationship is high, there is an expected increase in the number of honesty judgments made compared to lie judgments (McCornack & Parks, 1986).

Two refinements of the truth bias have been offered by other researchers. First, Buller and Burgoon (1994) suggest that truth bias is a function of the attributional bias of relational schemata. Buller and Burgoon rely on the work of Planalp (1985) to develop their argument. Planalp found that research participants had developed schemata for relationship behavior. Using a recall method subjects demonstrated strong memory biases for behavior specific relational communication knowledge. Buller and Burgoon (1994) suggest that truth bias is a part of the

relational schemata that partners develop. No clear demonstration of this connection to relational schemata has yet been demonstrated.

A second refinement of the truth bias was offered by Stiff et al. (1992). Stiff et al. define the truth bias as a cognitive heuristic that acts as a decision mechanism attributing truth to the partner. This heuristic functions to ease the cognitive load and speed the decision process.

Stiff and his associates (1992) found that suspiciousness was negatively related to the truth bias. That is, when relational partners become suspicious the truth bias effect is diminished. Thus, the truth bias as an explanation for the lack of accuracy in more developed relationships is not adequate under conditions of suspicion.

Although the Stiff et al. (1992) definition of the truth bias is theoretically appealing, their operationalization used four items that asked research participants to rate on a seven point scale their belief in their partner's general truthfulness. The problem with this operationalization is that, whereas Mccornack and Parks (1986) operationalized the truth bias as a ratio of truth to lie veracity judgments made by partners, Stiff et al. (1992) used four items with a seven point scale. The use of a global measures (such as that of Stiff et al., 1986) of honesty are consistent with a generalized belief of honesty in the partner (Levine & McCornack, 1991), and dichotomous truth/false items are consistent with the cognitive heuristic conceptualization. In other words, if one is measuring a decision mechanism that operates automatically in processing information and reducing the cognitive load a simple count of the decisions made would seem appropriate. If one is interested in a

general feeling of honesty for a partner a scale with greater variability seems appropriate.

The Stiff et al. (1992) study found that suspiciousness was negatively related to the truth bias. However, Levine and McCornack (1991) suggest that if one accepts the conceptualization of truth bias as a cognitive heuristic, the conclusion reached by Stiff et al. (1992) seems invalid because of the improper operationalization of the concept (Levine & McCornack, 1991). Given their operationalization, Levine and McCornack (1991) suggest that Stiff et al. (1992) have found that suspiciousness is negatively related to a generalized partner trust.

The functional relationship of these variables in the model were tested by Levine and McCornack (1991) under three conditions of suspicion. They found that the model was consistent with the data at all three levels of suspicion (low, moderate, and high). Although the model's functional relationships were not affected by levels of suspicion, the role of suspicion itself was not examined.

One final study of the detector's behavior is McCornack and Parks (1990) examination of leakage detection. Leakage detection was differentiated from deception detection, since individuals may be able to determine when deception is taking place (deception detection) but they may not be able to discern the truth behind the deceptive message (leakage detection). McCornack and Parks found that relational involvement had main effects on leakage detection such that greater intimacy lowers the accuracy of leakage detection. In addition female spouses were better detectors of leakage.

In addition to detection abilities, at least one study has examined the outcomes of discovered deception in relationships. In a self-report study of 394 subjects, McCornack and Levine (1990) found that the emotional intensity of discovered emotion was positively related to relational involvement, information importance, and lie importance.

Summary of studies of deception in relationships. A number of studies have demonstrated that deception in personal relationships requires analysis separate from deception in impersonal relationships. The relational history, opportunity for interaction, and expectation of future interaction (Miller et al., 1986) lead to different behavior patterns for deceivers and targets alike in personal relationships. Greater relationship development produces different motivations for lying and more intense emotional reactions to discovered deception. Deceivers display different nonverbal patterns to control immediacy in personal relationships than strangers.

Most research has focused on the accuracy of intimate relational partners to detect deception. Relationship development does not lead to greater detection accuracy. Instead, increases in confidence lead to truth bias. This truth bias has at least two general definitions. The first is a generalized belief in the honesty of the partner, and the second is a cognitive heuristic. Suspiciousness has been shown to be negatively related to the first conceptualization and operationalization of the truth bias. The truth bias leads to decreases in detection accuracy.

None of the studies to date have examined the behavior that marital partners associate with each other's deception. Furthermore, most of the studies of the

accuracy of relational partners in detecting deception were based on relational development measures with subjects who were not married or engaged. Most of these studies also use procedures that rely on relational partners making veracity judgments from videotaped interviews conducted by a third party.

Clearly, in order to understand relational deception more fully, marital partners should be allowed to make predictions of each other's behavior and then interactively test these predictions. This would allow researchers to understand deception and detection processes in the desired context. Marital deception should be studied using actual married couples and not simply those who are dating or have a higher score on an intimacy scale.

Deception and Marital Types

Studies of marital communication reveal that married couples are not alike and that these differences are more complex than once believed (Fitzpatrick, 1988). Thus, when considering deception and detection of deception in relationships, taking these differences into consideration is appropriate in order to capture a more accurate picture of these processes in relationships.

Differences in communication between marital types. Previous research on married couples has found that different levels of satisfaction are associated with different communication patterns and beliefs about communication between marital partners. For example, Fitzpatrick and Badzinski (1985) found that happy couples believe that they can communicate well and accurately interpret each other's nonverbal behavior.

Additionally, there is some evidence that happy couples actually are better at interpreting each other's behavior than unhappy couples. Kahn (1970) found that for couples with high satisfaction scores the husband's interpretations of the wife's nonverbal cues was more accurate than the interpretations of husbands from couples with lower satisfaction scores. In this study, wives were given a statement such as "I'm cold. Aren't you?" Using the same verbal message and whatever nonverbal message was appropriate research participants were then told to convey one of the following messages: (a) you wonder if he is also cold or it is only you who are cold, (b) you want him to warm you with physical affection, or (c) you want him to turn up the heat. Satisfied husbands were significantly better than unsatisfied husbands in interpreting the wives' messages.

Gottman (1979, 1994) proposed that happy couples develop a private message system and learn how to send and receive messages more accurately within the relationship. Support for this was found in a study in which couple interpretations of messages were compared with outsider interpretations. When the wives were the senders of messages there was a significant difference in the interpretations of satisfied husbands and that of outsiders but not between unsatisfied husbands and outsiders. This suggests that in nondistressed or happy couples (where accuracy is greater) there is a uniquely developed code within the relationship (Gottman, 1979, 1994).

In addition to the development of a private code, the differences in accuracy between happy and unhappy couples has been attributed to the failure of unhappy

couples to use the message channel that they have the most competence in using (Noeller, 1984). Noeller (1984) found that unhappy wives inaccurately used the vocal channel in decoding messages whereas happy wives accurately used the visual channel. The opposite was true of husbands. Unhappy husbands used the visual channel and were inaccurate, whereas happy husbands used the vocal channel and were accurate.

A series of studies by Gottman (1979, 1994) and his associates provides further evidence that distressed and nondistressed couples can be differentiated on the basis of their communication patterns. Gottman (1979, 1994) has found support for four major hypotheses. First, distressed couples are more rigid and less flexible in their communication patterns than nondistressed couples. Second, distressed couples are more negative. Third, distressed couples are more likely to reciprocate negative messages. Fourth, distressed couples have asymmetry in their predictability as compared with nondistressed couples. That is, one partner's behavior serves a good predictor of the other but not vice versa.

In summary, marital communication research reveals that happy or satisfied couples can be distinguished from unhappy or dissatisfied couples on the basis of their communication styles, patterns and accuracy of interpretation. Happy couples are more likely to develop idiosyncratic codes for interpreting each other's nonverbal behavior.

Distinguishing marital types. While the literature reviewed above demonstrates that differences exist between happy and unhappy couples, the use of a

single criterion (satisfaction or happiness) for studying marital couples is less than satisfying. Fitzpatrick (1988) has examined marital relationships and developed a typology that is more empirically based and differentiates couples using a broader set of dimensions. This does not mean that satisfaction is not an important variable in marital research. Rather, it suggests that married couples have substantively different relationship patterns and these patterns are not necessarily correlated with satisfaction. Not all satisfied couples have the same type of relationship and neither do unsatisfied couples (Fitzpatrick, 1988). The typology developed by Fitzpatrick (1988) allows for three pure couple types (where both husband and wife agree on the definition of their marriage) and six possible "mixed" couple types (where husband and wife disagree on their marital definition). The three pure couple types are defined by Fitzpatrick (1988) as Traditional, Independent, and Separate. A Traditional couple is noted for conventional ideology, preference for stability over spontaneity, community customs, interdependence in marriage, a high degree of sharing and companionship, regular daily time schedule, low level of support for autonomous space, low assertiveness, and tending not to avoid conflict with spouses (Fitzpatrick, 1988).

Independents are nonconventional in their views about relationships and believe that marital bonds should not constrain individual freedom. They have a high level of companionship and sharing, but this companionship and sharing is qualitatively different from traditionals. They stay psychologically close to each other but maintain separate physical spaces to control access. They tend not to avoid conflict, are assertive, and have difficulty keeping a regular time schedule (Fitzpatrick, 1988).

Separate couples are similar to traditionals in that they are conventional in marital and family issues, however, they simultaneously support values held by Independents and stress individual freedom over the constraints of the relationship. Separates are ambivalent about their relational values, have less companionship and sharing in marriage, keep psychological distance, are less interdependent than the traditionals and independents. Separates additionally maintain autonomy through space, keep regular time schedules, and avoid open conflicts (Fitzpatrick, 1988).

Mixed couples have relationships in which the husband's perspective represents one of these three marital types and the wife's perspective represents a different marital type (for example, Independent/Traditional). Fitzpatrick (1988) reports that these Mixed couples are more similar to other Mixed couple types than they are different, with the exception of Separate/Traditional (husband is separate and wife is traditional) mixed couple types. The Separate/Traditional represents a distinct relational pattern with a withdrawn husband and a compassionate wife. Thus, all combinations of mixed couples are typically combined for analysis with the exception of Separate/Traditionals.

Fitzpatrick's (1988) study of message interpretation illustrates how these couples may be expected to differ in their mutual perceptions. Specifically, in comparing all couple types, Separates were the least accurate in interpreting their spouses' emotional messages with Separate husbands being less accurate than Separate wives. Independents were the most accurate of all the couples in interpreting the emotional messages of their spouses. They were also highly confident in these

interpretations. Traditional couples were also confident in their interpretations but were not as accurate as Independent couples. The greatest accuracy for Traditionals was achieved by wives when they correctly inferred their husband's sexual interest. For Mixed couples, husbands were more accurate than their wives in their interpretations of emotional messages.

While these findings suggest that Independents are more accurate in their perceptions of their partner's emotional messages, it should be noted that this study did not involve deceptive messages. Specifically, the Fitzpatrick (1988) study, as well as the other studies of communication accuracy (e.g., Fitzpatrick & Badzinski, 1985; Gottman, 1979; Kahn, 1970; Noeller, 1984), assume a mutual effort to communicate honestly. In deceptive communication this is not true. In other words, when a spouse accurately interprets the partner's emotional messages, it is due in part to the honest attempt of the spouse to send a message. When deception is involved, the sending of the message is complicated by mixed motives. In this case, an accurate interpretation of the message would be somewhat contradictory to the intended message and qualitatively different from the accuracy of the type in the previous studies. When the deceiver is successful, this would by definition mean that the target of the deception was not accurate in his/her interpretations.

Deception presents a communicative situation in which individuals are required to rely more heavily on their own perceptual skills in order to deceive their partner or on their perceptual skills to correctly infer the intentions of a partner they suspect is deceiving them. Grice (1975) has proposed that meaningful conversation requires

cooperation and the assumption of truthfulness--the Quality Maxim. Unlike most conversations that assume this maxim of quality (Grice, 1975) and a principle of cooperation, when deception is suspected communicators are required to establish whether their partner is actually being truthful before they can proceed to what would otherwise be a straightforward interpretation of messages. Additionally, deceivers have to anticipate partner expectations about deceptive behavior and adjust their presentations in order to be successful. This would mean that those with more accurate perceptions and expectations about deceptive behavior for a given individual are more likely to be successful in either deceiving or detecting deceit.

The studies on couple communication patterns (e.g., Fitzpatrick, 1988; Fitzpatrick & Badzinski, 1985; Gottman, 1979; Kahn, 1970; Noeller, 1984) suggest that some couples are more likely than others to develop complex and specialized cognitive structures for their partner's communication patterns. It follows that those couples who have complex and individualized person structures will develop more specialized cognitive representations for their partners' deceptions. In addition, these couples are more likely to engage in metaperception processes and to utilize these processes in deception and detection of deception. Other couples are more likely to have general and stereotyped cognitive expectations about deceptive behavior and are therefore more likely to rely on this information in making veracity judgments about their partner.

As indicated previously, Traditional couples rely more on relational role expectations for attributions about their partner than do Independent couples.

Conversely, Independents are more unique and flexible in their expectations. This analysis of couple types suggests that Independent partners will develop more individualized cognitive expectations of their partner's deceptive behavior than will Traditionals couples.

Since Separates are less accurate in their interpretations of each other's behavior, tend to avoid conflict, and are emotionally distant (Fitzpatrick, 1988), it is expected that they would have less finely tuned expectations about partner behavior. Mixed couples also avoid conflict and use non-hostile tactics when they do have conflict (Fitzpatrick, 1988). Given the differing views of the relationship for Mixed couples, it is expected that these couples will be more general in their behavioral expectations for their partners.

Hypotheses

The literature reviewed above indicates that marital couple types will differ in their use of individualized expectations about their partner's deceptive behavior. The following hypotheses are thus proposed:

H1: Members of Independent couples will have expectations of deceptive behavior for their relational partners that are more unique and partner specific than the expectations of other couple types.

H2: Members of Traditional couples will have expectations of deceptive behavior for their relational partners that are less unique and partner specific than the expectations of Independent couple types.

H3: Members of Mixed couples will have expectations of deceptive behavior for

their relational partners that are less unique and partner specific than the expectations of either Independent or Traditional couples.

H4: Members of Separate couples will have expectations of deceptive behavior for their relational partners that are less unique and partner specific than Independent, Traditional or Mixed couples.

Since the ability to anticipate partner expectations could provide one with the information necessary to correctly adjust behavioral performance and mask deception, accurate metaperceptions (perceptions of their partner's expectations about their deceptive behavior) may differentiate more and less successful deceivers. Thus, the following hypothesis is proposed:

H5: Deceivers who have greater accuracy in metaperceptions of their partner will have greater success in deceiving their partner.

Similarly, if a target of deception can correctly anticipate the deceiver's behavior while lying, he or she will be better able to detect deceptive behavior. This should be true under conditions of suspicion when the partner is more likely to monitor the other's behavior (Stiff et al., 1992). Therefore the following hypothesis is proposed:

H6: Deceiver behavior will match the target's expectations when the target makes accurate veracity judgments.

As the literature review indicates there is some doubt about the awareness that individuals have of their partner's behavioral cues when they judge their partners to be

lying. Therefore the following research question is proposed:

R1: Do married partners make judgments of veracity based on their expectations about deceptive behavior in a spouse?

Since married partners are not as accurate as acquaintances in making veracity judgments, one possible explanation is that married partners do not have accurate expectations of the partner's deceptive behavior. Thus, the following hypothesis is proposed:

R2: Do married partners expectations about deceptive behavior in a spouse correlate with behaviors actually present in the spouse when they attempt to deceive?

Although there are differences among the couple types in ability to interpret each other's nonverbal cues, the nature of deception may tend to level the field. In other words, since at least one partner is not cooperating in the communication process in a truthful manner, the differences in interpretive ability may be blurred. Hence, no specific hypotheses are predicted regarding deception detection ability among the couple types. Instead, the following research questions are proposed:

R3: Members of which couple type (Traditional, Independent, Separate, Mixed) will have the greatest accuracy in veracity judgments of their partner?

R4: Members of which couple type (Traditional, Independent, Separate, Mixed) will have the greatest success in deceiving their partner?

One final research question explores the content of the behavioral expectations of marital couples.

R5: What are the actual behavioral expectations of married couples as compared with their expectations of friends outside the relationship?

In summary, research on perceptions of deception have not used marital couples in research protocols to discern their perceptions of spousal deceptive behavior. Further, when relational couples are used in deception studies they typically are not allowed to interact with each other in a test of their deception detection skills. In contrast to other levels of developing relationships (e.g. dating, engaged, friends) marital types have unique patterns of communication that suggest a need to study marital partners and their perceptions of deception in their relationships. The study detailed in the following chapters investigates perceptions of deceptiveness in marital types.

# Chapter Three

## Methods

### Research Participants

Fifty-nine couples were recruited for this study. Recruitment procedures included three advertisements in a local daily newspaper, one week of advertisement in a daily college newspaper (See Appendix A for advertisement), and fliers strategically placed in various buildings on local university and community college campuses. In addition, several hundred fliers were distributed to married campus housing, low and middle income apartment complexes, and townhouses and duplexes in the community; on cars in parking lots around the university campus, at local shopping centers, and the downtown public library; on bulletin boards around a local alternative progressive theatre; and bulletin boards in local shopping centers (See Appendix B for flyer). Couples were also solicited through personal contact by handing out fliers and asking for participation at the local alternative progressive theatre, in local churches, and from house to house in the researcher's neighborhood. Participants were also recruited through advertisements in Communication classes at the local university and community college. Finally, couples were recruited through solicitation in a local shopping mall.

Four couples were deleted from analysis because they represented the unusual mixed type of Separate/Traditional that Fitzpatrick (1988) has found to be significantly different from other mixed types. In addition, five other couples were deleted from the deception detection analyses because they failed to complete the

protocol as prescribed by the researcher. These subjects became confused during the interaction and either told the truth when they were supposed to lie or vice versa. One research participant stopped the procedure, a second lied for all interactions except the first, and the other three were judged to have significantly altered their behavior because of their confusion. Thus, four Separate/Traditional, two other Mixed couple types, and three Traditional couples were deleted from the analysis. However, these research participants were included in the Q sort analyses, because the deception manipulation did not affect the Qsort procedure.

Table 1 summarizes the demographics of the couple types. Couple types differed significantly in the mean number of years married ($p < .03$) and mean age ($p < .02$). The number of years married ranged from 3.71 for Independent couple types to 11.66 for Separates couple types. The grand mean was 9.27. Couple types ranged in age from 44.33 for Separates to 28.85 for Independents. Average age for males was 34.46 while females averaged 32.27. In contrast to Fitpatrick's (1988) study which found no significant demographic differences in types, Separates differed sharply from the other couples in that they were significantly older.

Procedure.

Couples recruited from the mall were offered ten dollars to complete a questionnaire. Their phone number was taken and they were told they may be contacted soon for further participation. Couples who were later contacted and who completed the protocol were given an additional twenty dollars. All couples who responded to advertisements and flyers were given twenty dollars for their

Table 1

Sample Demographics for Couple Types

| Couple Type | N | Years Married Mean | Age Mean |
|---|---|---|---|
| Traditional | 27 | 11.03 | |
| Husbands | | | 35.67 |
| Wives | | | 34.07 |
| Independents | 7 | 3.71 | |
| Husbands | | | 30.00 |
| Wives | | | 27.71 |
| Separates | 3 | 11.66 | |
| Husbands | | | 46.66 |
| Wives | | | 42.00 |
| Mixed | 18 | 7.93 | |
| Husbands | | | 31.62 |
| Wives | | | 29.31 |
| Separate/Traditionals | 4 | 10.25 | |
| Husbands | | | 36.00 |
| Wives | | | 32.25 |

participation in the study if they completed the protocol. Couples recruited from Communication classes were offered extra credit in their classes in addition to receiving twenty dollars when they completed the experimental protocol. Couples who agreed to participate were given an appointment time by the researcher. When the couple arrived at the Communication laboratory on campus, they were escorted to separate rooms where they were separately informed of the nature of the study and their respective roles. They were then asked to sign a consent form before continuing (See Appendices C and D for consent forms). One spouse was informed that they would be in the role of an interviewer, and the other was told that they would be in the role of the interviewee. With each new couple the roles were alternated between interviewer and interviewee. That is, if the first couple had the husband in the interviewee role then the second couple would have the wife in the interviewee role.

The interviewers were requested to ask their spouse questions about seven pictures their spouse would be shown. They were told their spouse may or may not be telling the truth and that their task would be to make a veracity judgment of their partner's responses after each question they asked. The experimenter provided the interviewers with the questions they were to ask their partners (See Appendix E). They were reminded that each question was to be considered separately. That is, each interviewer's veracity judgments was to be made independently of other judgments. The questions were: (a) What did you see in the [first] picture?; (b) How did you feel about that picture?; and (c) Are you really telling the truth? (cf. Comadena, 1982). Interviewers were told they were not allowed to ask additional questions. The

interviewers were also informed that the interaction was to be videotaped and that following the interaction, they would be sorting cards and filling out questionnaires. To add motivation to succeed in detecting deception, each interviewer was told that the best detector of deception would be given $50.00 (The best detector in this study correctly judged all twenty-one responses and received the $50.00).

Immediately after the interaction, interviewers were asked to write down anything that might have helped them to make their veracity judgments (See Appendix F). Next, interviewers were asked to complete the Relational Dimensions Instrument (RDI, Fitzpatrick, 1988). This instrument is a seventy-seven item scale with eight dimensions: sharing, traditional ideology, uncertainty, temporary regularity, autonomy, assertiveness, space and conflict. Table 2 indicates the reliabilities for the subscales of the RDI reported by Fitzpatrick (1988) along with the reliabilities obtained in the current study. The instrument differentiates marital types using Likert type scales.

Table 2

Alpha Reliabilities for the Relational Dimensions Instrument

| Subscales | Reliabilities (Current Study) | Reliabilities (Fitzpatrick) |
|---|---|---|
| Traditionalism | .75 | .80 |
| Uncertainty | .53 | .60 |
| Sharing | .86 | .88 |
| Temporal Regularity | .82 | .82 |
| Undifferentiated Space | .36 | .52 |
| Autonomy | .58 | .46 |
| Conflict Avoidance | .64 | .60 |
| Assertiveness | .61 | .65 |

Some items are bounded by strongly agree and strongly disagree, and other items are bounded by always and never.

After completing the RDI, they were asked to perform their first sort of deceptive behaviors. This sort required the interviewer to sort a deck of communication cues taken from Norton (1974), Zuckerman et al., (1980), and focus group discussions. The composition of the deck is reported in Wood (1993) and is shown in Table 3.

The interviewers were told to sort the deck from (a) the behaviors they would most likely expect to see in an acquaintance when telling a lie about their plans for the weekend to (b) those behaviors they would least likely expect to see. The sort was a forced quasi-normal distribution with 75 items in eleven columns. The number of items in each column of the sort were 3, 4, 6, 9, 10, 11 10, 9, 6, 4, 3. Prior to the sort the researcher reviewed the written instructions with the interviewers to make sure they understood the task (See Appendix G for participant forms with instructions). Following this sort, the interviewers were asked to use the same deck and sort them from (a) the behaviors they would most likely expect to see in their spouse when their spouse was telling a lie about their plans for the weekend to (b) those they would least likely expect to see. The same distribution was used for this sort (See Appendix H). Following the two sorts the interviewer completed a brief questionnaire (See Appendix I).

Meanwhile, the interviewer's spouse was informed by the experimenter that he/she would be in the role of interviewee. Interviewees were shown a series of

Table 3

Micro and Macro Level Cue Sort Items

| Micro Level Items | Macro Level Items |
|---|---|
| looks away | overly dramatic |
| normal eye contact | dramatic |
| stares | not dramatic at all |
| physical contact drops | overly contentious |
| physical contact unchanged | not contentious |
| physical contact increases | contentious |
| amount of talk is the same | tense |
| verbal response length drops | relaxed |
| verbal response length longer | overly tense |
| sudden drop in smiling behavior | overly apprehensive |
| smiles | not apprehensive at all |
| excessive smiling | apprehensive |
| forced smile | overly relaxed |
| no change in smiling behavior | not animated at all |
| suddenly quick to respond verbally | animated |
| takes a long time to respond verbally | overly animated |
| amount of time before responding unchanged | does not leave an impression |
| no change in fidgeting behavior | definitely leaves an impression |
| excessive fidgeting | leaves an impression |
| excessive drop in fidgeting behavior | friendly |
| no change in rate of speech | not friendly at all |
| suddenly talks much slower | overly friendly |
| suddenly talks much faster | not open at all |
| no change in speech hesitations | open |
| speech hesitations drop | overly open |
| speech hesitations increase | overly dominant |
| suddenly talks much softer | dominates the conversation |
| suddenly talks much louder | overly passive |
| volume does not change | not attentive at all |
| increase in body shifts | attentive |
| no change in body movements | overly attentive |
| fewer body shifts | communicates exceptionally well |
| pitch increases/becomes higher | |
| pitch decreases/becomes lower | |
| no change in pitch | |

Table 3 continues

| Micro Level Items | Macro Level Items |
| --- | --- |
| | does not communicate well |
| | communicates well |
| | vague |
| | precise |
| | overly precise |

pictures and asked to provide their true response to each picture. The pictures were of a new car, a flower arrangement, a man shooting his wife, malnourished children, landscapes, and a war casualty (See Appendix J). Interviewee's responses were measured with a seven point scale and anchored by extremely pleasant and extremely unpleasant (See Appendix K for scale). This scale provided a tool for constructing true and false responses for each participant.

Interviewees were requested to lie about three pictures. With each couple the pictures used for the lie condition were alternated between pictures two, four and six and pictures three, five and seven. The lie condition for a picture required the interviewee to lie in response to all three questions. To increase participant motivation to succeed each interviewee was told that the best deceiver in the study would be given $50.00 (The best deceiver in this study received $50.00 obtaining a low partner score of 4 correct veracity judgments). After the interviewee completed the response sheet, a cue sheet was constructed to remind the interviewee of the pictures they had seen and insure the truth conditions and lie conditions were followed (See Appendix L). The interviewee was then escorted into the room with the interviewer and seated. After the interviewer completed the questions and made the veracity judgments, the

interviewee was escorted back to another room and given instructions for completing the RDI.

Following completion of the RDI the interviewee was given instructions on completing the sorting task (See Appendix M). In contrast to the task of the interviewer, the interviewees were asked to sort the deck of communication cues from (a) those behaviors their spouse would most likely expect to see when the interviewees told a lie about their plans for the weekend to (b) those the spouse would least likely expect to see. After completing the sorting task the interviewee completed a brief questionnaire (See Appendix I).

All couples received $20.00 as advertised when they completed their participation in the study. Each participant received $10.00. In addition, couples recruited through Communication classes in which one or both spouses were students received extra credit in these classes for their participation. This procedure varied slightly for couples recruited through the local shopping mall. These couples received $10.00 for completing the RDI and an additional $20.00 per couple for completing the session. Only one couple recruited through the mall completed the protocol and received the $20.00.

Coding

Videotapes of the deceiver (interviewee) were coded for both nonverbal micro level and global macro level communicator attributes that surfaced in the expected behaviors of target spouses. Specifically, micro level cues coded were speech errors, fidgeting, rate of speech, response latency, smiling behavior, eye contact, body

movement, speech hesitations, volume and length of response. Macro level cues coded were friendliness, animation, dominance, apprehension, tension, dramatic, general communication quality, vagueness, openness and attentiveness. Physical contact was not coded, since couples were seated throughout the interview prohibiting the possibility of physical contact.

Four coders were trained in coding. After coding a small number of micro level behaviors one coder ceased to participate. The remaining coding was completed by the three remaining coders. Coders were provided with oral and written descriptions of behaviors and attributes to be coded (for definitions of behaviors see Appendix N). After approximately two hours working with definitions and examining tapes together, coders were left to code independently. Reliabilities were low on macro level behaviors and coders worked together and recoded to increase reliability for these behaviors.

Two general approaches to coding were taken. The first was an actual count of behaviors. This was used for coding speech hesitations, speech errors, fidgeting behaviors, body movements, and response length. A second approach to coding involved a rating scale from one to seven. Eye contact and smiling behavior as well as all macro level attributes were coded with this type of scale. The third type of coding was a form of the counting approach. The rate and response latency were coded to hundredths of a second using a stop watch.

Coding reliabilities were computed for all behaviors and attributes coded. Behaviors coded for an actual count were coded using an altered form of Cohen's

Kappa (Cohen, 1960). Cohen's Kappa uses the formula of $P_o$ - $P_c$ over $P_c$. In this case $P_o$ stands for percentage of observed agreement among coders. $P_c$ represents the percentage of agreement expected by chance alone. Various formulas for chance have been developed (cf. Cohen, 1960; Fleiss, 1971; Hughes & Garrett, 1990). Brennan and Prediger (1981) have demonstrated that the formulation $P_c$ in Cohen's Kappa (using the cross products of the coder matrix for categories as a percentage of agreement) penalizes coding that uses a small number of categories and codes a small number of behaviors. They recommend formulating $P_c$ as 1/N where N equals the number of categories. This formulation has been adopted by other Communication researchers (cf. Berger, Karol, & Jordan, 1989).

Since the coding for the micro level categories in this dissertation was essentially two category schemes (either true behavior or not a true behavior; i.e. there was a fidget present or there was not) and many of these schemes involved a small number of behaviors per subject, this adaptation is used for a measure of intercoder agreement.

In addition, this coding method represents a particularly strong measure, because it is a measure of absolute agreement. Reliability is more commonly considered a measure of the proportional agreement among coders of subjects and not agreement in absolute ratings (Tinsley & Weiss, 1975). Here proportional increases and decreases from subject to subject or from time to time for a particular subject are of the most interest and not the absolute value of the score. Correlation measures are typically used for this kind of reliability measure. What is of the greater interest in

this dissertation is the relative value of the ratings. That is, the primary concern is whether there are significantly more or less of a given behavior in truthful versus lie conditions. Nevertheless, since nominal data are being considered, correlations are not used and the more stringent coder agreement measure is used. Reliabilities for micro and macro level behaviors are reported in Table 4.

In summary 59 couples were recruited for participation in the study. Four of

Table 4

Intercoder Reliabilities for Micro and Macro Level Behaviors

| Micro Level Behaviors | Reliabilities |
|---|---|
| Fidgeting | .84 |
| Time of Response | .70 |
| Response Latency | .70 |
| Body Movements | .72 |
| Number of Words | .92 |
| Speech Errors | 1.00 |
| Speech Hesitations | 1.00 |
| Smiling | .89 |
| Eye Contact | .97 |
| Volume | .91 |

| Macro Level Behaviors | Reliabilities |
|---|---|
| Friendliness | .91 |
| Tense | .92 |
| Vague | .97 |
| Apprehensive | .90 |
| Communicates Well | .89 |
| Dominant | .90 |
| Dramatic | .92 |
| Animated | .94 |
| Open | .96 |

these were deleted from any analysis involving marital types since they were Separate/Traditional. An additional five couples were deleted from any analysis of veracity judgments based on partner behavior since one or both partners failed to follow the protocol. The protocol required subjects to provide their expectation of deceptive behavior for a spouse and then to make veracity judgments face to face with the spouse. Couples were typed with the Relational Dimensions Instrument and interviewees were coded for behaviors predicted by spouses. The following section describes the operationalization of the hypotheses and research questions examined in this study. The results of these analyses, testing hypotheses and answering research questions, are described in the next chapter.

Operationalization of Hypotheses and Research Questions. Hypotheses One through Four require distinguishing between the various couple types and their expectations about deceptive behavior. The RDI operationalizes Fitzpatrick's (1988) couple types of Traditional, Independent, Separate, and Mixed. Since one partner for each couple provided (a) behavioral expectations for deception when an acquaintance telling a lie as well as (b) behavioral expectations of deceptive behavior for a spouse (by sorting Q deck items--interviewer, sorts 1 and 2), these two different sets of expectations can be correlated for a measure of relationship. The correlations between these two sorts for each couple formed a correlation matrix and were transformed using Fisher's **Z** (Fisher, 1941; cf. Hays, 1963). Fisher (1941) notes that when comparing differences in correlations, particularly in small sample sizes the standard

deviation is not reliably representative of the population. Thus, Fisher's alternative measure of **Z** was used in the analysis of variance procedure to determine if there were significant differences among the couple types in their level of similarity for these two behavioral expectations (Qsorts 1 and 2).

The expectations for deceptive behavior were developed through Q analysis. The interviewer sorted a deck of items as described in the protocol. These items were descriptions of nonverbal cues such as smiling and eye contact as well as communication style attributes such as friendly and attentive. By sorting the items interviewers provided both a description of their expectations about a friend's deceptive behavior (Qsort 1) as well as expectations about their spouse's deceptive behavior (Qsort 2). In addition, the interviewee provided a description of their perception of the interviewer's expectations about the interviewee's deceptive behavior (Qsort 3). The three conditions of instruction for the three sorts are indicated as Qsort 1, Qsort 2, and Qsort 3 respectively. When the actual sorts are combined for analysis and the types of expectations used by research participants are revealed, they are denoted as Qtype 1, Qtype 2, Qtype 3, and Qtype 4. Any given Qtype may have been used by a research participant in any one of the three conditions. Qsort refers to the object of the sort as revealed in the conditions of instruction (whether friend, spouse, or anticipation of the spouse's expectation), while Qtype refers to the make-up of the sort (i.e. the actual behavioral expectations such as more eye contact, less smiling, etc.). This means, for example, that Qtype 1 could have been used by a research participant to refer to either a friend (Qsort 1), spouse (Qsort 2), or deceiver's

anticipation of the spouse's expectations of deceptive behavior (Qsort 3). The analysis of these Qsorts and the four Qtypes resulting from the analysis will be detailed in the following chapter. It should be noted that there is no assumed or predicted relationship between the marital couple types of Fitzpatrick (1988) and the expectations of deceptive behavior which comprise the Qtypes. Any given couple type, such as Traditional, may have expectations of deceptive behavior represented by any one of the four Qtypes that resulted from this analysis.

Hypotheses One through Four predict that there will be higher mean correlations (mean **Z** scores) between the Qsorts of the interviewer (Qsort 1 and Qsort 2) for Separates with Mixed, Traditionals and Independents following in that order. Higher **Z** scores suggest less differentiation between the two Qsorts. Thus, couples with higher **Z** scores between Qsorts 1 and 2 have less unique and distinct expectations of their marital partner when compared to an acquaintance than do couples with lower **Z** scores for these two Qsorts. If the analysis of variance indicates significant differences in the mean **Z** scores of the four groups and the group means are in the predicted direction, the hypotheses will be accepted. Hypothesis One requires that the mean **Z** score of Independents be significantly lower than all other couple types. Hypothesis Two requires that Traditionals have a higher mean **Z** score than Independents. Hypothesis Three requires that Mixed couples have a higher mean **Z** score than either Traditionals or Independents. Finally, Hypothesis Four requires that Separates have a higher mean **Z** score than any of the other three couple types.

Hypothesis Five predicts that partners in the interviewee condition whose

expectations about what their spouse (interviewer) expects them (interviewee) to do when telling a lie (Qsort 3), are more highly correlated with their partner's (interviewer) expectations of their behavior (Qsort 2) will be more successful in deceiving the partner. In other words, greater awareness of the behaviors a target expects allows the deceiver the advantage of adjusting behavior accordingly to mislead the target and successfully complete the lie. This hypothesis will be investigated using Fisher's r to **Z** transformation of the correlations of the interviewer's expectations of the interviewee's deceptive behavior (Qsort 2) and the interviewee's anticipation of the interviewer's expectations (Qsort 3). The transformed **Z** scores (Fisher, 1941) will be used as the independent variable in three simple regression equations with total number of correct veracity judgments, total number of correct factual judgments, and total number of correct emotional judgments as the dependent variables. The neutral question "Are you really telling the truth?" was not separately investigated.

Hypothesis Five requires that across couples (without regard to married couple type) higher **Z** scores will lead to a lower number of accurate veracity judgments. For this hypothesis to be accepted each simple regression equation should produce a significant and negative $R^2$. In other words, there is a negative relationship between the **Z** scores and (a) the number of total correct veracity judgments, (b) the number of correct factual veracity judgments, and (c) the number of correct emotional veracity judgments. Since there are three dependent variables, three separate regression equations are required. Because both the independent and dependent variables are continuous variables, simple regression equations are used rather than analysis of

variance. The simple regression procedure measures the strength of the relationship between a single independent variable and a single dependent variable and a test of significance for the relationship. Multiple regression, which measures the strength of a relationship between multiple independent variables and a single dependent variable, is not appropriate in this case.

Hypothesis 6 predicts that the interviewee's deceptive behavior will match the interviewer's expectations of deceptive behavior when the interviewer accurately judges the interviewee to be deceptive. Conversely, it predicts that the interviewee's behavior will not match the interviewer's expectations of deceptive behavior when the interviewer accurately judges the interviewee to be telling the truth. This means that accurate judgments depend on accurate expectations of deceptive behavior in the spouse. If correct expectations about deceptive behavior lead to accurate judgments, then the anticipated behavior will be manifested when the interviewer accurately predicts deceptive behavior but will not be present when the interviewer accurately predicts truthful behavior. For example, if an interviewer correctly expects more friendly behavior in a spouse (interviewee) when they lie than when they tell the truth, and if this expectation influences his or her judgments of deceptive behavior, then when the interviewer accurately judges the interviewee to be lying there should be more friendly behavior than when the interviewer accurately judges truthful behavior. A videotape of the research participant's (interviewee's) truthful and deceptive behaviors was coded for the expectations of their partner. A 2 (truth/lie condition) x 2 (truth/lie judgment) x 4 (behavioral expectations derived from Qtypes) analysis of

variance with repeated measures on the first two factors was used to test this hypothesis. The factors provide the interaction of accurate and inaccurate conditions for the different behavioral expectations (Qtypes). For example, in a lie condition (the interviewee was actually lying) with a lie judgment (the interviewer judged the interviewee to be lying) there is an accurate judgment. Further, this accurate judgment should interact with the expected behaviors of the interviewer (Qtype). If the expected behavior was overly friendly in a lie condition, then the behavior of the interviewee should be more friendly than when telling the truth. Since the expected behaviors of the interviewers were based on the Qsorts, and since they were typed into four Qtypes, which differed along a large number of dimensions, all behaviors that were coded from the videotape were used as dependent variables. Furthermore, since many of these behaviors are likely to be correlated with each other, a multivariate analysis of variance procedure is used. These nineteen behaviors were noted in the procedure section and the behaviors and their coding reliabilities provided in Table 4. In addition, the behaviors are further defined in the analysis of the Qsorts in the following chapter. The hypothesis predicts a significant three-way interaction on the dependent variables. A significant effect would mean that the correct behavioral expectations of the interviewers accurately influenced their veracity judgments of the partner's deceptive behavior. Following the multivariate analysis of variance, follow up analyses using univariate and stepdown $\underline{F}$ tests will be performed to further test effects on individual dependent variables. Significant differences on these variables would require that the mean scores in the dependent variables (such as friendliness) be

different for each set of expectations in the direction predicted by that expectation. For example, if one Qsort expected overly friendly behavior and another Qsort expected unfriendly behavior, the mean ratings for friendly behavior should be different for the two groups in the direction of their expectations. If this effect is present, hypothesis six is accepted. This means that the interviewee's behavior differed when telling the truth and when lying and that the interviewer's accurate judgments predicted this effect.

Research Question One raises the issue of awareness. It asks whether marital partners' expectations as given in a Qsort have any relation to the judgments of deception they actually make during an interaction. It is possible that those making veracity judgments are not fully aware of the cues actually present when making those judgments. Thus, if the expected behaviors of the interviewer are significantly more present when the interviewer judged the interviewee to be lying (whether they were actually lying or not) than when telling the truth, this provides evidence that the interviewer is actually relying on these cues in making veracity judgments. The analysis used a 2 (truth/lie judgment) x 4 (interviewer expectations from Qsorts) multivariate analysis of variance with repeated measures on the first factor. The dependent variables were the actual behaviors of the interviewee. The behaviors used were those coded behaviors previously reported in Table 4 and used in the analysis of Hypothesis Six.

Research Questions Three and Four explore whether couple types differ in their ability to deceive and/or detect deceit. These questions focused on marital type and

not the behavioral expectations revealed in Qtypes. These questions were explored using three analyses of variance with marital type (Traditional, Independent, Separate, Mixed) as the independent variable in each. The dependent variable for the first analysis of variance was the total number of accurate veracity judgments. For the second analysis the dependent variable was the total number of correct factual veracity judgments. Finally, the third analysis used the total number of correct emotional veracity judgments for the dependent variable. The neutral question "Are you really telling the truth?" was not separately investigated. Total number of correct veracity judgments had a range of 0 to 21. Total number of correct factual and emotional veracity judgments had a range of 0 to 7.

Research Question Five was explored using the Q sort of behavioral expectations. This question investigated the nature of deceptive expectations of individuals outside the relationship (friends, Qsort 1). That is, what behaviors are in fact expected of friends when they lie? In addition, this question explored the nature of behavioral expectations for the deceptive behavior of a spouse (Qsort 2). In other words, what behaviors are expected when a spouse tells a lie? Thirdly, this question investigated the nature of the deceiver's (interviewee's) expectations of the interviewer's behavioral expectations of the interviewee (Qsort 3). A deck of nonverbal cues along with communicator style attributes as noted in the procedure section were used in three different sorting conditions. The deck of items, the conditions of instructions, and the resulting Qtypes are those used in previous analyses. The Quanal program of Van Tubergen (1980) was used to develop Qtypes

of expectations. The sorts of expected deceptive behaviors were correlated and then individuals were factored to form types. That is, the people, not the items themselves were factored. In this case, factor loadings refer to the individuals and not the behavioral items. The factoring allows the researcher to investigate the extent to which any given individual loads on one factor or another. This procedure, Q technique, allows the researcher to capture the subjective nature of expectations with the interdependence of items. That is, one can see how a given individual groups the behavioral cues together. Rather than average item scores across individuals as in R methodology, Q captures the individuals' unique clustering of behavioral expectations. Once this is done, the people are factored to see whether people are similar in the nature of their expectations. Once types are formed, the average $\underline{z}$ score for the individual items for people of that type are used to explore the differences in the types. These $\underline{z}$ scores are simply the average standardized rankings of the items as provided in the sorting procedure. The $\underline{z}$ scores for each type were examined and comparisons and contrasts explored. Different $\underline{z}$ scores for various cues such as forced smile or overly friendly were compared and contrasted to determine the nature of the differences in expectations between the types. In addition, similarities in behavioral expectations were explored in the same manner. Dimensions of judgment relevant to each type were reviewed. That is, $\underline{z}$ scores less than $\pm$ 1 standard deviation from the mean are not relevant dimensions of judgment in the sorting task. Thus, some types may not use a given dimension of judgment. For example, one Qtype may not use volume as a dimension of judgment and would not rank increases in volume, decreases

in volume, or volume remains the same either $\pm$ 1 standard deviation from the mean. Finally, a frequency table was constructed using the Qsorts and the conditions of instruction as the factors. This analysis investigated the whether married people have different behavioral expectations for friends than they do for each other. In addition, it explores whether married partners have different beliefs for the interviewer's expectations of the interviewee's deceptive behavior. A chi-square crosstables procedure explored differences between the behavioral expectations of the three conditions. These conditions were: (a) Qsort 1, behavioral expectations of a friend when lying, (b) Qsort 2, behavioral expectations of a spouse when lying, and (c) Qsort 3, beliefs about the interviewer's expectations of the interviewee's deceptive behavior. A significant chi-square would indicate that there were differences in the behavioral expectations in the three conditions. An examination of the frequency table would reveal which types of expectations (Qtype) were more likely to be associated with married partners (conditions 2 and 3) and which were more likely to be associated with friends (condition 1).

# Chapter Four

## Results

This chapter presents the results of the analyses of data relevant to the six hypotheses and four research questions derived in chapter two. The results from the test of the first four hypotheses for this study are discussed together, since they are operationalized in the same manner and are directly related. Hypotheses Five and Six are discussed in turn followed by the research questions.

### Hypotheses One Through Four

Hypotheses One through Four proposed that couples differ in their expectations about their partners' deceptive behavior. The differences were proposed to vary along a scale of partner specific uniqueness. That is, couples were believed to be more or less idiosyncratic in their expectations about their partners' deceptive behavior. To operationalize this conceptual difference, one spouse (interviewer) was administered two Q sorts. The first sort (Qsort 1) required the spouse to arrange the deck of potential deception cues in the order the interviewer believed a friend would behave if telling a lie to another friend about his/her plans for the weekend. The second sort (Qsort 2) required the interviewer to arrange the deck of potential cues in the order the interviewer believed his/her spouse would behave if telling a lie to a friend about their plans for the weekend.

The Qsort 1 represents expectations that are more general in nature, since they involve someone outside the marital relationship. As discussed previously, marital partners develop more or less partner specific communication patterns.

Comparison of these patterns with outsiders can provide a measure of the uniqueness of the marital communication. On average, the difference between the two sorts should provide a measure of the unique nature of the expectations of the deceptive behavior of the spouse.

Partner expectations of deceptive behavior for couple types were developed using Q methodology. The Quanal program of Van Tubergen (1980) was used for the analysis. The sorts were correlated and subjected to principle components factor analysis. A varimax rotation resulted in a three factor solution with eigenvalues of 50.65, 14.86, and 14.36. This solution explained 45% of the total variance with the three factors explaining 63, 18 and 18 percent of the trace respectively for the three factors. Factor Three was 49% negative and negative items were extracted and formed into a third type. Thus, there were four types of partner expectations resulting from the factor analysis.

To obtain a measure of relationship between a marital partner's expectations for a friend and his or her expectations for a spouse using the Q sort data, the correlations between the friend sort and spouse sort for each interviewer were transformed using Fisher's $r$ to $Z$ and used in an analysis of variance. Hypotheses One through Four were tested using a single analysis of variance testing differences in mean **Z** scores between the four marital couple types (Traditional, Independent, Separate, and Mixed). The analysis of variance was not significant $F(3,51) = .4728$, $p > .05$. Table 5 presents the means from the analysis.

Table 5

Mean Correlations of Q Sorts of Friend and Spouse for Marital Couple Types

| Couple Type | N | Mean Z score |
|---|---|---|
| Independents | 7 | -0.3453 |
| Separates | 3 | -0.0685 |
| Traditionals | 25 | 0.0178 |
| Mixed* | 15 | 0.2054 |

*Separate/Traditionals were not included in this analysis.

Hypothesis One predicted a greater level of uniqueness for independents than other couple types. Thus, if there is a significantly greater difference between the two sorts for Independents than other couple types, Hypothesis One is accepted and the Null is rejected. This would mean that independents were less general and more unique on average in partner expectations than other couple types. However, as indicated by the analysis, Independents were not significantly different in mean Z scores for the correlation between the two Qsorts. Since the analysis of variance for differences among the four groups was not significant, no follow-up analyses were utilized.

Hypothesis Two predicted that Traditionals would have significantly higher Z scores than Independents. This would mean that Traditionals were less unique in

their expectations about their partner's deceptive behavior compared to Independents. The analysis indicated there was no significant difference between the mean **Z** scores between Traditionals and Independents. This hypothesis is rejected. The expectations of deceptive behavior for spouses as compared to friends are not more alike for Traditionals than Independents.

Hypothesis Three predicted that Mixed couples will have expectations of deceptive behavior for their relational partners that are less unique and partner specific than the expectations of either Independents or Traditionals. If Hypothesis Three is supported, the analysis of variance would indicate that Mixed couples would have a significantly higher mean **Z** score than either Traditionals or Independents. The results in Table 5 indicate the hypothesis is not supported. There is no difference in the level of unique expectations of deceptive behavior for spouses among the three marital types.

Hypothesis Four predicted that Separate couples would have expectations of deceptive behavior for their relational partners that are less unique and partner specific than any of the other three marital couple types. The analysis revealed that the mean **Z** score for Separates was not significantly different from any of the other three couple types. This means that Separates are equally unique and partner specific in their expectations of deceptive behavior for their spouses.

Hypotheses 1 through 4 were rejected. Although, as predicted, Independents displayed the greatest level of difference with a **Z** score of -0.3453, the other mean **Z** scores were not in the predicted order and the customary significance level of $\underline{p} <$

.05 was not obtained.

Hypothesis Five

Hypothesis Five proposed that across couples those interviewees who successfully predicted their partner's expectations would be more successful in deceiving. In other words this hypothesis posits that if deceivers know how the target of their deception expects them to behave, they may alter their behavior accordingly to accomplish their deception. This hypothesis was operationalized similarly to the previous four hypotheses. That is, Q sorts of expected behavior (interviewer sort) and Q sorts of perceptions of expected behavior (interviewee sort) were correlated and transformed using Fisher's **Z**. These **Z** scores were then used in three simple regression equations.

The three dependent variables for the regression equations were total number of accurate veracity judgments, total number of correct factual veracity judgments and total number of correct emotional veracity judgments. Recall from the procedures section the interviewer asked three questions about seven pictures. After each question the interviewer made a veracity judgment of the interviewee's response. The first question asked the interviewee what he/she saw in the picture. This was considered a factual question and the veracity judgment was considered a factual veracity judgment. The second question asked the interviewee how he/she felt about the picture. This was considered an emotional question and the veracity judgment an emotional veracity judgment. The third question that was included in the total number of correct veracity judgments but not entered separately in a regression equation was considered a neutral

question and asked, "Are you really telling the truth?"

Since Miller et al. (1981) found that marital couples were better at detecting emotional lies than factual lies two separate analyses were performed for factual and emotional responses. Thus correlations of the interviewer and interviewee sorts (the independent variable), were transformed into Fisher's **Z** and regressed onto (a) the dependent variables of total number of correct judgments, (b) total number of correct factual judgments and (c) total number of correct emotional judgments in their separate regression equations.

Hypothesis Five predicted a negative relationship between the **Z** scores and the number of correct judgments. If the interviewee sort matched the sort of the interviewer (higher **Z** score) the interviewer should be less successful in detecting the deceit. The results are displayed in Table 6. The analyses yielded a significant effect

Table 6
Correlation Coefficients and $R^2$: for **Z** Scores of Correlations of the Q Sorts Regressed onto the Total Number of Correct Judgments, Total Correct Factual Judgments and Total Correct Emotional Judgments

| Dependent Variable | Correlation Coefficient | $R^2$ | Significance Level |
|---|---|---|---|
| Total Overall Correct Judgments | .1437 | .02 | .3044 |
| Total Factual Correct Judgments | .0520 | .00 | .7098 |
| Total Emotional Correct Judgments | .3178 | .10 | .0160 |

Note: The neutral question was included in the total overall correct judgments but not in the total factual correct judgments or total emotional correct judgments.

in the opposite direction from the predicted hypothesis for the emotional condition. When the match between the interviewer's predictions about the interviewee's deceptive behavior and the interviewee's anticipation of these expectations increased, the level of correct emotional judgments also increased. The deceiver's awareness of the target's expectations did not facilitate success in deceiving, instead it facilitated the ability of the target to detect the deceit. The total overall correct judgments and the total factual correct judgments were not affected by the ability of the deceiver to anticipate the target's expectations about the deceiver's expected behavior. Knowing what kind of behavior a target expects a deceiver to display did not facilitate success in either detecting deceit or in deceiving. Thus, Hypothesis Five is rejected.

Hypothesis Six

Hypothesis Six proposed that the interviewee's deceptive behavior will match the interviewer's expectations of deceptive behavior when the interviewer accurately judges the interviewee to be deceptive. In addition, it predicts that the interviewee's behavior will not match the interviewer's expectations of deceptive behavior when the interviewer accurately judges the interviewee to be telling the truth.

This hypothesis was operationalized by coding the interviewee's (deceiver) behavior when telling the truth and lying. The behaviors coded were those used in the Qsorts and reported previously in Table 4. Items selected were those items which obtained a z score (standardized ranking of items in the sorting procedure) 1.0 or higher by one of the four types derived from the Q analysis. One behavior having a z score of 1.0 or higher was not coded, because the experimental condition rendered it

irrelevant. Since physical contact between spouses was prohibited by having the marital couples seated throughout the videotaping session, this behavior was not coded. Variations of items, of course, were not separately coded. The Likert item ranking of codings served to capture the extreme ends of behaviors that may have been predicted. The items from the sorts that were coded for the partner's behavior and the $\underline{z}$ scores for each type are shown in Table 7 (Higher $\underline{z}$ scores indicate a greater expectation for the behavior in deceptive conditions). If the interviewer's expectations of deceptive behavior lead to accurate veracity judgments, the interviewee's behavior under lie conditions should reflect the interviewer's expectations. The Qsorts were used to measure expectations of partner's deceptive behavior.

The coded behaviors of the interviewees (the coded behaviors of the deceivers were the same behaviors as those used by the interviewers when providing their expectations of deceptive behavior) then became dependent variables in a 2 truth/lie condition x 2 truth/lie judgments (coded as a dichotomous judgment) x 4 (Qsort type, expected deceptive behaviors) multivariate analysis of variance design with repeated measures on the first two factors.

Hypothesis Six proposes that when interviewers make accurate judgments of deception their spouse's behavior will match their expectations. This hypothesis means that accurate judgments reflect not only correct expectations about deceptive behavior but also correct use of these expectations in making veracity judgments. Thus, accuracy in judgments is tied to accurate expectations of behavior and accurate

Table 7

z Scores for Selected Sort Items

| Macro Level Behaviors Expected | z Scores Qtype 1 | Qtype 2 | Qtype 3 | Qtype 4 |
|---|---|---|---|---|
| Attentive | -0.2 | -0.9 | -1.3 | 1.5 |
| Friendly | 0.2 | -0.7 | -1.4 | 2.2 |
| Apprehensive | 1.2 | 1.6 | 0.4 | 0.4 |
| Dramatic | 0.8 | -0.3 | 0.4 | -0.7 |
| Tense | 1.6 | 1.8 | 1.4 | -0.1 |
| Animated | 1.0 | -0.4 | 0.1 | 0.2 |
| Friendly | 0.2 | -0.7 | -1.4 | 2.2 |
| Open | -0.8 | -1.3 | -2.0 | 0.7 |
| Communicates Well | -0.8 | -1.1 | -1.2 | 2.2 |
| Overly Dominant | 0.8 | -0.8 | 1.0 | -1.2 |
| Vague | 1.5 | 2.0 | 1.3 | 0.5 |

| Micro Level Behaviors Expected | z Scores Qtype 1 | Qtype 2 | Qtype 3 | Qtype 4 |
|---|---|---|---|---|
| Smiling | 0.7 | -0.5 | -1.2 | 1.5 |
| Fidgeting Increase | 1.6 | 1.6 | 1.6 | -1.5 |
| Speech Hesitations Increase | 1.3 | 1.7 | 0.9 | 0.0 |
| Speech Errors Increase | 1.2 | 1.2 | 0.9 | -0.5 |
| Eye Contact | -1.6 | -1.5 | -2.0 | 2.1 |
| Response Length Longer | 0.9 | 0.1 | -0.3 | -0.0 |
| Response Rate Faster | 1.7 | 0.6 | -0.1 | -0.1 |
| Volume Increases | 1.2 | -0.1 | 1.0 | -0.3 |
| Response Latency Shorter | 0.9 | -0.3 | -0.3 | 0.9 |
| Fewer Body Shifts | -1.2 | -1.0 | -0.9 | -0.0 |

use of these expectations. If Hypothesis Six is true, the analysis should reveal a

significant interaction between, veracity judgments (judgment), truth/lie condition of the partner (condition) and expectations (Qtype). The multivariate test did not reach significance F (3,15) = 1.02, p = .668. To test interaction effects on each individual dependent variable, both univariate and stepdown tests were performed. In the stepdown analysis each dependent variable was treated in turn as a covariate to test the effect on a subsequent dependent variable after the effects of the covariates were partialed out. The dependent variables (see Table 7) as a group, were not significantly predicted by the three-way interaction. The only significant effect of the three-way interaction on individual dependent variables was on the variable vague. In the stepdown analysis, this effect was found after the effects of the dependent variables eye contact, friendliness, attentiveness, openness, dominance, smiling, and hesitations were partialed out. Both univariate and stepdown effects showed a significant three-way interaction for the dependent variable vague with univariate F (3,51) = 3.25, p < .05, and stepdown F (3,44) = 5.74, p < .01. Since there was no significant multivariate effect, the univariate and stepdown effects must be interpreted cautiously. The cell means for the interaction are provided in Table 8. Lower numbers indicate more vague responses, while higher numbers represent more precise responses. The hypothesis predicts that the means for the dependent variable (the behavior of the deceiving spouse) match the expectations of the Qtypes. The expectations of the Qtypes for the variable vague were reported in Table 7. If a Qtype expected more vague behavior in the deceiver when lying than when telling the truth, the cell means for the behavior of the deceiver in the multivariate analysis should reflect more

behavior when lying than when telling the truth. Counter to the expectations of the researcher, the use of vagueness did not correspond to the composition of the

Table 8

Cell Means for Interviewer Judgments of Partner Truth/Lie By Partner Truth/Lie Condition, By Qtype for Dependent Variable Vague

| Judgment | Condition | Qtype 1 | Qtype 2 | Qtype 3 | Qtype 4 |
|---|---|---|---|---|---|
| T | T | 3.3005 | 3.6440 | 3.5256 | 3.7619 |
| T | L | 3.5296 | 3.5571 | 3.3823 | 3.8018 |
| L | T | 3.7300 | 3.4919 | 4.4473 | 3.5000 |
| L | L | 3.5967 | 3.7419 | 3.9074 | 3.6406 |

types.

Although there were significant effects at this level, they did not fit the predicted pattern. For example, interviewers whose Qsorts reflected Qtype 1, ranked vagueness at $\underline{z} = 1.5$, but judged their partners to be lying when they were more precise and they judged them to be telling the truth when they were more vague. Couples whose Qsorts reflected Qtype 2, which predicted vagueness at $\underline{z} = 2.0$, also exhibited a contrasting pattern with more vagueness being judged as truthful by Qtype 2. Qtype 4 did not use vagueness as a predictor for deceptive behavior. The results of these analyses indicate that Hypothesis Six should be rejected. Partner expectations did not lead to accurate judgments.

Research Questions One and Two

Research Question One explores whether marital partners are aware of the cues they use in making veracity judgments. This question was explored using a 2 (truth/lie judgment) x 4 (interviewer expectations, Qtypes) multivariate analysis of variance with repeated measures on the first factor. The coded behaviors of the deceivers used in previous analyses and reported in Table 7 were the dependent variables.

The multivariate effect was nonsignificant $F$ (3,15) = 1.2153, $p > .05$. This means that the interaction of the independent variables did not significantly affect the dependent variables as a group. Stepdown $F$ examined effects of the interaction on individual dependent variables partialing out the effects of previously entered dependent variables. Stepdown $F$ revealed four variables that were significantly predicted by the interaction of the two independent factors. The four variables were vague $F$ (3,45) = 3.4275, $p < .025$; attentive $F$ (3,44) = 6.8925, $p < .01$; eye contact $F$ (3,43), $p < .05$; dominant $F$ (3,39) = 4.6322, $p < .01$. This effect means that types of behavioral expectations and interviewer veracity judgments interacted to predict these behaviors in the deceiver. If interviewers are aware of the cues they use in making deception judgments, then interviewees should exhibit more of the expected behaviors when interviewers judge them to be lying than when interviewers judge them to be telling the truth. Table 10 indicates the cell means for the effect of this interaction on the dependent behavioral variables. Although there was a significant interaction for judgments of deception and interviewees behavior on these variables, the cell means

do not clearly indicate that interviewers used the expectations they provided in the Qsorts. For example, Qtypes 1 and 3 predicted vagueness in the partner but made judgments of truthfulness when the partner was more vague and judgments of deception when the partner was more precise. Qtype 2 made veracity judgments matching their predictions about partner behavior. Their expectations about vagueness were high ($\underline{z} = 2.0$) and is reflected in their judgments. Qtype 4 expected precise behavior (ranking for vague was $\underline{z} = 0.5$, but precise was $\underline{z} = 1.2$). This expectation was not reflected in the interviewers' judgments in the deceptive condition.

Further indication that interviewers did not use their expectations in actual judgments are seen when the other significant interactive effects are examined. Attentiveness was used by Qtypes 3 and 4 in their expectations of deceptive behavior; Qtypes 1 and 2 had $\underline{z}$ scores less than $\pm$ 1.0, which means that they did not use this dimension of judgment in their expectations, and therefore there are no specific conclusions that can be drawn from the interviewee's behavior on this variable. Qtype 3 judgments reflect predictions with judgments of truthfulness when the interviewee was more attentive and judgments of deception when the interviewee was less attentive. Qtype 4 expected attentive behavior during deception. While the cell means reflect attentive behavior, they are middle range and indicate judgments of deception when the interviewee was less attentive than when the interviewee was telling the truth.

Dominance was a predictor for Qtypes 3 and 4 but not for Qtypes 1 and 2.

Table 10

Cell Means for Significant Interactive Effects of Interviewer Judgments and Expectations on Vagueness, Attentiveness, Dominance, and Eye Contact

| Judgment | Qtype 1 | Qtype 2 | Qtype 3 | Qtype 4 |
|---|---|---|---|---|
| | | Vagueness | | |
| T | 3.4086 | 3.6191 | 3.4912 | 3.7681 |
| F | 3.6809 | 3.5684 | 4.1276 | 3.5769 |
| | | Attentiveness | | |
| T | 3.4880 | 3.4319 | 3.1228 | 3.5108 |
| F | 3.3711 | 3.6210 | 3.4361 | 3.5769 |
| | | Dominance | | |
| T | 4.0010 | 4.4439 | 4.2982 | 3.9516 |
| F | 4.0593 | 4.4736 | 4.0567 | 4.0717 |
| | | Eye Contact | | |
| T | 2.9491 | 3.0638 | 2.5614 | 3.0724 |
| F | 2.8220 | 2.8631 | 3.2127 | 3.1538 |

Thus, when interviewers expected Qtype 1 and 2, this dimension was not used as a predictor, and the behavior of interviewees cannot be used to draw any conclusions about the use of this expected behavior by interviewers. Qtype 3 expected overly dominant behavior, while Qtype 4 did not expect overly dominant behavior. Qtype 3 judgments reflect this expectation with greater dominance in the deceptive judgment condition and less dominance in the truthful judgment condition. When marital partners expected Qtype 4 behavior, they judged the partner truthful when the partner was more dominant, but they judged them to be deceptive when they were less dominant. However there was a small difference in the cell means for Qtype 4 and they are in the middle of the scale. This fits the expectations of this Qtype. Although in this case, the dominant behavior of the interviewees when they were judged to be lying matches the expectations of the interviewers, this result should be cautiously interpreted. Since interviewees were asked to respond to interviewer questions and were aware of a planned format, the likelihood of expressing clearly dominant behavior was limited. Nevertheless, the face value of the dominance means (See Table 10) suggests that interviewers were aware of the dominance cues in their partners.

The final behavior effect from the type/judgment interaction was eye contact. Eye contact was a significant expectation for all four Qtypes. Qtypes 1 through 3 expected less eye contact, while Qtype 4 expected normal eye contact. Eye contact was greater when Qtypes 1 and 2 judged deception. Eye contact was less when Qtypes 3 and 4 judged the interviewee as deceptive. Thus, only one out of the four

types made veracity judgments of their partner based on their expected eye contact. This outcome should also be cautiously interpreted in light of the difficulties of accurately measuring eye contact noted in the procedure section.

In summary, the results of the multivariate analysis of variance for research Question 1 are mixed. One of the four Qtypes made judgements of deception when the behavior of the interviewee matched their expectations of more vagueness. Three other Qtypes did not make judgments of deception when the interviewee's behavior matched their expectations of vagueness. Two Qtypes made judgments of deception when the interviewee's behavior matched their expectations for attentiveness, and the other two Qtypes did not use the dimension of attentiveness as an expectation of deceptive behavior. Two Qtypes made judgments of deception when the interviewee's behavior matched their expectations for dominance, whereas the other two Qtypes did not use dominance as a dimension of judgment. One Qtype made judgments of deception when the interviewee's behavior matched their expectations for eye contact. In contrast, three Qtypes made judgments of deception when the interviewee's behavior did not match their expectations for eye contact. The conflicting results of the analysis of means for these significant interactions along with the numerous nonsignificant interactions not further explored (such as different expectations for friendliness and smiling behavior) indicate that prior expectations of deceptive behavior had little impact on judgments of deception. This would indicate that the married partners did not use a consistent persona or unified set of cues to make judgments of deception.

In addition to the coded behaviors used in the multivariate analysis of variance, the experimental procedure asked subjects to respond to an open ended item following the interview. This item asked subjects to record any behavior or cue that may have helped them to make a veracity judgment. Table 11 indicates the frequency of cues cited by the Qtypes. Behaviors are shown to be either increasing or decreasing when the interviewer judged the interviewee to be lying. A variety of responses were given that did not fit neatly into the categories used in the qsort. Many of these responses were content oriented rather than behavior focused as was the design of the Qsorts. For example, one research participant said the answer given was too much of a coincidence (with something that had just happened to them). Another commented, "I just know how he feels." Beyond content oriented cues a few items that did not fit exactly into the Qsort scheme were that the person seemed uncomfortable, looked too serious or looked too insincere.

Although the analysis of results from the multivariate analysis of variance did not indicate that interviewers made judgments of deception when the interviewee's behavior matched their expectations, the cues reported by the research participants indicate that many of the interviewers believed they made judgments in keeping with their expectations. For example, Qtype 1 expected smiling and less eye contact. This was reported by a large number of the Qtype 1 interviewers as a cue they used in the interview. Across all Qtypes, smiling behavior and eye contact were the key dimensions reported.

Research Question Two explores the accuracy of couples' expectations of

partner deceptive behavior. Research Question One asked whether interviewers were

Table 11

Frequencies for Cues Cited by Interviewers by Qtype

| Behaviors | Qtype 1 n = 28 | Qtype 2 n = 19 | Qtype 3 n = 3 | Qtype 4 n = 11 |
|---|---|---|---|---|
| Smile | 9+ | 6+ | | 1+ |
| Eye Contact | 6- | 10- | 1- | 5-/1+ |
| Length | 1+ | 1+/1- | | 2- |
| Errors | 2+ | 1+ | | 1+ |
| Hesitations | | | 5+ | 2+ |
| body movement | 1+/2- | 3+ | 1+ | 1+ |
| communicates well | 2+ | | | 1- |
| apprehensive | 2+ | | | |
| pitch | | 1+/1- | | |

+Indicates more of the behavior
-Indicates less of the behavior

aware of the cues that they used in making veracity judgments. For this question interviewer expectations were compared with their actual judgments. Research Question two asks whether the expectations of interviewers matches their partners' deceptive behavior irrespective of whether it influences veracity judgments.

This question was operationalized by a 2 (truth/lie condition) x 4 (behavioral expectations, Qtypes) multivariate analysis of variance with repeated measures on the first factor. The coded interviewee behaviors used in previous analyses were the dependent variables.

The results show the multivariate $F$ was not significant $F(3,15) = .8854$, $p = .690$). Examining effects on individual dependent variables using stepdown analysis

revealed one significant relationship. The two-way interaction was significant for speech errors $F$ (3,37) = 2.8841, $p < .05$. Speech errors were a predictor for Qtypes 1 and 2. Cell means for all four types are given in Table 12. Higher scores for speech errors indicate more errors and lower scores indicate fewer errors. Partners of interviewers with Qtype 1 expectations averaged slightly more errors when telling the truth than when lying while partners of interviewers with Qtype 2 expectations made more speech errors when lying than when telling the truth. Thus, only Qtype 2 accurately predicted this behavior.

Table 12

Cell Means for Speech Errors in Truth/Lie Conditions by Interviewer Expectations

| Condition | Qtype 1 | Qtype 2 | Qtype 3 | Qtype 4 |
|---|---|---|---|---|
| T | .3936 | .4074 | .5932 | .2307 |
| F | .3814 | .5319 | .5111 | .4302 |

Married partners were not able to accurately predict their partner's deceptive behavior.

Research Questions Three and Four

These questions asked whether the marital couple types (Traditional, Independent, Separate, and Mixed) differ in their ability to deceive and to detect deceit. Three analysis of variance procedures were used with marital type as the independent variable. The first analysis of variance used total number of correct veracity judgments as the dependent variable. The possible range of scores was 0 to 21 for the total number of correct veracity judgments. The second and third

analyses used total number of correct judgments of factual responses and total number of correct judgments of emotional responses respectively as the dependent variables. The range for correct factual and emotional responses was 0 to 7. Table 13 provides the results of the analyses along with the cell means. The results indicate that

Table 13

Analysis of Variance with Cell Means, ns for Veracity Judgments By Marital Type

| Veracity Judgments | DF | F | P |
|---|---|---|---|
| Total Correct | 3/45 | 1.2717 | .29 |
| Factual Correct | 3/45 | 4.4486 | .00 |
| Emotional Correct | 3/45 | .1446 | .93 |

| | | Mean Correct Veracity Judgments | | |
|---|---|---|---|---|
| Marital Type | n | Total | Factual | Emotional |
| Traditional | 24 | 11.33 | 3.75 | 3.75 |
| Independents | 7 | 11.00 | 4.28* | 3.42 |
| Separates | 3 | 10.66 | 3.33 | 3.66 |
| Mixed | 16 | 9.46 | 2.62* | 3.75 |

for the total number of correct veracity judgments, the marital types did not differ significantly. However, when the judgments of factual and emotional responses were considered separately, the couple types were significantly different $p < .001$. Since

there were significant differences in the means for the four groups, further analysis using Duncan's multiple range test was used to determine which mean accuracy scores were significantly different. This comparison found that Independents had a higher accuracy rate for factual questions than any other type and that this difference was significantly higher ($p < .05$) than the Mixed couple types.

Marital couples displayed different levels of deception detection ability and success under factual conditions. Significant results were obtained only for Independent and Mixed couple types. Independents could detect their partner's deception when they were telling a factual lie better than the Mixed couples in the same experimental condition. Of course, conversely, Mixed couples could fool their partners better than Independents in this same condition, since they had a significantly lower number of correct veracity judgments. All other couple types had higher mean accuracy scores for detecting emotional lies than did the Independents, however the difference did not reach significance.

Research Question Five

Research Question Five explored the differences between marital couples expectations about deceptive behavior. Expectations were measured using Q methodology and the Quanal program of Van Tubergen (1980). Each couple performed three Q sorts. Two sorts were performed by the interviewer and one by the interviewee. The instructions for the sorting were described in the procedures section. All three sorts for each couple were used to develop a correlation matrix. The correlated sorts were then factored using a principle components method with Varimax

rotation. A three factor solution was selected with eigenvalues of 50.65, 14.86 and 14.36. The three factor solution explained 45% of the total variance, with each factor explaining 63, 18, and 18 percent of the trace respectively. Humphrey's test found all factors meaningful. Factor three was 49% negative; negative items were extracted and formed a fourth type. Table 14 provides the z scores of $\pm$ 1.0 for items in Qtypes.

The z scores of Table 14 show four distinct behavioral expectations resulting from the types. Qtype 1 represents a friendly, somewhat nervous but potentially suave deceiver. Along with the stereotypical lack of eye contact, tense and excessive fidgeting behavior, this individual is expected to be overly friendly and use excessive smiling to carry out the deception. These expectations are more focused on micro level cues, especially things that have to do with the voice or the mouth. These things include speech errors, hesitations, forced smile, talking faster, and increased pitch.

The second Qtype is similar to the first in also expecting less eye contact, tense and excessive fidgeting. Dimensions of judgment for Qtype 2 are similar but distinct from Qtype 1. Four dimensions were not considered in Qtype 1: response length, response latency, physical contact, and openness. This Qtype is also focused on micro level cues and things having to do with the voice. It is different, nevertheless in that the behavior expected is not friendly. Although not in given in Table 14, the item not friendly at all was ranked .84 above the mean for Qtype 2 and overly friendly was ranked 1.11 below the mean. Some of the micro level cues expected reflect this difference. For example, Qtype 2 expects a drop in smiling behavior or a forced smile and shorter responses. Qtype 2 may be considered a nervous deceiver whose

Table 14

z Scores of Item Rankings for Qtypes of Deceptive Behavior Expectations

| Qtype 1 | | Qtype 2 | |
|---|---|---|---|
| Items | z | Items | z |
| Looks away | 1.89 | Looks Away | 2.30 |
| Talks Faster | 1.73 | Vague | 1.96 |
| Tense | 1.59 | Overly Tense | 1.83 |
| Excessive Fidgeting | 1.56 | Tense | 1.82 |
| Vague | 1.49 | Body Shifts Increase | 1.69 |
| Body Shifts Increase | 1.47 | Forced Smile | 1.68 |
| Forced Smile | 1.42 | Hesitations Increase | 1.67 |
| Pitch Increases | 1.35 | Excessive Fidgeting | 1.61 |
| Overly Friendly | 1.33 | Apprehensive | 1.61 |
| Excessive Smiling | 1.31 | Errors Increase | 1.24 |
| Hesitations Increase | 1.29 | Overly Apprehensive | 1.22 |
| Overly Tense | 1.22 | Verbal Response Shorter | 1.20 |
| Apprehensive | 1.20 | Latency Increases | 1.16 |
| Errors Increase | 1.20 | Not communicate Well | 1.11 |
| Talks Louder | 1.18 | Not Open At All | 1.08 |
| Overly Apprehensive | 1.09 | Physical Contact Drops | 1.05 |
| Overly Animated | 1.06 | Smiling Decreases | 1.04 |
| No change Smiling | -1.02 | Communicates well | -1.08 |
| No change Rate | -1.05 | Overly Friendly | -1.11 |
| No Animated At All | -1.05 | Open | -1.26 |
| No change Volume | -1.06 | Physical Contact Increase | -1.35 |
| No change Fidget | -1.10 | Communicates Exc. Well | -1.39 |
| Not Dramatic At All | -1.11 | Normal Eye Contact | -1.51 |
| Not Friendly At All | -1.15 | Not Apprehensive At All | -1.55 |
| Overly Relaxed | -1.20 | Overly Open | -1.55 |
| Communicates Exc. Well | -1.21 | Relaxed | -1.66 |
| Fewer Body Shifts | -1.24 | Overly Relaxed | -1.69 |
| Drop in Fidgeting | -1.32 | | |
| No Change Body Move | -1.35 | | |
| Not Apprehensive At All | -1.53 | | |
| Normal Eye Contact | -1.57 | | |
| Relaxed | -1.69 | | |

Table 14 Continues

| Qtype 3 | | Qtype 4 | |
|---|---|---|---|
| overly tense | 1.64 | Friendly | 2.22 |
| excessive fidgeting | 1.62 | Communicates Well | 2.19 |
| overly apprehensive | 1.52 | Normal Eye Contact | 2.05 |
| Latency Increases | 1.50 | Smiling | 1.55 |
| Not Friendly At All | 1.39 | Amount of Talk Same | 1.51 |
| Tense | 1.37 | Attentive | 1.47 |
| Looks Away | 1.35 | Pitch Unchanged | 1.41 |
| Not Open At All | 1.31 | No Change in Rate | 1.37 |
| Forced Smile | 1.29 | No Change in Volume | 1.31 |
| Vague | 1.29 | No Change in Hesitations | 1.24 |
| Does Not Com. Well | 1.16 | No Change in Errors | 1.21 |
| Stares | 1.13 | Precise | 1.20 |
| Overly Dramatic | 1.04 | No Change in Body Move | 1.14 |
| Increase Body Shifts | 1.02 | No Change in Phy. Contact | 1.13 |
| Overly Dominant | 1.00 | No Change in Smiling | 1.13 |
| Not Contentious | -1.02 | Communicates Excep. Well | 1.02 |
| Volume No Change | -1.06 | Relaxed | 1.01 |
| Contact Unchanged | -1.08 | Overly Apprehensive | -1.12 |
| No Change Body Move. | -1.11 | Overly Tense | -1.15 |
| Precise | -1.15 | Stares | -1.16 |
| No Change Rate | -1.20 | Increase Phy. Contact | -1.20 |
| Communicates Well | -1.22 | Overly Dominant | -1.23 |
| Smiling | -1.23 | Not Attentive At All | -1.31 |
| attentive | -1.32 | Does Not Com. Well | -1.32 |
| Friendly | -1.37 | Overly Animated | -1.37 |
| Com. Except. Well | -1.42 | Excessive Fidgeting | -1.48 |
| Not Appreh. At All | -1.52 | Overly Contentious | -1.49 |
| Open | -1.99 | Overly Dramatic | -1.80 |
| Normal Eye Contact | -2.04 | Not Friendly At All | -1.99 |
| Relaxed | -2.10 | | |

anxiety is reflected in less than friendly behavioral cues. This may reflect a defensive maneuver of warding off the target from pursuing the truth. The third Qtype expected exaggerated behaviors such as overly tense behavior with excessive fidgeting and like Qtype 2 did not expect friendly behavior. Similar to Qtype 2 this Qtype used openness as a dimension of judgment. There was less focus on things having to do

Table 15

Dimensions of Judgment for Deceptive Behavior Ranked 1.0 Above or Below the Mean By Qtype

| Dimensions | Qtype 1 | Qtype 2 | Qtype 3 | Qtype 4 |
|---|---|---|---|---|
| Eye Contact | - | - | - | = |
| Rate of Speech | + | | * | = |
| Tense | + | + | + | = |
| Fidgeting | + | + | + | = |
| Vague | + | + | + | - |
| Body Shifts | + | + | + | = |
| Pitch | + | | | = |
| Friendliness | + | - | - | = |
| Smiling | + | - | - | = |
| Hesitations | + | + | | = |
| Apprehensive | + | + | + | = |
| Speech Error | + | + | | = |
| Volume | + | | * | = |
| Animation | + | | | |
| Com Quality | - | - | - | + |
| Dramatic | * | | + | = |
| Response Length | | - | | = |
| Response Latency | | - | - | |
| Openness | | - | - | |
| Physical Contact | | - | * | = |
| Attentive | | | - | = |
| Contentious | | | | - |
| Dominant | | | + | - |

-Indicates the type expects less of this behavior in the lie condition.
+Indicates the type expects more of this behavior in the lie condition.
*Indicates dimension was used by qtypes but the direction of change was not clear.
=Indicates the type expected no change from the truth to lie condition.

with the voice. This Qtype did not expect volume or rate to remain the same, although they were uncertain what change to expect. They did expect a delay in response time. Qtype 3 is more similar to Qtype 2 than to Qtype 1.

The two Qtypes use different dimensions of judgment (See Table 15), but both expect unfriendly behavior in contrast to Qtype 1. Qtype 3 was less certain of the changes associated with the voice. They did not use two of the voice categories used by Qtype 1 and two other voice categories were uncertain. In addition, Qtype 3 used the attentive and dramatic dimensions that Qtype 2 did not.

Qtype Four is obviously unique in expectations. The deceiver behavior expected here is very smooth. In fact, it is hard to differentiate from truthful behavior. In almost every category the individual expects the deceiver to exhibit the same level of behavior in both truthful and deceptive conditions. In contrast to the first three Qtypes that expected behavioral changes in the deceiver, the fourth Qtype expected no change.

Qtypes and Associated People

Further analyses of the Qtypes was pursued to examine potential difference in the use of particular expectations by marital types for each other or for those outside the relationship. First a crosstabulation procedure was used with Qtype and condition as the variables. The condition variable represents the three conditions of instruction--the two sorts of the interviewer (for friend and spouse deceiving), and the sort of the interviewee (how do you think your partner expects you to behave when deceiving). Condition 1 represents the expectations of the friend deceiving, while condition 2 represents the expectations about a spouse deceiving. The third condition represents the deceiver's anticipation of the spouse's expectation of the deceiver's behavior while lying. Conditions 2 and 3 are within the relationships, whereas condition 1 is outside

the relationship. Both Pearson chi-square (6, 27.1755, $p < .001$) and the likelihood ratio (6, 27.0510, $p < .001$) indicated a significant interaction.

Table 16 indicates that marital couples were likely to believe that their partner expected them to behave very smoothly. Couples used Qtype 4 for the third condition in which they predicted their partner's expectation. In contrast less than half as many spouses used this Qtype as an actual prediction of behavior. Finally only four individuals used this type when describing their expectations of someone outside

Table 16
Cell Counts for Qtype By Condition

| | Condition | | |
|---|---|---|---|
| Qtype | 1 | 2 | 3 |
| 1 | 39 | 25 | 20 |
| 2 | 13 | 19 | 10 |
| 3 | 3 | 5 | 5 |
| 4 | 4 | 10 | 24 |

the marital relationship.

A second analysis of the Qtypes using a crosstabulation procedure was a three-way analysis using Qtype, condition, and marital type as factors. The results found no significant interactions. The large number of empty cells in this 4 x 3 x 4 analysis yielded a very low power to test possible effects (Tabachnick & Fidell, 1989).

Summary

The results from the analysis indicate that none of the six hypotheses were supported. Although some significant effects were found, they were not in the predicted direction. These results indicate that the marital couple types of Fitzpatrick (1988) did not differ significantly in their level of unique and partner specific expectations for deceptive behavior. The examination of the analyses also revealed that there is no increase in detection ability when deceivers accurately predict their spouse's (target's) expectations about their deceptive behavior. In fact, in emotional conditions the success rate of deception decreased when the deceiver accurately predicted the spouse's (target's) expectations about their deceptive behavior. Married couples did not make accurate judgments of the partner's behavior, and the judgments of deception that married partners did make were not consistent with their stated expectations about their partner's deceptive behavior. Research questions revealed significant differences in deceptive expectations for spouses and friends. Expectations within the relationship were more likely to be Qtype 4, which expected no meaningful change in behavior from truthful conditions. Outside the relationship Qtype 1 was more likely to be used. The analyses also indicated differences between couple types in their ability to detect deception in factual conditions. Independents were more accurate than Mixed couple types in detecting deception in this condition. The following chapter will discuss the implication of the results presented here noting limitations and future directions for research.

# Chapter Five

## Discussion

There are four areas of discussion relevant to this dissertation. The first concerns the interpretation and application of the specific findings as demonstrated in the last chapter. A second area is the methodology utilized in the study. The third area is the limitations of the study, and the fourth area indicates future directions for research. The first category, interpretation and applications of this study, will be discussed under three general headings: (a) perceptions of deceptive behavior in marital couples; (b) accuracy of perceptions and judgments of deception in marital couples, and (c) the target's awareness of cues associated with judgments of deception.

### Interpretation and Application of Specific Findings

First, the Q analyses evidence the influence of relationship development in marital types. Marital couples had differing expectations about deceptive behavior for their spouses than they did for their friends. Across the four couple types of Fitzpatrick (1988) the highest mean **Z** was .2054 for the Mixed couple types. While these expectations are different from those of friends there was a consistent pattern such that in marital relationships partners were more likely not to expect spouses to exhibit any kind of behavior that differentiated between truthful and lie conditions and partners were also more likely expect their spouse to think of them in this way.

Secondly, perceptions of deception cannot be overgeneralized. Previous studies of deception have discovered cues associated with judgments of deception, but these associations need at least two qualifications. The first is that if we assume the

judge is aware of the association between the cue and his/her judgment, it may be a situation- or person-specific association. Given another individual (a spouse?) a different set of cues may be associated with the judgment of deception. This conclusion is drawn from the evidence in the present study that marital partners were able to develop deceptive expectations for two people (friend, spouse) that were either uncorrelated or were negatively correlated. The second qualification is that the judge may in fact not be aware of this association.

Thirdly this study offers implications concerning specific cues associated with perceptions of deceptive behavior. The four types of behavioral expectations differed along two major lines. The first was the level of cues manifested. Qtype 4 did not expect any unusual behavior. They expected the individual to behave as if they were telling the truth. The other three types were expecting some variation of nervous behavior. Qtype 1 expected nervous but friendly behavior and expected the accompanying cues of excessive smiling and talking faster. Qtypes 2 and 3 did not expect friendliness or smiling behavior.

These three Qtypes used different dimensions of behavior to detect deception. Qtype 1 focused more clearly on things having to do with the voice. Qtype 2 also focused on the voice but less so and with different expectations when using the same dimensions. Qtype 3 only weakly focused on the voice and seemed to rely more on macro level assessments of behavior. Previous research has recently begun to look toward macro level perceptions of deceptive behavior associated with judgements of deception (O'Hair et al., 1988). This study suggests that there may be differences in

the population in the tendency to focus on macro or micro level assessments. Rather than assume that most people use both micro and macro level assessments, the tendency to use one or the other is an individual difference variable that may predict judgments of deception. It is the difference in asking an individual what they saw in someone when they lied and one person responds, "I saw his eyebrows twitch," whereas another person responds, "He just wasn't very friendly."

This dissertation has furthered research on perceptions of deceptive behavior by focusing on the influence of relationships in forming behavioral expectations, limiting the generalizability of cues associated with perceptions of deception and focusing on specific behavior associated with various types of deceptive expectations.

A second area of discussion for specific findings in this study centers around accuracy in detecting deception and accuracy in perceptions of deceptive behavior. First, Independent couple types were significantly more accurate in detecting factual lies than Mixed couple types, although they were not highly accurate in an absolute sense. This difference should be understood in light of the difference in the correlation of the husband and wife sorts that were used to measure whether one spouse could accurately predict the other's expectations of their behavior. For Independents the **Z** scores of transformed correlations were negative **Z** = -.6089. While the four marital types did not differ significantly in their correlations, (as will be discussed in the limitations section, this is probably due to sample size problems. Independent deceivers were predicting their partners would expect a behavior that was actually least expected by the partner. This means that the deceiver was uncertain of

the judgments of the spouse and could not adequately adapt his/her behavior.

The difficulty with this explanation is that the higher rate of correct judgments were for factual questions only. In fact, across marital types the more positively the husband and wife sorts were correlated, the more accurate the interviewer became in emotional veracity judgments. This is the opposite effect from that of the Independent couples. The only obvious difference is the nature of the deception. Perhaps the shared expectation about the deceiver's expected behavior is more easily camouflaged in factual conditions with less stress than when lying about emotions that require masking or faking a given emotional state.

If the emotional nature of the lie explains the increase in accuracy for marital couples (when they agree on the target's expectations about the deceptive behavior), further explanation is needed for the ability of Independents to increase accuracy scores under factual conditions. Sillars and Kalbfleisch (1989) suggest that independent couple types use a communication style for decision making that is explicit in nature and flows from a syntactic language code in which communication needs to be more clearly stated. This is in contrast to Traditional couples who use an implicit style based on a pragmatic code. The pragmatic code assumes much more in the "context" of social roles and in traditional understandings.

This would imply that Independents more than Traditionals (and Separates) require explicit verbal interaction to clarify meaning. In contrast, Traditionals can infer much more on the basis of nonverbal behaviors. The emotional questions may have been easier for Traditionals and Separates to judge because of the load that

nonverbal behaviors carry in expressing emotions. In contrast, the Independent couples did not maintain their higher level of accuracy in emotional conditions because they typically interact with more explicit verbal responses and the emotional condition of judgment did not provide this same level of explicit verbal response as was provided in the factual responses.

The second accuracy question (can marital partners accurately predict the spouse's deceptive behavior) led to nonsignificant results indicating that marital partners were not able to predict their partner's deceptive behavior across couple types. In addition to the these two accuracy questions, Research Question One probed whether married partners actually used their expectations of deceptive behavior when making veracity judgments. When the interviewer made judgments of deception in the spouse, the actual behavior of the deceiving spouse did not correspond to the stated expectations the interviewer. This indicates that married partners who make judgments of deception are not aware of the cues they actually use in making these judgments. Nevertheless, when open-ended responses were reviewed, research participants often reported making judgments of deception based on behavioral cues which they had stated in their expected behaviors. It is unclear whether subjects did in fact make some judgments using these cues but not consistently enough to be statistically significant in the analysis, or if research participants believed they were using these cues when in fact they did not. Although the time lapse was short between the judgments were made and the time they wrote down the cues they believed they used (three to five minutes from the time the interviewer asked the first

question), perhaps some memory bias influencedtheir open-ended responses. If the individuals have very strong expectations (such as schema set responses) they may be responding to what they believed they saw and not what they actually saw in the partner. The conscious use of behavioral cues in veracity judgments needs further exploration.

Because couples were not accurate in detecting deception overall (M = 10.67) and married partners were not accurate in predicting their partner's deceptive behavior, married partners should be cautioned about making quick judgments of dishonesty in each other. This study indicates that the truth bias, which is stronger in intimate couples than with friends and strangers (Kalbfleisch, 1992; McCornack & Parks, 1986; Stiff et al., 1992) is not necessarily a detriment to the relationship. In fact, given the lack of accuracy in predicting the types of deceptive behavior a spouse may exhibit, less truth bias may lead to increases suspicion and incorrect attributions of dishonesty. Further indication of this need for caution results from the equivocal evidence of the actual use of the behavioral expectations in making veracity judgments. Married partners did not make judgments of deception in their partner that corresponded with their expectations about the partner's behavior. This means that married partners may not be aware of the cues they are using when making judgments of deception. Married couples need to more closely monitor their behavioral observations and strive for clarity in their rationale for making deceptive judgments.

Methodological Advances

This dissertation builds on previous studies of deception and pushes further

through the adoption of different methodological procedures. First, this study used Q sort methodology to delineate expected behaviors accompanying deception. Rather than use a correlation procedure that associates actual behaviors with judgments of deception, this methodology specifically explores research participants' cognitive frameworks and establishes types of deceptive behavior typical in marital couples. The Q methodology allows the intercorrelation of items by the research participant and thus captures a composite picture that can be compared with other "types." For example, Qtype 1 was a friendly but nervous deceiver with associated nonverbal behaviors, whereas Qtype 2 had many of the same behaviors but the overall picture differs with the unfriendly tone of the behavior. This methodology explores the richness in people's perceptions of deceptive behavior and highlights the complex and multifaceted nature of perceptions of deceptive behavior. A second methodological improvement in this study is the use of an interactive setting for the study of deception in marital couples. Although Comadena (1982) included some married couples in an interactive context, this was an exception. Furthermore, married couples were not differentiated in the Comadena study. In this dissertation married couples were used exclusively and were differentiated on the basis of communication styles and relational patterns. In summary, the present study advances the study of deception by using Q methodology and focusing on perceptions of deceptive behavior in different marital types.

Limitations

The current study suffers perhaps in several respects, but one limitation is

especially obvious. The sample size for this study was too small. Although an extensive effort was made to gather a larger sample size, this seemed an almost impossible task for the limited means of the researcher. At least two problems made recruiting research participants for this study difficult. First, the study involves two people. Both husband and wife had to arrange a scheduled time to come into the laboratory to participate. There are several possible inconveniences including the scheduling problems, babysitters and associated expenses, and campus parking. A more likely concern for many potential research participants is the nature of the study itself--marital communication. Some couples (especially Separates, who totaled 3 for this study) do not focus attention on their relationship in everyday interaction. Thus, a study of this kind would not be immediately appealing. Furthermore, for Independents (a sample of 7 couples for this study) time schedules are difficult to coordinate and the time required for this protocol was advertised as approximately one and one-half hours. Thus, given these constraints, the sample became overloaded with Traditionals and Mixed couples. Additionally, the Mixed couples in this samle were primarily those in which one spouse was a Traditional.

The low sample size renders the power to statistically detect meaningful differences very low. At the same time this low sample size could falsely suggest an effect that is not actually present in the population at large. Thus, the conclusions of this study should be taken with a note of caution. When the sample is broken into types, the cell sizes become very small. When analyses are across types and considered as a whole, the results are more reliable. Thus, the multivariate analyses of

variance that use marital type or Qtype as factors in the design are weak. The type by condition crosstabulations are more reliable because they involve a sample of 118 participants and 177 Qsorts. With this qualification for sample size, the current study does provide some solid results as discussed above and some directions for future research and investigation.

Another possible caveat for this study involves the nature of the deception detection manipulation. Because it is a laboratory situation, the motivation to deceive is somewhat less than is found in many everyday deceptive contexts. This could mean that the behavior of the deceiver in the laboratory condition is not the same as the behavior the deceiver would manifest outside the laboratory. Although, this problem cannot be completely resolved an attempt was made to create a situation that would stimulate behavior similar to that outside the laboratory. The situation used for the sorting task was likely to be a less than strenuous deceptive situation and more similar to the experimental condition than some potential scenarios that could have been used. The experimental condition required the deceiver to lie about pictures shown to the deceiver by the researcher. Because the deceiver has little to fear in exposure, the difference between the truth and lie conditions may be minimal. When developing a condition of instruction for the interviewee who predicted the spouse's behavior when deceiving, the researcher sought to use a scenario that was not highly threatening and thus, the similarity of the two situations (the sorting situation and the experimental manipulation) is increased. In addition, the researcher sought to increase the motivation by offering money for successful deceivers and detectors as described in

the protocol. A number of participants indicated to the researcher that they felt very uncomfortable deceiving and they found the task difficult.

Finally, as with many deceptive situations if there is some evidence of distinctive behavior present in the experimental situation, it is often exacerbated in a real life circumstance. This would suggest that the error in this experiment is in not detecting a meaningful effect. In other words, if a slight degree of anxiety produces an effect in the laboratory condition that is meaningful, increased anxiety levels in real life scenarios would only tend to increase this effect on the deceiver's behavior. It may be that there is not enough anxiety in the laboratory condition to produce behaviors at a significant level. In this case the error would be that no significant effects were produced when they were actually present. It is less likely that the laboratory situation produces an anxiety level for the deception manipulation (and accompanying behavioral manifestations) far greater than that of real life scenarios. Thus, it is less likely that a significant effect is found when there is none in deceptive events outside the laboratory.

A final limitation to this study is the difficulty of coding the interviewee behaviors. The camera angle and sound quality were less than optimal and two key behaviors may not have strong validity. Although reliability in coding was high, this does not equate to validity. Coders agreed on behavior, but they could not be certain of what they were seeing. Thus, future protocols would improve the equipment used for videotaping couple interaction.

Suggestions for Future Research

Despite the limitations of this study, it does provides new insight into perceptions of deceptive behavior and directions for future research. The use of deceptive Qtypes (personas of deceptive behaviors) and the differing use various couple types make of these personas to increase accuracy in detection or to deceive can be explored profitably. This study highlights the need for further study in the cognitive process of deception detection and the role these expectations play as either on-line processing cues or cognitive biases, which influence decisions and memory for events when suspicion is high. If married partners are not aware of the cues they use in making deceptive judgments, there may be some more automatic process involved. Beyond the truth bias that automatically influences these decisions under conditions of minimal suspicion, when the suspicion is high as in the present study, the decision rules are not clearly defined.

This process may be further clarified if the nature of the various strategies for detecting deception are intertwined. Kalbfleisch (in print, 1994) has delineated numerous verbal interaction strategies used by people in trying to determine if another is lying. Strategies include simple probing for details, looking for contradictions or provoking their occurrence, and simply asking a partner for the truth. This dissertation explores the use of nonverbal cues in an isolated context. Couples were not allowed to use other verbal tactics to help them make veracity judgments. In real life situations evaluation of nonverbal behavior would be accompanied by other strategies of deception detection. It may be that different verbal strategies may lead to different

expectations about nonverbal responses. For example, questioning the truthfulness of a partner's response may be expected by some people to prompt angry affirmations from the partner when lying but calm assurances when the partner is telling the truth, while others may expect greater overall nervousness if the person is lying. Deception research could profit from considering interactive frameworks, strategies used and expectations about partners truthful and deceptive behavior.

# APPENDIX A

## ADVERTISEMENT FOR RESEARCH PARTICIPANTS PUBLISHED IN LOCAL AND COLLEGE PAPERS

Appendix A

## Unusual Opportunity for Married Couples

Married couples who have been married at least one year and speak English as a first language may volunteer to participate in a research project on marital communication. To secure a place in the research project couples should respond as soon as possible. Results from the research will be made available to participants. Couples who complete the project will be paid $20.00 for their participation. For further information about this opportunity or to request an opportunity to participate couples should contact Randy Wood at 224-3488.

# APPENDIX B

## FLYER USED FOR RECRUITING SUBJECTS

# *Married Couples Needed for Communication Study*

Married couples who have been married at least one year and speak English as a first language may volunteer to participate in a research project on marital communication.

To secure a place in the research project couples should respond as soon as possible. Summary results from the research will be made available to participants.

Each individual who completes the project will be **paid $10.00**. This will be **$20.00 per couple.**

This research project is being overseen by the University of Kentucky. For further information about this opportunity or to request an opportunity to participate couples should contact ***Randy Wood*** **at 224-3488.**

# APPENDIX C

## INTERVIEWER CONSENT FORM

IRB Approval
93-10045
THIS FORM VALID
8/11/93 — 8/10/94

**Consent for Research Study**
**"Communication in Marriage"**

I,_____, agree to participate in the research study being conducted by James Randall Wood, under the direction of Dr. Pamela J. Kalbfleisch.

I understand the purpose of this research is to study communication in marriage. The time expected for my participation is approximately one and one-half hours. I understand the study will be conducted in the communication lab at 240 Grehan Building, University of Kentucky campus.

I understand that I will first be involved in a videotaped interaction. This interaction will require me to ask my partner a series of questions about pictures they have been shown. My partner may or may not be telling me the truth. I will not be allowed to ask further questions. I will also be asked to mark on the questionnaire provided whether I believe my partner is telling the truth or lying about each response he/she gives. This interaction will last approximately five to seven minutes.

Following the videotaped interaction I will be asked to fill out a series of questionnaires and do a sorting task. This will take approximately one hour.

I understand there are no known risks involved in this study. I may request further information about the study by contacting the principal investigator named below at 237 Grehan on the UK campus or by calling 257-5339. All questionnaires will be numbered. My name will not be attached to videotapes or any other materials produced during the research study. All materials will be kept in the possession of the researchers who will maintain strict confidentiality. I will receive a copy of this consent form for my records.

**PARTICIPATION** is voluntary, refusal to participate will involve no penalty or loss of benefits to which I am otherwise entitled. I understand that I may discontinue participation at any time without penalty or loss of benefits to which I am otherwise entitled.

(Signature of Participant) _____
(Date)_____

I have explained and defined in detail the research procedure in which the subject has consented to participate.

Principal Investigator_____Date_____

# APPENDIX D

# INTERVIEWEE CONSENT FORM

IRB Approval
93-10045
THIS FORM VALID
8/11/93 — 8/10/94

**Consent for Research Study**
**"Communication in Marriage"**

I_____, agree to participate in the research study being conducted by James Randall Wood, under the direction of Dr. Pamela J. Kalbfleisch.

I understand the purpose of this research is to study communication in marriages. The time expected for participation is approximately one and one-half hours. I understand that the study will be conducted in the communication lab at 240 Grehan Building, University of Kentucky campus.

I understand that in this project I will be involved in a videotaped interaction. This interaction will require me to first view a series of pictures and respond to each on a questionnaire. I understand that some of the pictures could be disturbing. Afterwards I will be asked to provide my partner some truthful and some false responses about what I have seen. This interaction will be approximately five to seven minutes.

Following the videotaped interaction I will be asked to fill out a series of questionnaires and do a sorting task. This will take approximately one hour.

I understand there are no known risks involved in this study. I may request further information about the study by contacting the principal investigator at 237 Grehan on the UK campus or calling 257-5339. All questionnaires will be numbered. My name will not be attached to videotapes or any other materials produced during the research study. All materials will be kept in the possession of the researchers who will maintain strict confidentiality. I will receive a copy of this consent form for my records.

**PARTICIPATION** is voluntary, refusal to participate will involve no penalty or loss of benefits to which I am otherwise entitled. I understand that I may discontinue participation at any time without penalty or loss of benefits to which I am otherwise entitled.

_____(Signature of Participant)
_____ (Date)

I have explained and defined in detail the research procedure in which the subject has consented to participate.

Principal Investigator_____ Date_____

# APPENDIX E

# INTERVIEWER QUESTIONNAIRE

Appendix E

## INTERVIEWER QUESTIONNAIRE

**(After each question, circle whether or not you believe your partner is telling the truth)**

**Set One**

1. What did you see in the first picture?
   Partner's response is TRUE FALSE

2. How did you feel about that picture?
   Partner's response is TRUE FALSE

3. Are you really telling the truth?
   Partner's response is TRUE FALSE

**Set Two**

1. What did you see in the second picture?
   Partner's response is TRUE FALSE

2. How did you feel about that picture?
   Partner's response is TRUE FALSE

3. Are you really telling the truth?
   Partner's response is TRUE FALSE

**Set Three**

1. What did you see in the third picture?
   Partner's response is TRUE FALSE

2. How did you feel about that picture?
   Partner's response is TRUE FALSE

3. Are you really telling the truth?
   Partner's response is TRUE FALSE

**Set Four**

1. What did you see in the fourth picture?
   Partner's response is TRUE FALSE

2. How did you feel about that picture?
   Partner's response is TRUE FALSE

3. Are you really telling the truth?
   Partner's response is TRUE FALSE

**Set Five**

1. What did you see in the fifth picture?
   Partner's response is TRUE FALSE

2. How did you feel about that picture?
   Partner's response is TRUE FALSE

3. Are you really telling the truth?
   Partner's response is TRUE FALSE

**Set Six**

1. What did you see in the sixth picture?
   Partner's response is TRUE FALSE

2. How did you feel about that picture?
   Partner's response is TRUE FALSE

3. Are you really telling the truth?
   Partner's response is TRUE FALSE

**Set Seven**

1. What did you see in the seventh picture?
   Partner's response is TRUE FALSE

2. How did you feel about that picture?
   Partner's response is TRUE FALSE

3. Are you really telling the truth?
   Partner's response is TRUE FALSE

# APPENDIX F

## INTERVIEWER SELF ANALYSIS SHEET

Appendix F

## INTERVIEWER SELF ANALYSIS SHEET

Reflecting upon the completed videotaped interview, please list below any and all means you used to determine when the interviewee was telling a lie.

# APPENDIX G

## INSTRUCTIONS FOR SORT ONE

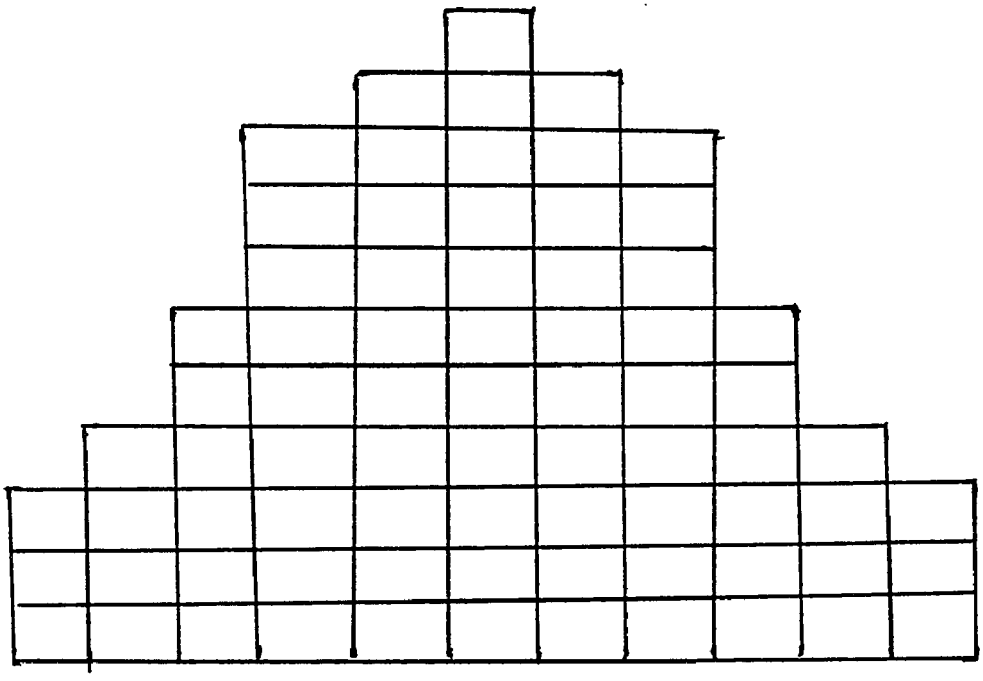
Appendix G

## SORTING TASK INTERVIEWER
## SORT ONE

Consider that you see two acquaintances conversing. One of the acquaintances asks the other what are his/her plans for the weekend. You know that this individual does not have any plans. Thus, when they respond that they are busy you know he/she is lying.

With this scenario in mind sort the cards into the following distribution. Sort them into the eleven columns as in the pattern below. Those farthest to the left will be those items you think you would most likely expect to observe in the deceiver's behavior while lying, and those items farthest to the right will be those items you would least likely expect to observe. Force yourself to place the cards into the order given below with the appropriate number of cards in each column. After sorting the cards take the randomly applied number in the upper right hand corner of the card and write it into the space below corresponding to its place in your sort.

In order to make the sorting a bit easier, first sort the cards into two stacks of most likely to observe to least likely to observe. Then work from the outside in at both ends. Note that within a single column cards need not be in any particular order. Only column differences will be utilized in the sorting.



# APPENDIX H

## INSTRUCTIONS FOR SORT TWO

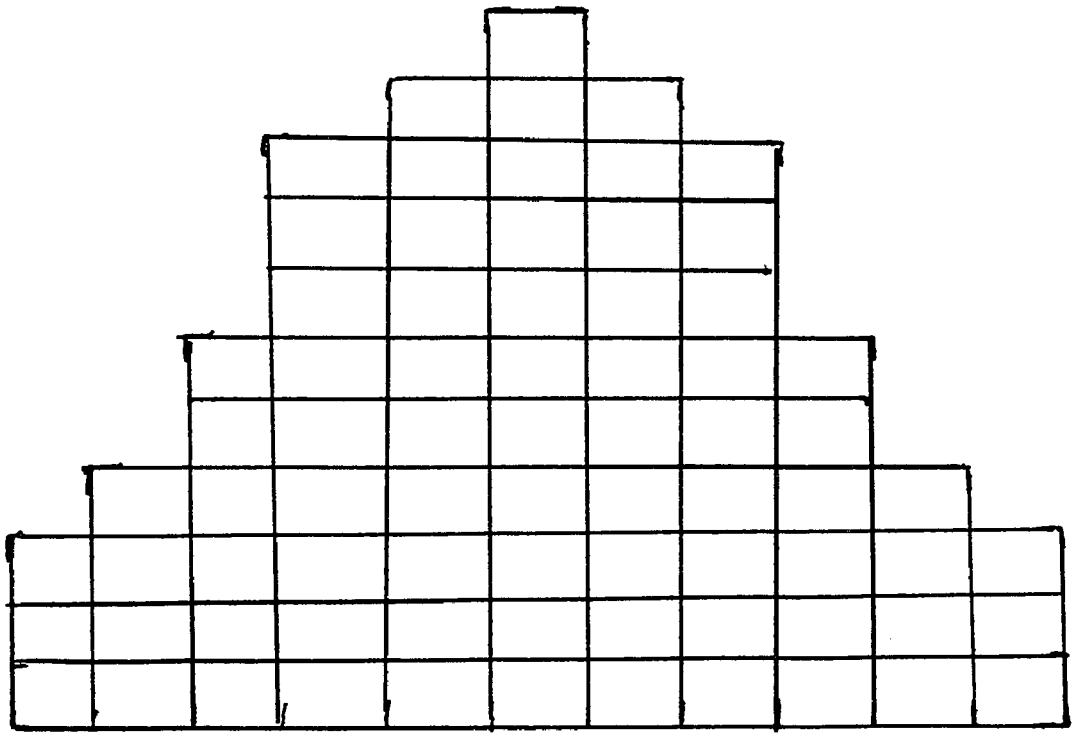
Appendix H

## SORTING TASK INTERVIEWER
## SORT TWO

Consider that you see your partner conversing with an acquaintance. This acquaintance asks your partner what are his/her plans for the weekend. You know that your partner has no plans. Thus, when your partner responds that they are busy you know he/she is lying.

With this scenario in mind sort the cards into the following distribution. Sort them into the eleven columns as in the pattern below. Those farthest to the left will be those items you think you would most likely expect to observe in your partner's behavior while lying, and those items farthest to the right will be those items you would least likely expect to observe. Force yourself to place the cards into the order given below with the appropriate number of cards in each column. After sorting the cards take the randomly applied number in the upper right hand corner of the card and write it into the space below corresponding to its place in your sort.

In order to make the sorting a bit easier, first sort the cards into two stacks of most likely to observe to least likely to observe. Then work from the outside in at both ends. Note that within a single column cards need not be in any particular order. Only column differences will be utilized in the sorting.



# APPENDIX I

# GENERAL QUESTIONNAIRE

Appendix I

## GENERAL INFORMATION QUESTIONNAIRE

1. Number of years married_____.

2. Citizenship_____.

3. Age _____.

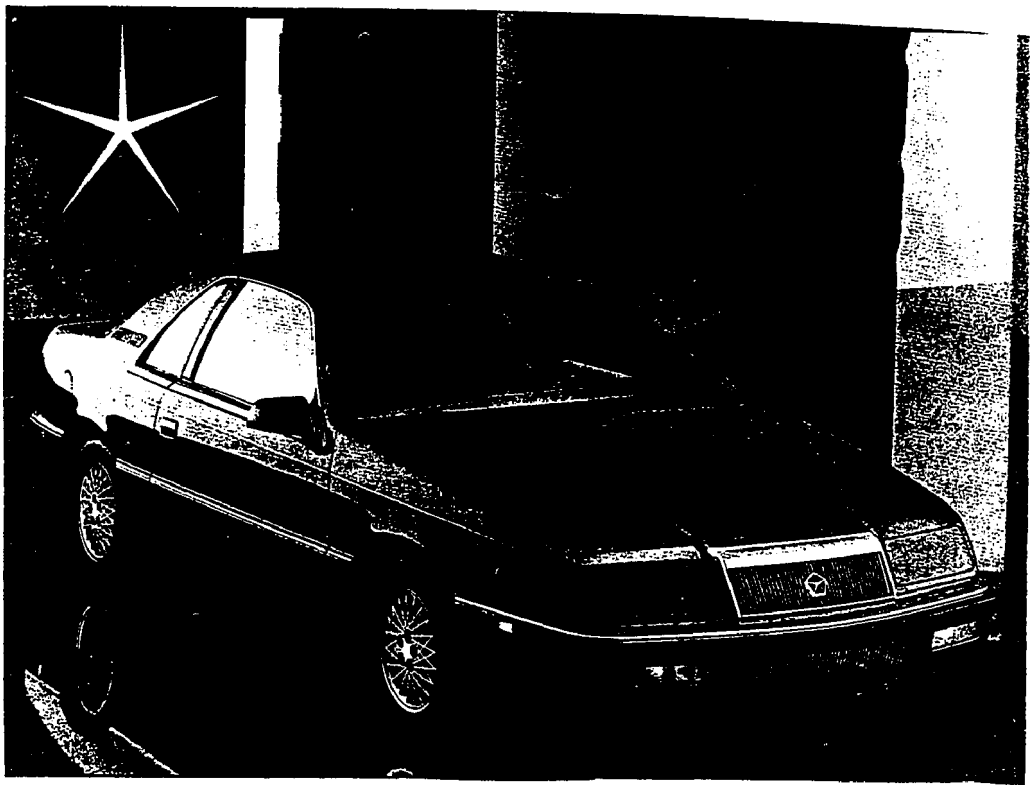
4. Income Level_____0-$15,000 _____15,001-25,000
_____25,001-35,000 _____35,001-50,000
_____50,001-75,000 _____Above 75,000

5. Rate on the following scale your confidence in your ability to detect deception in your partner.

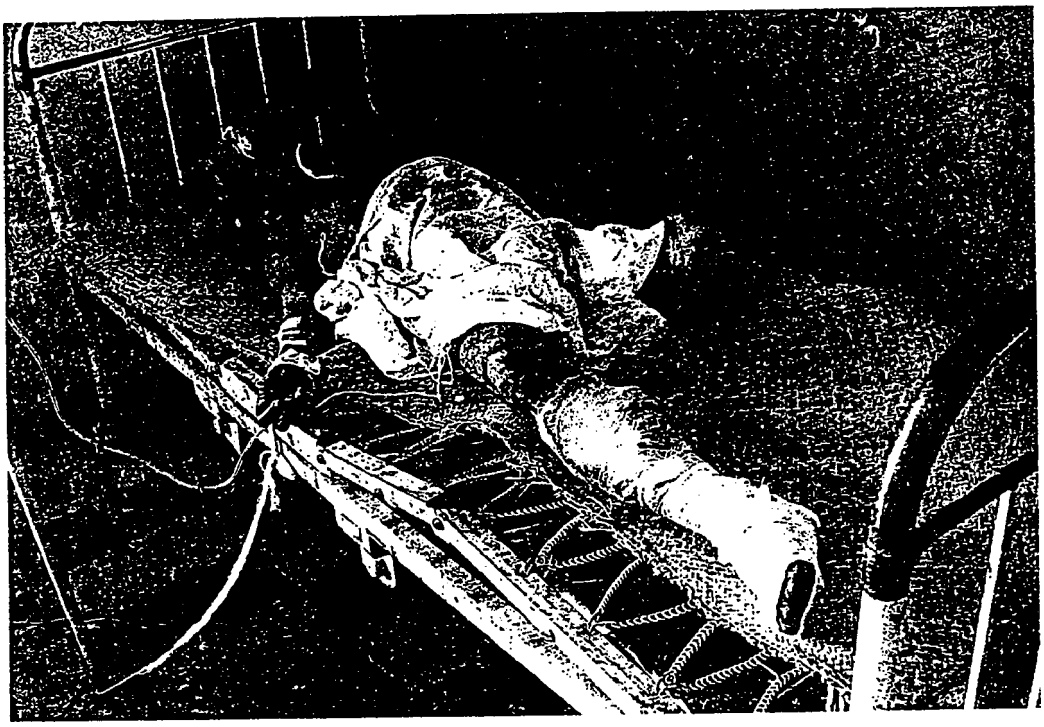
| NOT CONFIDENT AT ALL | | | | | VERY CONFIDENT | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

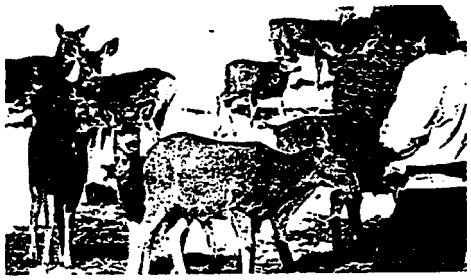
# APPENDIX J

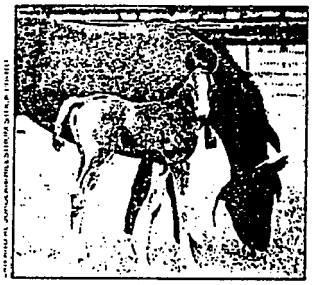
# STIMULUS PICTURES




TELEMUNDO







# APPENDIX K

# INTERVIEWER PICTURE RATINGS

Appendix K

## INTERVIEWEE PICTURE RESPONSE SHEET

For each scale listed in the questions below circle the number which best represents your response to the pictures you are viewing.

1. Picture number one is:

| Extremely unpleasant | | | | | Extremely pleasant | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

2. Picture number two is:

| Extremely unpleasant | | | | | Extremely pleasant | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

3. Picture number three is:

| Extremely unpleasant | | | | | Extremely pleasant | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

4. Picture number four is:

| Extremely unpleasant | | | | | Extremely pleasant | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

5. Picture number five is:

| Extremely unpleasant | | | | | Extremely pleasant | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

6. Picture number six is:

| Extremely unpleasant | | | | | Extremely pleasant | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

7. Picture number seven is:

| Extremely unpleasant | | | | | Extremely pleasant | |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |

# APPENDIX L

## INTERVIEWEE CUE SHEET

Appendix L

## INTERVIEWEE CUE SHEET

1. This picture was an advertisement for a new car.
   You responded to the pleasant/unpleasant scale _____.

2. This picture was a flower arrangement.
   You responded to the pleasant/unpleasant scale _____.

(Lie response: You could say you saw a picture of a labrador retriever or a Rottweiler. Vary your response to the scale.)

3. This picture was of an abused spouse.
   You responded to the pleasant/unpleasant scale _____.

(Lie response: You could say you saw a picture of a wedding. Vary your response to the scale.)

4. This was a picture of war casualties.
   You responded to the pleasant/unpleasant scale _____.

(Lie response: You could say this was a picture of your favorite actor/actress. Vary your response to the scale.)

5. This was a picture of wildlife.
   You responded to the pleasant/unpleasant scale _____.

(Lie response: You could say this was a picture of an oil spill disaster. Vary your response to the scale.)

6. This was a picture of suffering children.
   You responded to the pleasant/unpleasant scale _____.

(Lie response: You could say this was a picture of a family reunion. Vary your response to the scale.)

7. This was a picture of rivers and streams.
   You responded to the pleasant/unpleasant scale _____.

(Lie response: You could say this was a picture of a polluted streams and rivers. Vary your response to the scale.)

# APPENDIX M

## INSTRUCTIONS FOR SORT THREE

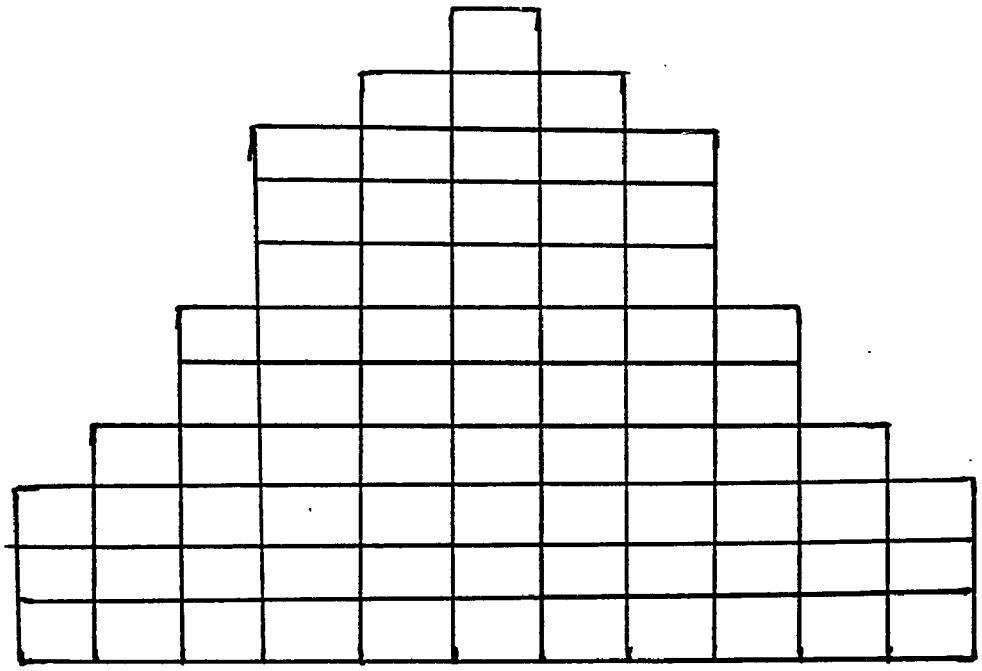
Appendix M

## SORTING TASK INTERVIEWEE

Consider that you have been asked by an acquaintance what your plans are for the weekend. Although you do not have any plans you lie to this acquaintance because you do not want to be obligated to spend any time with this individual.

With this scenario in mind sort the cards into the following distribution. Sort them into the eleven columns as in the pattern below. Those farthest to the left will be those items you think you believe your partner would most likely expect to observe in your behavior while lying, and those items farthest to the right will be those items you believe your partner would least likely expect to observe. Force yourself to place the cards in each column. After sorting the cards take the randomly applied number in the upper right hand corner of the card and write it into the space below corresponding to its place in your sort.

In order to make the sorting a bit easier, first sort the cards into two stacks of my partner's most likely expectation to my partner's least likely expectation. Then work from the outside in at both ends. Note that within a single column cards need not be in any particular order. Only column differences will be utilized in the sorting.



# APPENDIX N

# DEFINITIONS OF CODED BEHAVIORS

# Appendix N

## Coding Scheme

### Micro Level Cue Definitions

Speech Errors--mispronunciations, using the wrong word, words out of order, nonfluencies and verbal pauses, repeated words

Fidgeting--These are hand movements other than illustrators (specific gestures), and do not include arm movements. Examples include scratching the head, rubbing the hands or otherwise touching parts of the body. These behaviors were coded by actual count. Distinct movements were judged one count. If movements were continuous it counted as one fidget. For example, twiddling the thumbs continuously was one fidget behavior. If the person stopped and started again a second fidget was counted. If a continuous fidget carried over into the next question, it counted as one fidget for both time periods.

Length of Response--This behavior was the number of words the individual used in responding to the interviewer. Nonfluencies counted as one word.

Hesitations--These behaviors were pauses involving silence. In other words, nonfluencies not accompanied by silence were not considered in this category since there were coded as speech errors. Silence between sentences was not counted as hesitations. Hesitations were only counted where it was clear the speaker was not finished with the thought and broke off the sentence momentarily.

Speech Rate--This was the ratio of words to time consumed in speaking. In other words, this category codes how long it took the individual to say whatever it was they said. The length was divided by the time. Time was counted to hundreths of a second.

Response Latency--This was the time consumed between the end of the interviewer's question and the beginning of the interviewee's response. It coded how long it took the interviewee to respond to the question. It was time to hundredths of a second.

Smiling--Smiling behavior was rated on a scale from one to seven. The bounds of the scale were no smiling and excessive smiling.

Eye Contact--Eye contact was difficult to rate because of the camera angle and lack of focus of the lens. Nevertheless, eye contact was rated by coders on a scale from one to seven. The scale was bounded by staring/excessive eye contact to non eye contact at all.

## Macro Level Cue Definitions

All macro level cues were rated on a scale from one to seven. These ratings indicated the perceived level of the attribute during the time period for which is was rated. Although these definitions were provided to coders and discussed, each was reminded to consider the everyday sense of the term and whether it applied to any given interaction. In other words, these are not absolutes. The definitions are derived from Norton (1978). This seems especially appropriate since couples were not rehearsed in these detailed definitions.

Dominant--The tendency to take charge of social situations/conversations

Dramatic--This attribute focuses on exaggerations, fantasies, stories, metaphors, rhythm, voice and other style devices to highlight or understate content.

Animated--This tends to involve frequent and sustained eye contact, many facial expressions and frequent gestures.

Tense--Raters coded how tense the individual appeared to be with relaxed at the other boundary of the scale. This often involved more fidgeting, perceptions of nervousness in verbal speech, and variations in eye contact.

Attentive--This category involves general listening and empathy and is often nonverbally reflected in eye contact, head nods and vocal qualities.

Friendly--Coders rated each interviewee on their perception of the friendliness with hostility at the other end of the scale. Friendliness was often reflected nonverbally in smiling behavior, eye contact, response length and vocal qualities.

Communicator Image--This category reflected the overall impression of the quality of the communication given. How easy the interaction seemed to be for the interviewee. How clearly did they express themselves.

Apprehensive--This category was highly correlated with tense but reflects a degree of uncertainty and worry not necessarily present in a rating of tension. It was included in the sorts and coding because of its presence in focus group discussions (Wood, 1993).

References

Berger, C. R., Karol, S. H., & Jordan, J. M. (1989). When a lot of knowledge is a dangerous thing: The debilitating effects of plan complexity on verbal fluency. Human Communication Research, 16, 91-119.

Bond, C. F., Kahler, K. N., Paolicelli, L. M. (1985). The miscommunication of deception: An adaptive perspective. Journal of Experimental Social Psychology, 21, 331-345.

Brandt, D. R., Miller, G. R., & Hocking, J. E. (1980a). Effects of self-monitoring and familarity on deception detection. Communication Quarterly, 28, 3-10.

Brandt, D. R., Miller, G. R., & Hocking, J. E. (1980b). The truth-deception attribution: Effects of familiarity on the ability of observers to detect deception. Human Communication Research, 6, 99-108.

Brennan, R. L., & Prediger, D. J. (1981). Coefficient kappa: Some uses, misuses, and alternatives. Educational and Psychological Measurements, 41, 687-699

Buller, D. B., & Aune, R. K. (1987). Nonverbal cues to deception among intimates, friends, and strangers. Journal of Nonverbal Behavior, 11, 269-290.

Buller, D. B., & Burgoon, J. K. (1994). Deception: Strategic and Nonstrategic Communication, In J. A. Daly & J. M Wieman (Eds.), Strategic Interpersonal Communication (pp. 191-223). Hillsdale, NJ: Lawrence Erlbaum Associates.

Buller, D. B., Strzyzewski, K. D., & Comstock, J. (1991). Interpersonal deception: I. Deceivers reactions to receivers' suspicions and probing. Communication Monographs, 58, 1-24.

Cody, M. J., & McLaughlin, M. L. (1980). Perceptions of compliance-gaining situations: A dimensional analysis. Communication Monographs, 47, 132-148.

Cody, M. J., & McLaughlin, M. L. (1985). The Situation as a Construct in Intepersonal Communication Research. In M. L. Knapp & G. R. Miller (Eds.), Handbook of interpersonal communication (pp. 263-312). Beverly Hills, CA: Sage.

Cohen, J. (1960). A coefficient of agreement for nominal scales. Educational and Psychological Measurement, 20, 37-46.

Comadena, M. E. (1982). Accuracy in detecting deception: Differences in deception cues due to gender and communicator dominance. Communication Monographs, 50, 175-192.

Ekman, P., (1985). Telling lies. New York: Berkley Books.

Ekman, P., & Friesen, W. V. (1974). Detecting deception from the body or face. Journal of Personality and Social Psychology, 29, 288-298.

Fisher, R. A. (1941). Statistical methods for research workers (8th Ed.). New York: G. E. Stechart.

Fitzpatrick, M. A. (1988). Between husbands and wives. Newbury Park, CA: Sage.

Fitzpatrick, M. A., & Badzinski, D. (1985). All in the family: Communication in kin relationships. In M. L. Knapp & G. R. Miller (Eds.), Handbook of interpersonal communication (pp. 687-736). Beverly Hills, CA: Sage.

Fleiss, J. L. (1971). Measuring nominal scale agreement among many raters. Psychological Bulletin, 76, 378-382.

Gottman, J. M. (1979). Marital interaction: Experimental investigations. New York: Academic Press.

Gottman, J. M. (1994). What predicts divorce: The relationship between marital processes and marital outcomes. Hillsdale, NJ: Lawrence Erlbaum Associates.

Grice, H. P. (1975). Logic and conversation. In P. Cole and J. Morgan (Eds.), Syntax and semantics (pp. 41-58). New York: Academic Press.

Harrison, A. A., Hwalek, M., Raney, D. F., & Fritz, J. G. (1978). Cues to deception in an interview situation. Social Psychology, 41, 156-161.

Hays, W. L. (1963). Statistics. New York: Holt, Rinehart, and Winston.

Hemsley, G. D., & Doob, A. N. (1978). The effect of looking behavior on perceptions of a communicator's credibility. Journal of Applied Social Psychology, 8, 136-144.

Hocking, J. E., Kaminski, E. P., Bauchner, J., & Miller, G. R. (1979). Detecting deceptive communication from verbal, visual, and paralinguistic cues. Human Communication Research, 6, 33-46.

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

Hughes, M. A., & Garrett, D. E. (1990). Intercoder reliability estimation approaches in marketing: A generalizability theory framework for quantitative data. Journal of Marketing Research, 27, 185-195.

Kahn, M. (1970). Non-verbal communication and marital satisfaction. Family Process, 9, 449-456.

Kalbfleisch, P. J. (1990). Listening for deception: The effects of medium on accuracy of detection. In R. N. Bostrom (Ed.), Listening behavior: Measurement and application (pp. 155-176). New York: Guilford Press.

Kalbfleisch, P. J. (1992). Deceit, distrust and the social milieu: Application of deception research in a troubled world. Journal of Applied Communication Research, 20, 308-334.

Kalbfleisch, P. J. (In press, 1994). The language of detecting deceit. Journal of Language and Social Psychology, 13(4).

Kalbfleisch, P. J., & Vogl, S. M. (1993, November). Deceptive messages and maintaining close relationships. Paper presented at the Annual Convention of the Speech Communication Association, Miami, Fl.

Kantor, D., & Lehr, W. (1975). Inside the family. New York: Harper & Row.

Knapp, M. L., Cody, M. L., & Reardon, K. (1987). Nonverbal communication. In C. Berger & S. Chaffee (Eds.), Handbook of communication science (pp. 385-418). Beverly Hills, CA: Sage.

Kraut, R. E. (1978). Verbal and nonverbal cues in the perception of lying. Journal of Personality and Social Psychology, 36, 380-391.

Kraut, R. E., & Poe, D. (1980). On the line: The deception judgements of customs inspectors and laymen. Journal of Personality and Social Psychology, 39, 784-798.

Levine, T. R., & McCornack, S. A. (1991). Linking love and lies: A formal test of the McCornack and Parks model of deception detection. Journal of Social and

Personal Relationships, 8, 2-32.

Lippard, P. V. (1988). "Ask me no questions, I'll tell you no lies": Situational exigencies for interpersonal deception. Western Journal of Speech Communication, 52, 91-103.

McCornack, S., A., & Levine, T. R. (1990). When lies are uncovered: Emotional and relational outcomes of discovered deception. Communication Monographs, 57, 119-138.

McCornack, S., A., & Parks, M. R. (1986). Deception detection and relationship development: The other side of trust. In M. L. McLaughlin (Ed.), Communication Yearbook, 9, (pp. 377-389). Beverly Hills, CA: Sage.

McCornack, S., A., & Parks, M. R. (1990). What women know that men don't: Sex differences in determining the truth behind deceptive messages. Journal of Social and Personal Relationships, 7, 107-118.

Metts, S., & Hippensteele, S. (1988). Characteristics of deception in close relationships. Advances in interpersonal communication research (pp. 33-50). Las Cruces, NM: Communication Resources Center.

Miller, G. R., Bauchner, J. E., Hocking, J. E., Fontes, N. E., Kaminski, E. P. & Brandt, D. R. (1981). " . . . And nothing but the truth": How well can observers detect deceptive testimony? In B. D. Sales (Ed.), Perspectives in law and psychology, Volume II: The trial process. New York: Plenum.

Miller, G. R., Mongeau, P. A., & Sleight, C. (1986). Fudging with friends and lying to lovers: Deceptive communication in personal relationships. Journal of Social

and Personal Relationships, 3, 495-512.

Noeller, P. (1984). Nonverbal communication and marital interaction. Pergamon: Oxford.

Norton, R. (1978). Foundations of a communicator style construct. Human Communication Research, 4, 99-112.

Norton, R. (1983). Communicator style. Beverly Hills, CA: Sage.

O'Hair, D., & Cody, M. J. (1987). Machiavellian beliefs and social influence. Western Journal of Speech Communications, 51, 279-303.

O'Hair, H. D., Cody, M. J., Goss, B., & Krayer, K. K. (1988). The effect of gender, deceit orientation and communicator style on macro-level assessments of honesty. Communication Quarterly, 36, 77-93.

Parks, M. R., & Adelman, M. B. (1983). Communication networks and the development of romantic relationships: An expansion of uncertainty reduction theory. Human Communication Research, 10, 55-79.

Planalp, S. (1985). Relational schemata: A test of alternative forms of relational knowledge as guides to communication. Human Communication Research, 12, 3-29.

Pryor, B., & Buchanan, R. W. (1984). The effects of a defendants's demeanor on juror perceptions of credibility and guilt. Journal of Communication, 34, 92-99.

Riggio, R. E., & Friedman, H. S. (1983). Individual differences and cues to deception. Journal of Personality and Social Psychology, 45, 899-915.

Riggio, R. E., Salinas, C., & Tucker, J. (1988). Personality and deception ability.

Personality and Individual Differences, 9, 189-191.

Sillars, A. L., & Kalbfleisch, P. J. (1989). Implicit and explicit decision-making styles in couples. In D. Brinberg & J. Jaccard (Eds.), Dyadic decision making. New York: Springer-Verlag.

Stiff, J. B., Kim, H. J., & Ramesh, C. N. (1992). Truth-biases and aroused suspicion in relational deception. Communication Research, 19, 326-345.

Stiff, J. B., & Miller, G. R. (1986). "Come to think of it . . .": Interrogative probes, deceptive communication, and deception detection. Human Communication Research, 12, 339-358.

Tabachnick, B. G., & Fidell, L. S. (1989). Using multivariate statistics. 2nd Ed. New York: Harper & Row Publishers.

Tinsley, H. E. A., & Weiss, D. J. (1975). Interrater reliability and agreement among subjective judgments. Journal of Counseling Psychology, 22, 358-376.

Van Tubergen, N. (1980). Quanal [Computer program]. Lexington, KY: N. Van Tubergen, University of Kentucky.

Wood, J. R. (1993). Deceptive schemata: Initial impressions of others. In P. J. Kalbfleisch (Ed.), Interpersonal communication: Evolving interpersonal relationships (pp. 69-86). Hillsdale, NJ: Lawrence Erlbaum Associates.

Zuckerman, M., DeFrank, R. S., Hall, J. A., Larance, D. T., & Rosenthal, R. Facial and vocal cues of deception and honesty. Journal of Experimental Social Psychology, 15, 378-396.

Zuckerman, M., DePaulo, B., & Rosenthal, R. (1981). Verbal and nonverbal

communication of deception. In L. Berkowitz (Ed.), Advances in experimental social psychology (vol. 14, pp. 1-59). New York: Academic Press.

Zuckerman, M., Koestner, R., & Driver, R. (1981). Beliefs about cues associated with deception. Journal of Nonverbal Behavior, 5, 1-31.

# Vita

James Randall Wood

**Date of Birth**: 9/23/55

**Degrees**

B.A. Freed-Hardeman University 1979

M.Th. Harding Graduate School of Religion 1985

Ph.D. University of Kentucky 1994

**Teaching**

1993-Present **Visiting Assistant Professor**, Department of Communication, Univeristy of Louisville, Louisville, Kentucky

1992-1993 **Visiting Assistant Professor**, Department of Communication, University of Cincinnati, Cincinnati, Ohio

1990-1992 **Teaching Assistant,** Department of Communication, University of Kentucky, Lexington, Kentucky

1989-1992 **Teaching Assistant**, Department of Telecommunications, University of Kentucky, Lexington, Kentucky

1980-1989 **Minister** Church of Christ

Selmer, Tennessee; Temple Hills, Maryland

**Publications and Papers**

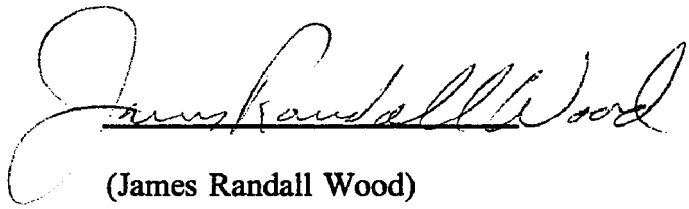
Wood, J. R. (1993). Deceptive Schemta: Initial Impressions of others. In P. J. Kalbfleisch (Ed.), Interpersonal communication: Evolving interpersonal

relationships (pp. 69-86). Hillsdale, NJ: Lawrence Erlbaum Associates.

Wood, J. R. (1994, April). The development of deceptive schemas in marital relationships. Paper presented at the Annual Meeting of the Southern Speech Communication Association, Norfolk, VA.

Wood, J. R. (1992, February). Deceptive schemata: micro and macro level analysis. Paper presented at the Annual Meeting of the Western States Communication Association, Boise, ID.

Kalbfleisch, P. J., & Wood, J. R. (1992, November).**Top Six Paper**. Organizational commitment and job involvement in a health care environment: The effect of mentoring, job reward value, and job expectations on fostering a supportive organizational environment. Paper presented at the Annual Meeting of the Speech Communication Association, Chicago, IL.



(James Randall Wood)