STATE-RECEIVER APPREHENSION AND UNCERTAINTY
IN CONTINUING INITIAL INTERACTIONS

THESIS

Presented to the Graduate Council of the
University of North Texas in Partial
Fulfillment of the Requirements

For the Degree of

MASTER OF SCIENCE

By

Bradley K. Schumacher, B. A.
Denton, Texas
August, 1995
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This study examined state-receiver apprehension and uncertainty as they relate to each other and to information seeking and confirmation of relational predictions in initial interactions. Participants consisted of 381 college students enrolled in a basic communication class at a Southwestern university. Three groups were used to check for sensitization effects of an early test or a mid-test on subsequent mid-test or post-test scores. The results offered support for three hypotheses. State-receiver apprehension was positively related to uncertainty and both were negatively related to information seeking and confirmation of relational predictions. Results also suggested that state-receiver apprehension may lead to uncertainty. Results indicated a negative correlation between state-receiver apprehension and information seeking. There was no clear indication that initial interactions with others reduced state-receiver apprehension.
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CHAPTER 1

INTRODUCTION

This chapter will introduce the concepts of the study, provide the fundamentals of uncertainty and receiver apprehension, and discuss the significance of the study. A quotation by Francis Bacon will introduce us to the first concept, uncertainty.

Francis Bacon stated in The Advancement of Learning that "If a man will begin with certainties, he will end with doubts; but if he will be content to begin with doubts, he shall end with certainties." Bacon's quotation points out that we, as humans, are unsure about a great many things but, more importantly, he suggests that it is normal, and preferred, to begin with doubts (i.e., uncertainties).

Berger and Calabrese (1975) developed an interpersonal communication theory of uncertainty reduction in initial interactions based on the assumption that "when strangers meet, their primary concern is one of uncertainty reduction or increasing predictability about the behavior of both themselves and others in the interaction" (p. 100). Berger and Calabrese's (1975) theory is known as Uncertainty Reduction Theory (URT).
The concept known as Receiver Apprehension (RA) is defined as "...the fear of misinterpreting, inadequately processing and/or not being able to adjust psychologically to messages sent by others" (Wheeless, 1975, p. 263). The purpose of this paper is to investigate the relationships between uncertainty and receiver apprehension as they relate to each other and as they relate to information seeking and confirmation of relational predictions in initial interactions. Before investigating the relationships between uncertainty and receiver apprehension, the fundamentals of each concept will be discussed briefly.

Fundamentals of Uncertainty Reduction Theory (URT)

Berger and Calabrese (1975) believed that interpersonal communication was a developmental process that occurs through three stages. They have identified these stages as the entry phase, personal phase, and exit phase. A primary concern in the entry phase is the reduction of uncertainty about the other person in the interaction. Information (physical, biographic, demographic) may be obtained in this phase to reduce uncertainty. Much of the interaction in the entry phase is influenced (i.e., controlled) by a set of communication rules or norms. If an individual is unaware of the communication rules or norms and chooses to engage in
behavior that is inappropriate, then the result may be embarrassment or increased uncertainty.

When the communicators begin to explore each others’ attitudes, beliefs, and values, they have entered into the personal phase. In this phase “communication is more spontaneous and less constrained by social desirability norms” (Berger & Calabrese, 1975, p. 100). More personal information is provided in this phase than in the entry phase.

The final phase of the interaction is called the exit phase. During this phase, the communicators decide if future interaction is desirable and, if so, plans may be made to meet in the future.

Berger and Calabrese (1975) explained that URT’s basic assumption was consistent with Heider’s (1958) notion which basically asserts that everyone seeks to “make sense” of events observed in the environment. In other words, human beings attempt to decrease uncertainty by creating a sense of order out of what he/she perceives is disorder or confusion. Furthermore, Shannon and Weaver (1949) stated that “uncertainty is determined by the number of alternatives that could occur in a given situation and the relative likelihood of their occurrence” (p. 35). Berger (1975) and Berger and Calabrese (1975) believed that a
person may engage in two attributional processes when reducing uncertainty, proactive and retroactive. Since there are a number of alternative ways that each communicator might behave at the beginning of an encounter, the task of each communicator is to predict which behavior the other person may or may not engage in. Berger and Calabrese (1975) believed that a person was “engaged in [a] proactive process of creating predictions” (p. 101). In addition, the degree of uncertainty felt by each communicator depends upon the limited number of plausible alternative explanations a person has for their own and others’ behavior in the interaction. The second type of attributional process that a person engages in involves explaining what has already occurred. In other words, when explaining the other communicator’s behavior, a person is engaged in what Berger and Calabrese call a retroactive process.

Berger (1979) and Berger and Bradac (1982) argued there are at least two types of uncertainty involved in interactions, cognitive uncertainty and behavioral uncertainty. Cognitive uncertainty is uncertainty about our own and the other person’s beliefs, attitudes, and preferences. Behavioral uncertainty is concerned with the
extent to which behavior is predictable in a given situation.

**Fundamentals of Receiver Apprehension (RA)**

Receiver apprehension (RA) has been conceptualized as (1) a primary anxiety, (2) a secondary anxiety, (3) an information processing syndrome, (4) a social evaluation phenomena (see Wheeless, Preiss, & Gayle, in press). RA as a primary anxiety occurs as a function of a fear of encountering new information (Wheeless & Scott, 1976). In other words, as new information is received, anxiety associated with message decoding occurs. Decoding, interpreting and analyzing new data or information causes a receiver of that information to become apprehensive. RA as a secondary anxiety asserts that a generalized anxiety is associated with receiving messages. In other words, processing and adjusting to messages leads to a generalized trait-like response to receiving those messages.

The information processing approach attempts to understand the characteristic patterns of cognitive responses to the relative information environment or situation (see Wheeless et al., in press). Namely, individuals may rely on schemes to produce strategies for guiding behavior in a specific environment. Individuals relying on schemes is similar to individuals choosing from a
repertoire for guiding behavior according to the relevant situation. An individual may react anxiously for fear of misinterpreting or inadequately processing information from others. The social evaluation explanation to receiver apprehension states that when inadequate processing or adjustment is available for inspection by another, a self-evaluation will occur (Ayres, Wilcox, & Ayres, 1994). An implicit or explicit evaluation will transpire as a result of a possible inspection by another. Any of the above mentioned approaches may lead to an increase in receiver apprehension.

Similar to the conceptualizations of communication apprehension, receiver apprehension has also been thought of as a trait-like or state-like construct. For example, RA as a secondary anxiety is seen as a generalized trait-like response to all messages (e.g., argumentativeness; Wigley, 1987). Receiver apprehension relative to a particular situation (i.e., state-receiver apprehension) will be the focus in this study.

The purpose of this study was to partially replicate and extend a previous study by Wheeless and Williamson (1992) examining state-communication apprehension and uncertainty as they related to each other and to information seeking and confirmation of relational predictions.
Wheeless and Williamson (1992) used a truncated Solomon four-group design consisting of pretests, mid-tests, and post-tests with two eight-minute interaction periods. The pretests consisted of the Receiver Apprehension Test (RAT) (Wheeless, 1975) and the Personal Report of Communication Apprehension Test (PRCA-24) (McCroskey, 1982). The mid-tests consisted of the Attributional Confidence Scale (CL7) (Clatterbuck, 1979) and the Form State (FS) (Booth-Butterfield & Gould, 1985). The post-tests consisted of the Form State (FS) and Attributional Confidence Scale (CL7), along with the Relational Confirmation Scale (RCS) (Wheeless & Williamson, 1992) and the Interrogation Scale (IS) (Gudykunst & Nishida, 1984).

Essentially, Wheeless and Williamson's (1992) results indicated that state-communication apprehension was related to uncertainty and that these two were both related to information seeking and confirmation of relational predictions. In addition, state-communication apprehension and uncertainty were found to decrease over the two time periods. Again, this study partially replicated and extended the Wheeless and Williamson (1992) study (see Design and Statistical Analysis in Chapter 3).
Significance of the Study

The communication process has long been thought of as a dynamic one involving both a source and receiver of the message(s). To gain a better understanding of the communication process, research should concentrate on both source and receiver perspectives. Indeed, senders must react, adapt, and understand receiver’s feedback and predispositions if they are to achieve a high degree of communication fidelity. On the other hand, receivers must understand the source’s predispositions, motives, and meaning if they are to analyze, adapt, and cognitively process a message. For example, a majority of the research on communication apprehension has focused on the source of the message. It was not until the middle seventies that research began examining the receiver of information (e.g., Wheeless, 1975). In any case, it is clear that both communication related apprehension, whether CA or RA, and uncertainty play a role in most communication interactions.

Since it has already been established that uncertainty can be a proactive (predicting) process and a retroactive (explaining) process (see Berger, 1975; Berger & Bradac, 1982; Berger & Calabrese, 1975), it is reasonable to assume that when one makes an uncertain prediction some tension or anxiety may be felt. In other words, the act of predicting
may create some level of uncertainty. Furthermore, Booth-Butterfield and Booth-Butterfield (1986) believed that uncertain predictions lead to increased tension or anxiety. Moreover, a finding prevalent throughout the receiver apprehension literature is that anxiety is also associated with confronting or anticipating confronting new information. In some cases this anxiety may cause an individual to avoid and/or withdraw from a communication interaction.

On the other hand, if the person chooses to interact in a situation, this anxiety may actually inhibit an individual from processing the information. In other words, the generalized anxiety, complexity of the information, lack of cognitive flexibility of the individual, or inability to interpret, adjust, or process the information may cause an increase in apprehension (see Wheeless et al., in press). The knowledge obtained in this study will allow students, scholars, and researchers to better identify the difficulties in receiving and processing information. Furthermore, this knowledge will also allow instruction and remediation programs to be tailored more to the communication needs of individual students.
Summary

This chapter introduced and discussed the significance of the study and provided the fundamentals of uncertainty and receiver apprehension. The next chapter will further examine the uncertainty and receiver apprehension literature leading to four hypotheses and two research questions.
CHAPTER 2

REVIEW OF LITERATURE

The previous chapter provided the fundamentals of uncertainty and receiver apprehension. This chapter will include a review of the literature for uncertainty and receiver apprehension, and a rationale for the study leading to four hypotheses and two research questions. Since this study includes aspects of uncertainty and receiver apprehension, each literature review section will be devoted to the applicable literature in each area.

Uncertainty Literature

Researchers often use different labels when referring to the concept of uncertainty. Labels such as ambiguity, obscurity, vagueness, and entropy are just a few. Since uncertainty is such a broad concept and is present in almost all communication contexts, the literature review in this paper will only cover uncertainty in interpersonal relationships.

Although many researchers have attempted to explain uncertainty (e.g., Berger, 1979; Berger & Bradac, 1982; Berger & Calabrese, 1975; Booth-Butterfield, Booth-
Butterfield, & Koester, 1988; Gudykunst, 1985; Gudykunst, Nishida, & Schmidt, 1989; Gudykunst, Yang, & Nishida, 1985; Sunnafrank, 1986). Berger and Calabrese’s (1975) Uncertainty Reduction Theory (URT) is considered the most relevant basis for this study. For example, Predicted Outcome Value (POV) Theory places less emphasis on uncertainty and more emphasis on ensuring that future interactions will lead to more positive experiences (Sunnafrank, 1986). This study is focused more on uncertainty and receiver apprehension as they relate to each other and as they relate to information seeking and confirmation of relational predictions.

Recall that Berger (1979) and Berger and Bradac (1982) believed there were two types of uncertainty, cognitive and behavioral. Cognitive uncertainty entailed uncertainty that individuals have about their own and others’ beliefs and attitudes. Behavioral uncertainty referred to the predictability of an individual’s own behavior and others’ behavior in a communication interaction. Since the context and situation may affect an individual’s level of uncertainty, if an individual is familiar with the surroundings and others involved in the interaction, then a relatively low level of uncertainty will be present. On the other hand, if the individual is not familiar with his or her surroundings or with the others involved, then a
relatively high level of uncertainty will be present. In fact, one of the three conditions that Berger (1979) and Berger and Bradac (1982) believed should increase the likelihood that uncertainty reduction strategies would be implemented is if the behavior of others deviates from what is normally expected. In other words, even if a relatively low level of uncertainty associated with familiar surroundings and familiar people exists, the level of uncertainty may rise if the behavior of others deviates from the norm.

Uncertainty, as well as communication related apprehension, may be influenced by social norms. In fact, Richmond and McCroskey (1995) state that one cause of situational or state-communication apprehension is "being unfamiliar with the norms in a culture..." (p. 65). So, one may infer that as unfamiliarity increases, so does state-CA. Furthermore, if state-CA is influenced by the degree of familiarity of social norms, then receiver apprehension may also be influenced by this degree of familiarity of social norms. If an individual has had plenty of experience with a particular person or situation, then that individual will most likely be more comfortable and certain than another individual who has not had any experience with a particular
person or situation. The range and/or number of experiences a person has may constitute his or her repertoire.

Recall that the assumption of URT asserts that a primary concern of an interactant is predicting the behaviors of both themselves and others in the interaction so that one can select from his or her own behavioral repertoire those alternative behaviors which are most appropriate in the given situation. Therefore, uncertainty is dependent on the extent to which an individual can select the most appropriate predictions (and explanations) for their own and others' behavior in the communication interaction. However, if an individual's repertoire is limited or lacking from a variety of experiences (or a specific experience), then he or she may be unaware of the possible alternatives which, in turn, may lead to an increase in uncertainty.

Since its first appearance, URT has been extended to include communication well beyond the initial interaction stages. Parks and Adelman (1983) tested URT as it applies to premarital romantic relationships and found support for several predictions regarding networks, however, only partial support was provided for the axioms tested. Since all relationships inevitably fall within larger social
circles which are made up of each individual's separate relationships, Parks and Adelman suggested that these separate relationships may provide information about one's romantic partner.

Indeed, Berger and Bradac (1982) listed three different strategies for learning about another; passive, active, and interactive. The passive strategy involves obtaining information about a target through unobtrusive observation. The active strategy involves seeking information from a third party (e.g., friend, family, etc.) or through the manipulation of the target's environment so as to observe the target's responses to the manipulation. There is no interaction between the target and the observer while utilizing the active strategy. On the other hand, the interactive strategy involves obtaining information directly from the target through such communicative methods as direct, face-to-face contact, interrogation, or self-disclosure between the observer (information seeker) and the target.

In further investigations of information seeking, Gudykunst et al. (1985) applied an uncertainty model across three relationships: acquaintance, friend, and dating relationships. These three relationships were examined across three cultures: Japan, Korea, and the United States.
This investigation, applying the uncertainty model, found that the overall model proved an acceptable description of the data. However, tests of specific uncertainty predictions provided only mixed support.

Related to Parks and Adelman's (1983) study of romantic relationships, Turner (1990) studied the relationship between communication and marital uncertainty. Turner examined whether “her” idea(s) of marriage differed from “his” idea(s) of marriage by having 46 couples fill out a two-section questionnaire which contained a mixture of open-ended questions, forced choice questions, and Likert-type rating scale questions. Turner's (1990) findings suggested that husbands and wives are relatively similar in their levels of certainty and uncertainty about their relationship. Turner stated:

These data reveal that husbands and wives report similar cognitions and behaviors. The only areas of difference between marriage partners in this study were in terms of time spent thinking about the relationship itself and in their use of social support networks. (p. 76)

Based on these findings, one may infer that women may be more uncertain about the relationship because they spend more time thinking about the relationship and, thereby,
analyzing the relationship. In other words, by analyzing the relationship, the women encounter many possible aspects of the relationship that cause them to be wary and uncertain. This is consistent with the literature indicating that women are more motivated to invest energy into the relationship and, consequently, monitor the relationship more closely than do men (Baxter & Wilmot, 1985; Gilligan, 1982; Maltz & Borker, 1982).

In a similar fashion, men may feel more content and certain about the relationship because they do not spend as much time examining and analyzing the relationship as do the women. In addition, the women in Turner’s (1990) study sought support from their social networks more often than the men did which may indicate that the men are not fulfilling the need the women have for support and encouragement. Indeed, research has indicated that friends may serve different functions for men and women (e.g., Winstead, 1986). For example, Dickson-Markman & Markman (1988) found that friendship for men provides companionship, while friendship for women serves to develop and maintain intimacy.

While obtaining support from their social networks, women may notice that men are not providing the amount of necessary support, thereby causing their level of
uncertainty to increase. Common questions the women might be asking themselves are "Why isn’t he providing any support for me...is he having doubts?” or “Why has he stopped providing support for me?” In these cases, there is a change in both the cognitive and behavioral aspects of the relationship which, according to URT, would increase uncertainty.

Sanders, Wiseman, and Matz (1990) used uncertainty reduction theory to see if there are gender differences in attributional confidence. They looked at areas of reported disclosure, interrogation, and nonverbal immediacy in same-sex dyads. Their study found significant differences between males and females in regard to particular communication behaviors. For example, women reported “asking more questions than men regarding the other person’s family and marital ideas” while men reported “asking [more] questions regarding the other person’s political attitudes and recreational activities” (Sanders et al., 1990, p. 102). These results suggest that both males and females seek to increase their confidence (i.e., decrease their uncertainty) through the use of interrogation, disclosure, and information seeking; however, they differ in the types of questions asked. Nevertheless, the results offer support that the information seeking strategies of URT (passive,
active, interactive) do indeed decrease the level of uncertainty.

Furthermore, Sanders et al. (1990) found that in same-sex dyads, "men used more touching behaviors than women" (p. 103). This result was surprising because previous nonverbal research has typically found that just the opposite usually occurs. Our culture usually allows more touching of women by women than it does touching of men by men. As Sanders et al. stated "this finding could represent a change in social norms regarding touching behavior" (p. 103). If this is the case, then it may have an impact on uncertainty and receiver apprehension. Recall that if one is unfamiliar with social norms, the level of state-communication apprehension may increase (Richmond & McCroskey, 1995). In general, the research dealing with social norms suggests that any change in the social norms may have an effect on uncertainty and receiver apprehension. An individual's range of experiences, number of experiences, and given levels of uncertainty and receiver apprehension associated with a new communication interaction will all influence subsequent levels of uncertainty and receiver apprehension.

Both the type and amount of information received might also influence levels of uncertainty and apprehension.
Gudykunst and Hammer (1987) found that females self-disclosed more than males. Research has also found that females asked more questions than did males (in mixed-sex dyads) (e.g., Fishmen, 1978; Stafford, 1984). Based on these findings, if both interactants in a mixed-sex dyad were high receiver apprehensives then the male's subsequent level of apprehension would most likely increase more than the female's level of apprehension.

Receiving background information may also alleviate uncertainty and receiver apprehension. For example, Booth-Butterfield et al. (1988) studied the function of uncertainty reduction in alleviating primary tension in small groups. Primary tension (PT) is seen as "...the social unease and stiffness that accompanies getting acquainted" (Bormann, 1975, pp. 181-182). Booth-Butterfield et al. (1988) manipulated levels of uncertainty and used self-reports, observer-ratings, and behavioral coding to assess primary tension in groups. They stated "since high uncertainty among strangers is linked to knowledge of demographic and biographic data, providing such information should contribute to the reduction of group primary tension" (p. 147). Their findings suggested that the primary tension associated with small groups is identified as "an individual response rather than a response generated by group
interaction” (p. 152). The groups that were given more background information about the other people in the group displayed fewer PT behaviors which suggests that prior information may reduce uncertainty. In essence, receiving background information, in both small groups and in dyads, may alleviate uncertainty.

In fact, research on information seeking strategies generally provide support for uncertainty expectations (Sunnafrank, 1986). In particular, research on the use of passive strategies provides support for the expectation that individuals prefer to observe the target in a social situation (Berger & Douglas, 1981). Furthermore, individuals anticipating an interaction with the target consider informal rather than formal situations to be more informative (Berger & Perkins, 1978).

Hewes, Graham, Doelger, and Pavitt (1985) conducted research in the area of active strategies of information seeking. They found that college and non-college students acquired around 65% of their information about the target through their social networks. Hewes et al. (1985) also found that the individuals were aware that the information obtained from a third party could be biased, yet about 71% of these individuals stated that the biased information would still be useful.
While it is important to recognize that both passive and active strategies may be used to reduce uncertainty in initial interactions, other strategies may be used to reduce uncertainty as well. For example, the design of this study focused more on the use of interactive strategies during initial interactions between two individuals (see Method in chapter 3).

Research in the area of interactive strategies indicates that three primary strategies exist: question-asking, disclosure, and relaxation of the target (Berger & Kellerman, 1983). Individuals in a high information seeking mode tended to ask more questions concerned with explanations of their behavior than questions concerned with their future goals and plans. In addition, Kellerman and Berger (1984) found that individuals seeking information used more positive or encouraging nonverbal behaviors than those not concerned with seeking information. Altogether, the results indicated that question-asking was most efficient but also the most intrusive, while the relaxation of the target was least efficient but also least threatening. Kellerman and Berger’s (1984) study provides support that the use of interactive strategies (which are used in this study) are more productive and efficient than active or passive strategies.
The concept of uncertainty reduction also has been studied within intercultural contexts (Gudykunst, 1985; Gudykunst et al., 1989). For example, Gudykunst (1985) used the model of uncertainty reduction in intercultural encounters. Results revealed that "both cultural similarity and type of relationship influence uncertainty reduction and that these two factors interact to further impact on the process" (p. 97). His study emphasized the fact that social norms, and the ability to choose the appropriate behaviors according to those norms, play an integral role in uncertainty reduction.

Studies provide further examples for the implicit assumption of URT, which is, the level of uncertainty is dependent upon the individual's ability to choose from a limited repertoire the plausible alternative explanations for their own and others' behavior. To further clarify the concept of uncertainty, Stohl and Redding (1987) believed that ambiguity stemmed from: (1) multiple interpretations (more than one interpretation is plausible in a given context; i.e., double-meanings), (2) no plausible interpretation in a given context (no interpretation seems appropriate for the situation), or (3) the receiver truly believes the correct interpretation was chosen only to find
that it differs from the sender’s intended meaning (i.e., misunderstanding).

A study by Bavelas, Black, Chovil, and Mullet (1990) has shown that uncertainty is functional in some circumstances. Bavelas et al. (1990) discussed the use of equivocal communication as an implied message strategy which is less direct (i.e., more uncertain) and may provide a shield that protects both the sender and receiver of the communication. When a sender intentionally sends an ambiguous message the receiver may become more apprehensive because there are multiple interpretations from which to choose.

One last study, by Wheeless and Williamson (1992), examined how uncertainty relates to state-communication apprehension. Since the assumption of URT involves predicting how the other person is going to behave in the interaction, Wheeless and Williamson (1992) believed that this uncertainty may trigger or heighten state-like anxiety which then may lead to increased apprehension. They stated “this type of disturbance or [physiologic] arousal probably becomes manifest in the form of uncertainty reduction behaviors such as information seeking or interrogation” (p. 251). They divided study participants into three groups and
administered the appropriate tests/scales to determine if the results would support their hypotheses. Although their findings suggested that a relationship between state-communication and uncertainty does exist, their results did not confirm that uncertainty triggers or heightens state-like anxiety which then leads to increased apprehension. In essence, Wheeless and Williamson (1992) observed the opposite trend (i.e., that state-communication apprehension could possibly lead to increased uncertainty). Time periods between each of the tests (eight-minute intervals) may also have had some effect on the levels. In other words, longer or shorter time periods may show different results. As previously discussed, the degree of familiarity of the surroundings and the other communicators may also affect the degree to which the levels of uncertainty and apprehension decrease or increase.

Wheeless and Williamson (1992) could have also examined receiver apprehension since much of the research in that area suggests that anxiety is associated with encountering or anticipating encountering new information. Another possible explanation for their findings could be that an individual’s level of uncertainty and apprehension may have an interaction effect. If this is the case, then, the question becomes “which occurs first?” Indeed, one focus of
this study will examine the relationship between state-receiver apprehension and uncertainty.

Receiver Apprehension Literature

Receiver apprehension has been operationalized by using the Receiver Apprehension Test (RAT) which was developed by Wheeless (1975). Receiver apprehension has also been operationalized and measured with the Revised Receiver Apprehension Test (RRAT) which consists of 16 Likert-type items developed by Wheeless and Scott (1976). As discussed previously, research has indicated there are four plausible explanations for receiver apprehension: primary anxiety, secondary anxiety, information processing, and social evaluation (see Wheeless, Preiss, & Gayle, in press).

Instead of repeating what was discussed previously about these four explanations, some important findings will be briefly mentioned. Recall that Preiss and Wheeless (1989) and Preiss, Wheeless, and Allen (1990) offered the first three explanations while Ayres, Wilcox, and Ayres (1994) provided the fourth explanation, social evaluation.

In general, receiver apprehension can be thought of as a fear associated with the inability to adjust to and/or process the incoming information sent by another (see Wheeless, 1975; Wheeless et al., in press). This fear may be real or imagined but, in any case, it quite possibly may
lead to an increase in uncertainty. In particular, the secondary anxiety explanation involves the area of listening efficiency where Beatty, Behnke, and Henderson (1980) examined the relationship between RAT scores and individuals' responses to incoming information. They found that individuals scoring high on the RAT also tended to respond anxiously when incoming information required psychological adjustment or complex processing.

In addition, Beatty (1981) found that apprehensive receivers possessed a backlog of unassimilated facts and information which may result in a generalized anxiety. Furthermore, Beatty and Payne (1981) believed that cognitive complexity plays a role in creating these backlogs by setting an information processing threshold. Thus, they found that receiver apprehension was negatively related to cognitive complexity. The social evaluation explanation, formulated by Ayres et al. (1994), provided evidence that processing motivation, processing demand, and social evaluation were found to increase receiver apprehension.

Overall, there appear to be five categories of receiver-based anxiety outcomes in the literature which include: (1) listening effectiveness, (2) processing anxiety, (3) information processing effectiveness, (4) processing complexity, and (5) education level (Preiss &
Wheeless, 1989; Preiss, Wheeless, & Allen, 1990). For example, Roberts (1986) found that a curvilinear relationship between receiver apprehension and listening effectiveness exists. These findings correspond to Roberts' (1986) arousal model which states that a moderate level of arousal facilitates effective listening, while too much or too little results in poorer listening.

Throughout the receiver apprehension literature anxiety is ultimately associated with encountering messages or anticipating encountering messages. This anxiety may actually inhibit efficient information processing because the individual may be preoccupied or may withdraw altogether. A major outcome of receiver apprehension may be diminished information processing (Preiss et al., 1990).

The cognitive dimensions of complexity, abstractness, and flexibility also appear to be associated with receiver apprehension (Wheeless et al., in press). The level of abstractness indicates that anxiety may be associated with higher-level reasoning. Much of the research indicates that individuals' report higher levels of anxiety in situations where they can not understand, process, or interpret the message. The cognitive flexibility or rigidity of the receiver may influence the level of apprehension as well. This notion is related to what was discussed previously with
regard to an individual entering an unfamiliar situation with unfamiliar people. In this situation the level of state-communication apprehension would increase and, probably, the level of uncertainty would as well. Also, trait-apprehensives see more situations as uncertain because of their personalities. This suggests that uncertainty and receiver apprehension may be associated at some level and in certain situations.

The RA literature can be divided into three dimensions of informational receptivity: affective, cognitive, and behavioral. "Receiver apprehension may reflect a baseline, informational aversion or anxiety that can be magnified (and perhaps minimized) by certain message stimuli and/or situational forces" (Wheeless et al., in press). For example, a positive relationship exists between receiver apprehension and trait listening anxiety (Beatty et al., 1980). Research indicates a small, consistent association between instruments measuring receiver- and source-based anxieties (e.g., Clark, 1989; McDowell & McDowell; 1978). For example, McDowell (1994) found a correlation between receiver apprehension and his new Telephone Apprehension Scale (r's ranging from .23 for Australians to .47 for Americans) (see Wheeless et al., in press for an overview).
The affective qualities of receptivity suggest a cognitive basis for the arousal. Beatty and Payne (1981) and Bocchino (1984) believed that the negative relationship between receiver apprehension and cognitive complexity create backlogs which, in turn, lead to a generalized anxiety. With this anxiety present, the receiver develops a cognitively simple processing style. For example, Vinson and Roberts (1990) found a negative relationship between RA and instruments measuring willingness to listen. They also found a negative, linear relationship between RA and listening effectiveness (see Wheeless et al., in press).

A number of reasons could be affecting an individual's listening effectiveness. For example, positional stress has been found to affect apprehensive receivers' judgments and evaluations. When an individual has a high level of RA, they tend to be more lenient on evaluations. Bock and Bock (1984) offer the suggestion that highly apprehensive receivers do not listen carefully or critically when they are under stress.

The behavioral nature of message receptivity appears to reveal itself in two ways: (1) through direct physical distancing, aversion, and avoidance of some information, and (2) subsequent interactive and source-oriented behaviors (Wheeless et al., in press). For example, Andersen and Sull
(1985) found that RA predicted interpersonal distance in mixed-sex (not same-sex) interactions. In other words, receiver apprehension test scores may be a good predictor of the distance between interactants involved in initial interactions (at least in mixed-sex dyads).

In addition, Preiss and Leydelmeyer (1994) found that apprehensive receivers reported finding themselves in more embarrassing predicaments, making more social blunders, and producing more direct attacks (see Wheeless et al., in press). This finding relates to the previous discussion on the range of an individual's repertoire. If an individual recognizes that he/she lacks the experience or the knowledge of what behavior is socially acceptable, then the individual may become more uncertain and more apprehensive. Or the increased levels of uncertainty and apprehension could be a consequence of poor reasoning and inadequate processing.

After examining most of the research on receiver apprehension, Wheeless et al. (in press) offered a revised concept of informational receptivity/apprehension that provides support for this study. They stated that "less receptive, apprehensive receivers display an orientation to the information environment characterized by alienation, frustration, and intolerance for ambiguity" (in press). This "intolerance for ambiguity" may act as a catalyst for
information seeking which, according to URT, should decrease uncertainty.

**Rationale**

Studies have shown there is a negative correlation between the amount of information exchanged and the amount of uncertainty experienced (Clatterbuck, 1979; Greene & Sparks, 1983; Kellerman, 1986; Sherblom & Van Rheenan, 1984; Sunnafrank, 1986; Wheeless & Williamson, 1992). One of Berger and Calabrese's (1975) axioms specifies the role uncertainty plays in information seeking during initial interactions. Axiom 3 states that "High levels of uncertainty cause increases in information seeking behavior. As uncertainty levels decline, information seeking behavior decreases" (p. 103). Furthermore, Berger and Calabrese (1975) stated that "the level of uncertainty is reduced as the amount of verbal communication in the exchange increases" (pp. 101-102). Unfamiliarity with the surroundings or others involved in the interaction may be one reason why the amount of verbal communication and information seeking strategies exist during initial interactions (Berger & Bradac, 1982). If the behavior of others in the interaction deviates from what is expected, then the level of uncertainty may rise which, also, will contribute to an increase in information seeking strategies.
Studies have also shown that the anticipation of receiving, interpreting, and adjusting to incoming information causes apprehension on the part of the receiver (RA) of the information and subsequent interaction (Beatty, 1981; Beatty et al., 1980; Beatty & Payne, 1981; Preiss et al., 1990; Wheeless, 1975; Wheeless & Scott, 1976). For example, Wheeless and Scott (1976) suggested that RA is "related to an individual's reception and processing of information as well as to psychologically coping with information" (p. 1). In other words, receiver apprehension inhibits the decoding, interpreting, and analyzing of new data or information which, in turn, may cause a receiver of that information to become more apprehensive.

In addition, Beatty et al. (1980) examined the relationship between RAT scores and individuals' responses to incoming information. They found that individuals scoring high on the RAT also tended to respond anxiously when incoming information required psychological adjustment or complex processing (p. 135). It could be that during initial interactions the receiver of communication has little, if any, information from which to choose plausible predictions and explanations for the other's behavior in the interaction.
Since the information received during initial interactions influences both the level of uncertainty and the level of apprehension, then receiver apprehension and uncertainty should be positively related. Namely, during initial interactions the levels of uncertainty and receiver apprehension will influence individuals to seek more information about the other. State-receiver apprehension will most likely accompany this uncertainty during the initial interaction. This predicted relationship leads to the following hypothesis:

H1: State-receiver apprehension is positively correlated with uncertainty in initial interactions.

For the purposes of this study, an "initial" interaction is one in which two individuals, who have not interacted personally (one on one), meet for the first time to engage in a conversation. Likewise, for the purposes of this study, uncertainty has typically been operationalized with Clatterbuck's (1979) Attributional Confidence scale (CL7).

Research has indicated there are four plausible explanations for receiver apprehension: primary anxiety, secondary anxiety, information processing, and social evaluation (Preiss et al., 1990; Wheeless et al., in press). Primary and secondary anxieties provide support for the
first hypothesis advanced in this paper while the information processing explanation provides the grounds for discussion leading to the second hypothesis which deals with a sequential and quasi-causal linking of state-receiver apprehension and uncertainty. The discussion begins with research done by Beatty (1981), who found that high trait receiver apprehensives possessed a backlog of unassimilated facts and information that may result in a generalized anxiety. Furthermore, Beatty and Payne (1981) found that receiver apprehension was negatively related to cognitive complexity. They believed that cognitive complexity played a role in creating backlogs by setting an information processing threshold. In reconceptualizing receiver apprehension, Wheeless et al. (in press) offer the definition of information reception apprehension (IRS) as:

... a pattern of operant anxiety and antipathy associated with perceived informational and cognitive complexity, abstractness, and flexibility leading to deficient receiving, processing and interpreting, and/or adjusting (psychologically, verbally, physically) to information. (in press)

Therefore, there appears to exist a general apprehension associated with the anticipation of receiving new information during initial interactions. This secondary
anxiety, for most people, will influence them to reduce their uncertainty by interrogation and/or information seeking strategies which then may lead to a number of possible outcomes: (1) as Berger and Calabrese (1975) have postulated, the increase in the amount of information exchanged will produce a decrease in uncertainty, (2) as Beatty (1981) and Beatty and Payne (1981) have found, the information received may not be assimilated because of its complexity thereby creating backlogs which, in turn, lead to sustaining or increasing receiver apprehension, (3) as Wheeless et al. (in press) have suggested, for highly informationally anxious people (approximately 16%), the inability of the receiver to be cognitively flexible may cause the incoming information to be unassimilated, misinterpreted, or misunderstood which may lead to sustaining or increasing receiver apprehension. Nevertheless, the receiver apprehension experienced during the initial interaction may be non-debilitative or motivational (as is the case of the first outcome) for about 84% of the participants, or debilitating (as is the case of the second and third outcomes) for about 16% of the participants who fall on the extreme tail of a normal distribution.
Before conducting their study, Wheeless and Williamson (1992) believed that uncertainty might trigger or heighten state-like anxiety which then could lead to increased apprehension. However, their results tended to indicate the opposite. They observed that state-communication apprehension could quite possibly lead to increased uncertainty. Wheeless and Williamson (1992) discovered that "...nonsignificant trends indicated that some form of communication apprehension may contribute to uncertainty in initial interactions" (p. 257). The same may be true of receiver apprehension. For example, if an individual is already anxious upon entering a situation and is unable to assimilate the new information because of its complexity, thereby possibly increasing uncertainty, then it is reasonable to assume that state-receiver apprehension may contribute to uncertainty as well. This predicted relationship leads to the following hypothesis:

H2: State-receiver apprehension leads to uncertainty.

Research has shown that, as a result of uncertainty associated with initial interactions, information seeking plays a role in allowing most interactants to make more certain predictions about their relational outcomes (Berger, 1986; Booth-Butterfield & Booth-Butterfield, 1986; Clatterbuck, 1979; Kellerman, 1986; Sunnafrank, 1986;
Wheeless & Williamson, 1992). As the interaction continues, more information is gained thereby aiding the interactants to make even more certain predictions about the relational outcomes of the interaction and how to test those predictions. In addition, other research has shown that the inability to assimilate, interpret, or understand incoming information increases receiver apprehension (Beatty, 1981; Beatty & Payne, 1981; Wheeless et al., in press). In other words, newly gained information may serve to reduce the level of uncertainty or (for high receiver apprehensives) increase receiver apprehension. The reduction of uncertainty -- increased certainty -- has been equated in previous studies with interpersonal interrogation (Gudykunst & Nishida, 1984; Wheeless & Williamson, 1992) and confirmation of relational predictions (Wheeless & Williamson, 1992). In essence, in the presence of state-receiver apprehension, the associated uncertainty probably serves as a catalyst for information seeking, relational predictions, and the testing of those predictions. Given this reasoning, the following hypothesis is proposed:

H3: A composite of state-receiver apprehension and uncertainty in initial interactions is positively correlated with a composite of interpersonal
interrogation and confirmation of relational predictions.

Whenever interpersonal communication phenomena are examined, inevitably some scholars are interested in whether sex differences exist (e.g., Gray, 1992; Reibstein & Richards, 1993; Sanders et al., 1990; Turner, 1990). For example, Sanders et al. (1990) used uncertainty reduction theory to look for differences between males and females in attributional confidence. They looked at areas of reported disclosure, interrogation, and nonverbal immediacy in same-sex dyads. Their study found significant differences between males and females with regard to particular communication behaviors. To put simply, their results suggest that both males and females seek to increase their confidence (i.e., decrease uncertainty) through the use of interrogation, disclosure, and information seeking; however, they differ on the types of questions asked. In particular, men asked more questions regarding the other person's political attitudes and recreational activities. Women asked more questions regarding the other person's family and marital ideas.

Research has indicated that men and women also differ in the topics disclosed (Cline, 1983; Gudykunst & Hammer, 1987; Lombardo & Berzonsky, 1979). For example, Lombardo
and Berzonsky (1979) examined the topics disclosed during an interview which is an initial dyadic interaction. They found that males and females did not necessarily differ in the amount of disclosure but did differ on the topic of disclosure. In their study, females disclosed more on the topics of religion and sex. In essence, both the type and amount of disclosure may very well influence the levels of uncertainty and state-receiver apprehension.

Research in nonverbal immediacy has also revealed gender differences. Pearson's (1985) review of the literature indicates that females tend to be more immediate than men by establishing more eye contact, smile more, and are touched more than men. All of these indicators of immediacy might also effect the levels of uncertainty and receiver apprehension in initial interactions. Men and women may differ in their use of interrogation strategies and uncertainty reduction strategies.

Researchers have suggested that if an individual is unfamiliar with social norms, the level of apprehension (whether CA or RA) may increase (see Wheeless et al., in press). Therefore, there may also be a relationship between state-receiver apprehension and unfamiliarity with social norms as well. Moreover, the magnitude of the relationship of state-receiver apprehension and uncertainty to
interrogation and confirmation of relational predictions could well be different for males and females. Again, the reduction of uncertainty -- increased certainty -- has been equated in previous studies with interpersonal interrogation (Gudykunst & Nishida, 1984; Wheeless & Williamson, 1992) and confirmation of relational predictions (Wheeless & Williamson, 1992).

Since past research suggests that there are gender differences in interrogation strategies, topics disclosed, and nonverbal immediacy behaviors (all of which contribute to uncertainty reduction processes), then the following research question may be examined:

RQ1: Are the relationships of initial state-receiver apprehension and uncertainty to interrogation and confirmation of relational predictions different for men and women?

For most interactants, receiving new information enables them to reduce their uncertainty about the future of the interaction. However, for high receiver apprehensives this is most likely not the case. If an individual is unable to assimilate information because of its complexity or is unable to assimilate the information because he/she lacks the cognitive flexibility, then seeking more information may not be an option. This debilitative state
may increase or heighten both their level of uncertainty and their level of apprehension.

In addition, if an interactant is a high trait-receiver apprehensive and enters a particular situation that is already known to cause apprehension, then the level of receiver apprehension will actually intensify or magnify. This type of person will be entering an already uncertain and apprehensive situation and when an attempt is made to reduce these levels by seeking information, this type of person will find that assimilating this new information is very difficult which, in turn, causes an increase in both uncertainty and apprehension. Also, because of cognitive difficulties (abstraction, complexity, rigidity) the appropriateness or functionality of utterances in developing interactions would be deficient (Wheeless et al., in press). Drawing from this reasoning, the following research question is posed:

RQ2: Is there a point at which the level of state-receiver apprehension becomes debilitative or dysfunctional in information seeking (uncertainty reduction) in initial interactions?

Research has indicated there are differences in the levels of uncertainty and anxiety from early stages of the interaction to the later stages of the initial interaction
(Booth-Butterfield et al., 1988; Planalp, Rutherford, & Honeycutt, 1988; Sherblom & Van Rheenen, 1984; Wheeless & Williamson, 1992). For example, Wheeless and Williamson's (1992) study found that both state-communication and uncertainty decreased over the two time periods spent in continuing initial interactions. Furthermore, if state-receiver apprehension and uncertainty are positively correlated as hypothesized previously, then the following hypothesis may also occur:

H4: After later initial interactions, levels of state receiver apprehension will be lower than after earlier initial interactions.

For the purposes of this study, “early” initial interactions will include the first two to ten minutes of a conversation whereas “later” initial interactions will include the conversation past the first ten minutes. The reasoning for this will become apparent when examining the method used for this study discussed in the next chapter.

Summary

This chapter examined the relevant literature for uncertainty and receiver apprehension and provided a rationale for this study which led to four hypotheses and two research questions. The next chapter will discuss the
methods, measurements, and statistical analyses used in this study.
CHAPTER 3

METHOD

The previous chapter discussed the relevant literature for uncertainty and receiver apprehension and posited four hypotheses and two research questions. This chapter will examine the methods and measurements used in this study along with the statistical analyses used for each of the four hypotheses and two research questions.

Participants and Procedure

Five hundred eighty copies of questionnaires were given to twelve different instructors covering 23 sections of a basic, introductory communication class at a Southwestern, four-year university distributed as the following for three groups: Group 1 (n = 225, 9 sections), Group 2 (n = 200, 8 sections), Group 3 (n = 155, 6 sections). A total of 382 questionnaires were returned resulting in the following: Group 1 (n = 154, 8 sections), Group 2 (n = 157, 7 sections), Group 3 (n = 71, 5 sections). Three instructors were unable to use one of their sections due to scheduling conflicts. As a result, a total of twenty sections (N = 382) were used for this study. One of these observations
was not used because the majority of the responses were incomplete. Four of the remaining usable observations ($N = 381$) were missing portions of demographic data. After calculating the mean for these data, the mean of the sample was substituted for the missing portions. Two of the observations were missing some item-response data for the Interrogation Scale (IS) (Gudykunst & Nishida, 1984) so the mean of the sample for these items were substituted (see Appendix D for example of Interrogation Scale). One of the observations was missing some item-response data for the Attributional Confidence scale (CL7) (Clatterbuck, 1979) so the mean of the sample was substituted on these items. Of the 191 pairs of dyads ($N = 382$) involved in this study, 87 pairs (app. 46%) were mixed-sex and 104 pairs (app. 54%) were same-sex. The average age was 21 years and 4 months with a range from 18 to 55. The average year in school was slightly over Sophomore status (2.25) with a range from Freshman (1) status to Graduate status (5).

Students were paired with other students with whom they have not interacted personally (one on one) of same and different gender to produce initial dyadic interactions. A design similar to a truncated Solomon four-group design was used to produce three groups of interacting dyads and related testing procedures (see Figure 1). However, no
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**KEY:**
- CL7 = Attributional Confidence Scale
- SRAT = State-receiver Apprehension Test
- RCS = Relational Confirmation Scale
- IS = Interrogation Scale

**Figure 1.** Design of study indicating interaction times and administration of tests.

Pretests were given to any of the groups. Instead, the testing during interactions consisted of early tests, mid-tests, and post-tests. The instructors were told to prevent students from pairing up other students with whom they have interacted with in class, but to make no decision as to whether the pair would be same-sexed or mixed-sex.

Group 1 consisted of 77 dyads in eight sections of a communication class (n = 154). This group of participants
was instructed to interact with the previously unknown student for two minutes at which time they completed the early tests consisting of the 7-item Attributional Confidence scale (CL-7) (Clatterbuck, 1979) and the 13-item State-Receiver Apprehension Test (SRAT) [developed in this study] (see Appendix C). The dyads then interacted for eight additional minutes and then completed the same tests used in the early tests but in reverse order. The dyads interacted for another eight minutes and then completed the post-tests of the Attributional Confidence scale (CL7) and the State-Receiver Apprehension Test (SRAT), along with the 8-item Relational Confirmation Scale (RCS) (Wheeless & Williamson, 1992) and the 6-item Interrogation scale (IS) (Gudykunst & Nishida, 1984) (see Appendix D). Of the 77 dyads in this group, forty pairs (app. 52%) were same-sex (Number of Male/Male = 20, Number of Female/Female = 20) and thirty-seven pairs (app. 48%) were mixed-sex. The average age for group 1 was 21 years and 15 days with a range from 18 to 52. The average year in school for group 1 was slightly over Sophomore status (2.15) with a range from Freshman status (1) to Graduate status (5).

Group 2 consisted of 78 dyads in seven sections of a communication class (n = 156). This group of participants engaged in 10 minutes of interaction (2 minutes plus 8
minutes) with a previously unknown student before completing the same mid-tests as group 1 (CL7 and SRAT) (see Appendix C). These dyads were then instructed to interact for 8 additional minutes where they then completed the same post-tests as group 1 (SRAT, CL7, RCS, and IS), with the SRAT and CL7 reversed in order from the previous test period (see Appendix D). Of the 78 dyads in this group, 48 pairs (app. 62%) were same-sex (Number of Male/Male = 23, Number of Female/Female = 25) and 30 pairs (app. 38%) were mixed-sex. The average age of group 2 was 21 years and 8 months with a range from 18 to 55. The average year in school was halfway through Sophomore status (2.46) with a range from Freshman (1) status to Graduate status (5).

Group 3 consisted of 35 dyads in five sections of a communication class (n = 71). This group was instructed to interact for two minutes and then complete the same early tests as group 1 (CL7 and SRAT) (see Appendix C). This group was then instructed to interact for a total of 16 minutes (8 minutes plus 8 minutes) with no intervening mid-tests. Following this 16 minutes of interaction, they then completed the same post-tests as the other groups (SRAT, CL7, RCS, and IS), with the SRAT and CL7 reversed in order from the previous test period (see Appendix D). Of the 35 dyads in this group, 15 pairs (app. 42%) were same-sex.
(Number of Male/Male = 5, Number of Female/Female = 10) and 20 pairs (app. 58%) were mixed-sex. The average age for group 3 was 21 years with a range from 18 to 40. The average year in school was Sophomore status (2.00) with a range from Freshman status (1) to Graduate status (5).

Given the time constraints of a 50-minute class period, and based upon the examination of previous time periods used and selected by Wheeless and Williamson (1992), the eight-minute time intervals for each of the interactions appeared to be appropriate for this study. These interaction time periods should allow sufficient time for completing the early, mid-, and post-tests within the 50-minute class period.

Measurement

All of the measures appeared in a "Questionnaire Booklet" in the appropriate order of administration for each of the three groups (see Figure 1). Two scales were used in the early test (Groups 1 and 3). The Attributional Confidence Scale (CL7) (Clatterbuck, 1979) was developed to measure the uncertainty construct developed by Berger and Calabrese (1975). The CL7 has been widely used by researchers as a reliable measurement of uncertainty based on the level of attributional confidence (Wheeless & Williamson, 1992). Respondents evaluate how confident they
are in assessing specific information about the other (target) person by responding to 7 items with a 0% to 100% level of confidence. Summing the CL7 items produces a "certainty" score which is inversely proportional to uncertainty. (The sign was reversed for analyses conducted in this study.) The CL7 was designed to measure proactive attributional confidence while the second version (CL65) was designed to measure retroactive attributional confidence. Clatterbuck (1979) reported Cronbach alphas for the CL7 ranging from .76 to .98 while Wheeless and Williamson (1992) reported alpha reliability coefficients ranging from .90 to .93. Cronbach alphas for the CL7 in this study ranged from .89 to .94 (see Figure 2).

The second scale used in the early test for groups 1 and 3 was the State-Receiver Apprehension Test (SRAT). This scale was developed for this study to measure the state-receiver apprehension experienced by a person in response to any initial interpersonal communication interaction. This scale originally consisted of fifteen Likert-type items with response options ranging from *Strongly Agree* (5) to *Strongly Disagree* (1) (see Appendix A).

The SRAT scale was developed by examining the Receiver Apprehension Test (RAT) (Wheeless, 1975) and the Revised Receiver Apprehension Test (RRAT) (Wheeless & Scott, 1976) to
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<td>IS      = .73</td>
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**Figure 2.** Cronbach Alpha Reliabilities of each measurement by Group and Time Period.

Locate appropriate items that could be restated so as to reflect a specific communication interaction. A pilot study was conducted with these 15 items on a similar sample of 102 college students. Item-total correlations and Cronbach alpha reliabilities were computed. Reliability was increased by dropping two items (item no. 6 and item no. 9); this procedure resulted in a 13-item SRAT scale for this
study (see Appendix B). In the pilot study, the alpha reliability for the 13-item SRAT was .87 with a standardized reliability also of .87. Cronbach alphas for the 13-item SRAT used in this study ranged from .85 to .91 (see Figure 2).

These two scales (CL7 and SRAT) were also used as the mid-tests for groups 1 and 2. The scales were again used to measure the participants' attributional confidence and state-receiver apprehension levels after the first eight-minute interaction (group 1) or after ten minutes (two minutes plus eight minutes) of interaction (group 2). In addition, the order of administration of the tests was reversed. Group 3 did not complete any mid-tests.

The post-tests consisted of four scales (given to all three groups). The first two scales comprising the posttest were the CL7 and the SRAT, which were reversed in order from the mid-test (for groups 1 and 2) and the early test (for group 3). These scales were again used to measure the participants' attributional confidence (CL7) and state-receiver apprehension (SRAT) levels after the second eight-minute interaction (groups 1 and 2). Since group 3 did not have a mid-test, these scales (CL7 and SRAT) were used to measure the participants' levels of attributional
confidence and state-receiver apprehension after a total interaction time of 16 minutes (8 minutes plus 8 minutes).

The third scale that comprised the posttest was the Relational Confirmation Scale (RCS) (Wheeless & Williamson, 1992). This scale was developed "to measure the confirmation of initial relational predictions by the participants" (Wheeless & Williamson, 1992, p. 254). The scale consists of eight Likert-type items that are concerned with the subjects' perceptions of whether or not relational predictions were confirmed and whether or not future interaction is desired. The alpha reliability coefficient reported by Wheeless and Williamson (1992) was .80. The Cronbach alpha for the RCS used in this study ranged from .83 to .86 (see Figure 2).

The fourth scale that comprised the posttest was the Interrogation Scale (IS) developed by Gudykunst and his colleagues (e.g., Gudykunst & Nishida, 1984; Gudykunst, Yang, & Nishida, 1985). This scale consists of six Likert-type items that are designed to measure information seeking. This study employed the IS version used to measure the information seeking in the time periods of the interactions. All three groups in this study were given the four scales (CL7, SRAT, RCS, IS) in the posttest with the CL7 and SRAT reversed in order from each group's previous test. Alpha
reliabilities for versions of the Interrogation Scale range from .69 to .88 (Wheeless & Williamson, 1992). The Cronbach alpha reliability for the IS used in this study ranged from .63 to .73 (see Figure 2).

**Design and Statistical Analyses**

Three groups of new dyads were the basis for testing the hypotheses and research questions posited in this paper. These groups were also used to check for sensitizing effects of an early test or a mid-test on subsequent mid-test or posttest scores. Group 1 and paired combinations of combined groups 1 and 3, and combined groups 1 and 2 were used for a series of data analyses relevant to the hypotheses in this study. The sensitization effects of the presence/absence of an early test on the mid-test, as well as an early test and mid-test on the posttest were tested using a least squares type ANOVA from a General Linear Models Procedure (SAS) and/or t-tests. Analysis of variance and appropriate t-tests between groups on SRAT and CL7 means for each testing period provided tests for significant differences among these means which could indicate sensitization.

The first hypothesis was tested using the Pearson product-moment correlations on early tests (CL7, SRAT) from combined groups 1 and 3, and on mid-tests (CL7, SRAT) from
combined groups 1 and 2. Cross-lagged panel analyses were utilized in testing the second hypothesis between early and mid-tests (group 1), early and posttests (groups 1 and 3), and mid-tests and post-tests (groups 1 and 2) for the appropriate groups. Cross-lagged panel analyses provide tests of sequential or quasi-causal relationships between two variables measured across at least two time periods.

Canonical correlations of CL7 and SRAT with RCS and IS were used to test the third hypothesis with combined groups 1 and 3, and combined groups 1 and 2. Canonical correlations create a linear composite of "predictor" variables (CL7, SRAT) and a linear composite of "criterion" variables (RCS, IS) and correlates those two composites in a manner consistent with Pearson product-moment correlations.

The first research question was tested by using z-test comparisons of canonical correlation coefficients from these canonical correlations for men versus women. Further, variable loadings (r's) on the composite variates were examined. These analyses were conducted for combined groups 1 and 3, and combined groups 1 and 2 which represented the groups where the "predictor" variables (CL7, SRAT) could be associated with the post-test "criterion" variables (RCS, IS).
In evaluating the second research question, levels of SRAT categories were created to examine/test the mean differences in interrogation (IS). The five categorical levels of state-receiver apprehension represented standard deviation increments beginning with half standard deviations above and below the mean (low, medium low, medium, medium high, high). Tests among these categories used least squares type ANOVA and t-tests among category cells on IS means. Combined groups 1 and 2, and combined groups 1 and 3 were used in this analysis with SRAT as the "predictor" variable and IS as the "criterion" variable.

Paired t-tests between SRAT means (for combined groups 1 and 3, and combined groups 1 and 2) were used to test the fourth hypothesis to examine differences in SRAT means over time. The .05 level of significance was required for all statistical tests.

Summary

This chapter examined the method, measurement, and statistical analyses used in this study. The next chapter will report the results of the tests for sensitization effects, the hypothesis testing, and the examination of each research question.
CHAPTER 4

RESULTS

The previous chapter discussed the method, measurement, and analyses that the researcher used for this study. This chapter will report the results of the statistical analyses conducted on each hypothesis and research question. Each of the hypotheses and research questions will be covered in order of their appearance; however, the sensitization effects will be examined first.

Sensitization Effects

Analysis of variance and corresponding pre-planned $t$-tests were run on appropriate groups for the (1) early tests (groups 1 and 3), (2) mid-tests (groups 1 and 2), and (3) post-tests (groups 1, 2, 3) to detect any sensitization effects. No difference was observed on the means for SRAT [$t(223) = 1.19, p = .2361$] and CL7 [$t(223) = 1.35, p = .1777$] for groups 1 and 3 on the early test. A significant difference was observed on the means for SRAT [$t(308) = 2.34, p = .0201$] and CL7 [$t(308) = 2.46, p = .0146$] for groups 1 and 2 on the mid-test. The mean for group 1 SRAT was 21.08 ($n = 154$) and group 2 SRAT mean was 23.03 ($n =$
The mean for group 1 CL7 was 42.56 (n = 154) and group 2 CL7 mean was 48.59 (n = 156) (see Table 1).

Significant differences were observed for SRAT \( [F(2, 378) = 4.31, p = .0142] \) and for CL7 \( [F(2, 378) = 9.17, p = .0001] \) for groups 1, 2, and 3 on the post-test time. In particular, a significant difference was observed on the means for SRAT \( [t(308) = 2.73, p = .0067] \) and CL7 \( [t(308) = 3.99, p = .0001] \) for groups 1 and 2 on the post-test. The mean for group 1 SRAT was 20.10 (n = 154) and group 2 SRAT was 22.45 (n = 156). The mean for group 1 CL7 was 35.21 (n = 154) and group 2 CL7 was 45.00 (n = 156) (see Table 1). No difference was observed for SRAT \( [t(223) = 1.91, p = .0572] \) and CL7 \( [t(223) = 0.00, p = .9604] \) for groups 2 and 3 on the post-test. Similarly, no difference was observed for SRAT \( [t(223) = .33, p = .7449] \) for groups 1 and 3 on the post-test. However, a significant difference was observed for CL7 \( [t(223) = 3.07, p = .0024] \) for the same groups (1 and 3). The mean for group 1 CL7 was 35.21 (n = 154) and group 3 CL7 was 44.84 (n = 71) (see Table 1).

These tests, therefore, indicated that there was an apparent early test sensitization on the mid-test for group 1. Also for group 1, the mid-test in the presence of the early test apparently sensitized the post-test responses.
Table 1. Means of uncertainty (CL7), state-receiver apprehension (SRAT), relational confirmation (RCS), and interrogation (IS) by Group and Time.

<table>
<thead>
<tr>
<th>Group</th>
<th>Early Tests</th>
<th>Mid-tests</th>
<th>Post-tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CL7 = 51.00</td>
<td>SRAT = 21.08&lt;sub&gt;a&lt;/sub&gt;</td>
<td>CL7 = 35.21&lt;sub&gt;ce&lt;/sub&gt;</td>
</tr>
<tr>
<td>n = 154</td>
<td>SRAT = 22.75</td>
<td>CL7 = 42.56&lt;sub&gt;b&lt;/sub&gt;</td>
<td>SRAT = 20.10&lt;sub&gt;d&lt;/sub&gt;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RCS = 32.82</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IS = 19.60</td>
</tr>
<tr>
<td>2</td>
<td>CL7 = 48.59&lt;sub&gt;b&lt;/sub&gt;</td>
<td>SRAT = 22.45&lt;sub&gt;d&lt;/sub&gt;</td>
<td></td>
</tr>
<tr>
<td>n = 156</td>
<td>SRAT = 23.03&lt;sub&gt;a&lt;/sub&gt;</td>
<td>CL7 = 45.00&lt;sub&gt;c&lt;/sub&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RCS = 32.96</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IS = 18.78</td>
</tr>
<tr>
<td>3</td>
<td>CL7 = 55.46</td>
<td>SRAT = 20.44</td>
<td></td>
</tr>
<tr>
<td>n = 71</td>
<td>SRAT = 21.54</td>
<td>CL7 = 44.84&lt;sub&gt;o&lt;/sub&gt;</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>RCS = 33.99</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>IS = 19.86</td>
</tr>
</tbody>
</table>

KEY: CL7 = Attributional Confidence Scale  
SRAT = State-receiver Apprehension Test  
RCS = Relational Confirmation Scale  
IS = Interrogation Scale

Note. Column means with the same subscript are significantly different, $p < .05$. 
However, there did not appear to be a sensitization on the post-test produced by the mid-test for group 2 nor the early test of group 3. Groups with apparent sensitization effects were excluded from analysis when possible.

Results for First Hypothesis

Pearson product-moment correlations were run to test the first hypothesis positing a positive correlation between state-receiver apprehension (SRAT) and uncertainty (CL7). When early tests for groups 1 and 3 (no sensitization effect) were combined, SRAT correlated positively with CL7 \( r(224) = .19, p = .0043 \) accounting for 3.6% of the shared variance. When the mid-tests for group 2 only (no early test, no sensitization effect) were analyzed, SRAT correlated positively with CL7 \( r(155) = .30, p = .0002 \) accounting for 9.0% of the shared variance. When the post-tests for groups 2 and 3 (no sensitization effect for mid-test only or early test only on the post-test) were combined, SRAT correlated positively with CL7 \( r(70) = .25, p = .0001 \) accounting for 6.25% of the shared variance. The first hypothesis was supported.

Results for Second Hypothesis

Cross-lagged panel analyses were used to test the second hypothesis predicting that state-receiver apprehension (SRAT) leads to uncertainty (CL7). No
significant cross-lagged effects \((z = 0 < 1.65)\) were observed for mid-tests and post-tests on SRAT and CL7 (group 2). No significant cross-lagged effects \((z = .67 < 1.65)\) were observed for early and post-tests on SRAT and CL7 (group 3). The only possible cross-lagged test analysis for early and mid-tests was in group 1 with a potential sensitization effect. Significant cross-lagged effects were observed for early and mid-tests on SRAT and CL7 for this group. A significant cross-lagged effect \((z = 2.65 > 1.65)\) was observed for early and mid-tests on SRAT and CL7 (group 1). The Pearson correlation coefficient of SRAT (early test) to CL7 (mid-test) was \(r = .31\). The Pearson correlation coefficient of CL7 (early test) to SRAT (mid-test) was \(r = .12\) (see Figure 3). The second hypothesis was partially supported, particularly during earlier initial interactions. 

Results for Third Hypothesis

Canonical correlations were used to test the third hypothesis (for different groups and times) predicting that a composite of state-receiver apprehension (SRAT) and uncertainty (CL7) is positively correlated with a composite of interpersonal interrogation (IS) and confirmation of relational predictions (RCS). For group 3, the canonical correlation \((R_c = .50)\) between a composite of early tests for SRAT and CL7 and a composite of post-tests for
Figure 3. Pearson product-moment correlation coefficients of SRAT and CL7 for early and mid-tests of Group 1.

Relational Confirmation (RCS) and Interrogation (IS) was significant [Wilks' $F(4, 134) = 5.74, p = .0003$] accounting for 25.00% of the shared variance between the composites. SRAT loaded highly on the predictor composite ($r = .89$) and CL7 loaded moderately ($r = .55$). RCS loaded very highly on the criterion composite ($r = -.99$) and IS loaded at a low level ($r = -.33$) (see Table 2). Because of the low loading of IS on its composite, univariate analyses may have been more appropriate than canonical correlations (see correlations in Table 3).
Table 2. Weights and Loadings for canonical correlations on Hypothesis 3.

<table>
<thead>
<tr>
<th>Group(s)</th>
<th>Composite Variables</th>
<th>Raw Weights</th>
<th>Standard Weights</th>
<th>Loadings (r's)</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>CL7 (early test)</td>
<td>.0193</td>
<td>.4557</td>
<td>.5522</td>
</tr>
<tr>
<td></td>
<td>SRAT (early test)</td>
<td>.1328</td>
<td>.8393</td>
<td>.8917</td>
</tr>
<tr>
<td></td>
<td>RCS (post-test)</td>
<td>-.2190</td>
<td>-.9677</td>
<td>-.9938</td>
</tr>
<tr>
<td></td>
<td>IS (post-test)</td>
<td>-.0222</td>
<td>-.1144</td>
<td>-.3348</td>
</tr>
<tr>
<td>2</td>
<td>CL7 (mid-test)</td>
<td>.0253</td>
<td>.5284</td>
<td>.7374</td>
</tr>
<tr>
<td></td>
<td>SRAT (mid-test)</td>
<td>.0941</td>
<td>.7071</td>
<td>.8632</td>
</tr>
<tr>
<td></td>
<td>RCS (post-test)</td>
<td>-.1940</td>
<td>-.9089</td>
<td>-.9779</td>
</tr>
<tr>
<td></td>
<td>IS (post-test)</td>
<td>-.0472</td>
<td>-.2200</td>
<td>-.5050</td>
</tr>
<tr>
<td>2 and 3</td>
<td>CL7 (post-test)</td>
<td>.0233</td>
<td>.5101</td>
<td>.6972</td>
</tr>
<tr>
<td></td>
<td>SRAT (post-test)</td>
<td>.1002</td>
<td>.7409</td>
<td>.8697</td>
</tr>
<tr>
<td></td>
<td>RCS (post-test)</td>
<td>-.1954</td>
<td>-.9026</td>
<td>-.9731</td>
</tr>
<tr>
<td></td>
<td>IS (post-test)</td>
<td>-.0498</td>
<td>-.2408</td>
<td>-.5053</td>
</tr>
</tbody>
</table>

KEY:

CL7 = Attributional Confidence Scale
SRAT = State-receiver Apprehension Scale
RCS = Relational Confirmation Scale
IS = Interrogation Scale

For group 2, the canonical correlation ($R_c = .61$) between the composite of mid-tests for SRAT and CL7 and a composite of post-tests for RCS and IS was significant

$[\text{Wilks' } F(4, 304) = 20.34, \ p = .0001]$ accounting for 37.21% of the shared variance between the composites. SRAT loaded
Table 3. **Correlation Matrix showing all variables and all times.**

<table>
<thead>
<tr>
<th></th>
<th>CL7 early</th>
<th>CL7 mid-test</th>
<th>CL7 post-test</th>
<th>SRAT early</th>
<th>SRAT mid-test</th>
<th>SRAT post-test</th>
<th>RCS post-test</th>
<th>IS post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>CL7 early test</strong></td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CL7 mid-test</strong></td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CL7 post-test</strong></td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SRAT early test</strong></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SRAT mid-test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SRAT post-test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>RCS post-test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
<td></td>
</tr>
<tr>
<td><strong>IS post-test</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.000</td>
</tr>
</tbody>
</table>

**KEY:**
- CL7 = Attributional Confidence Scale
- SRAT = State-receiver Apprehension Test
- RCS = Relational Confirmation Scale
- IS = Interrogation Scale

* Significant, \( p < .05 \).
highly on the predictor composite ($r = .86$) and CL7 loaded moderately ($r = .74$). RCS loaded very highly on the criterion composite ($r = -.98$) and IS loaded at a moderate level ($r = -.51$) (see Table 2).

For combined groups 2 and 3, the canonical correlation ($R_c = .64$) between the composite of post-tests for SRAT and CL7 and a composite of post-tests for RCS and IS was significant [Wilks' $F(4, 446) = 34.34, p = .0001$] accounting for 40.96% of the shared variance between the composites. SRAT loaded highly on the predictor composite ($r = .87$) and CL7 loaded moderately ($r = .70$). RCS loaded very highly on the criterion composite ($r = -.97$) and IS loaded at a moderate level ($r = -.51$) (see Table 2). Examination of $R_c$'s, the direction loadings of the variables ($r$'s) on their composites and the correlation matrix among the variables indicated that the predictor variables (SRAT and CL7) were correlated with the criterion variables (RCS and IS) in the direction opposite of that hypothesized. The hypothesis was not confirmed.

Results for First Research Question

After obtaining canonical correlation coefficients, $z$-tests were used to investigate the first research question (for different groups and times by sex) examining whether the relationships of initial state-receiver apprehension and
uncertainty to interrogation and confirmation of relational predictions are different for men and women. For the men in group 3, the canonical correlation \( (R_c = .75) \) between a composite of early tests for SRAT and CL7 and a composite of post-tests for RCS and IS was significant \[ \text{Wilks' } F(4, 54) = 7.48, p = .0001 \] accounting for 56.25% of the shared variance between the composites (see Table 4). SRAT loaded very highly on the predictor composite \( (r = .94) \) and CL7 loaded moderately \( (r = .41) \). RCS loaded very highly on the criterion composite \( (r = -.98) \) and IS loaded at a very low level \( (r = -.11) \). For the women in group 3, the canonical correlation \( (R_c = .36) \) between a composite of early tests for SRAT and CL7 and a composite of post-tests for RCS and IS was not significant \[ \text{Wilks' } F(4, 72) = 1.40, p = .2416 \]. Therefore, the \( z \)-test between \( R_c \)'s was not needed; the significant \( R_c \) for men was greater than the nonsignificant \( R_c \) for women.

For the men in group 2, the canonical correlation \( (R_c = .48) \) between the composite of mid-tests for SRAT and CL7 and a composite of post-tests for RCS and IS was significant \[ \text{Wilks' } F(4, 144) = 5.39, p = .0004 \] accounting for 23.04% of the shared variance between the composites (see Table 4). SRAT loaded highly on the predictor composite \( (r = .80) \) and CL7 loaded moderately \( (r = .77) \). RCS loaded very highly on
Table 4. The z - scores of CL7 and SRAT to RCS and IS by Group, Time, and Sex.

<table>
<thead>
<tr>
<th>Group(s) &amp; Tests</th>
<th>Canonical Composites</th>
<th>Rc’s</th>
<th>z-Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early and Post-tests</td>
<td>CL7 and SRAT to RCS and IS</td>
<td>.75*</td>
<td>.36 **</td>
</tr>
<tr>
<td>Mid- and Post-tests</td>
<td>CL7 and SRAT to RCS and IS</td>
<td>.48*</td>
<td>.70* z = -2.11 (&gt; 1.96)</td>
</tr>
<tr>
<td>2 and 3</td>
<td>CL7 and SRAT Post-tests to RCS and IS</td>
<td>.64*</td>
<td>.63* z = .126 (&lt; 1.96)</td>
</tr>
</tbody>
</table>

KEY: CL7 = Attributional Confidence Scale  
SRAT = State-receiver Apprehension Test  
RCS = Relational Confirmation Scale  
IS = Interrogation Scale

* Significant, p < .05.

** z-score not computed because one correlation was nonsignificant. Because one correlation was significant, a significant difference in r’s was observed.

the criterion composite (r = -.98) and IS loaded at a moderate level (r = -.35). For the women in group 2, the canonical correlation (Rc = .70) between the composite of mid-tests for SRAT and CL7 and a composite of post-tests for RCS and IS was significant [Wilks’ F(4, 152) = 15.07, p =
accounting for 49.00% of the shared variance between the composites. SRAT loaded very highly on the predictor composite \( r = .91 \) and CL7 loaded moderately \( r = .69 \). RCS loaded very highly on the criterion composite \( r = -.98 \) and IS loaded at a moderate level \( r = -.58 \). A \( z \)-test was run between \( R_c \)'s for the men and women in group 2. The resulting \( z \)-score for group 2 \( (z = -2.11 > 1.96) \) was significant (see Table 4).

For the men in combined groups 2 and 3, the canonical correlation \( (R_c = .64) \) between the composite of post-tests for SRAT and CL7 and a composite of post-tests for RCS and IS was significant [Wilks' \( F(4, 206) = 16.39, p = .0001 \)] accounting for 40.96% of the shared variance between the composites. SRAT loaded highly on the predictor composite \( r = .89 \) and CL7 loaded moderately \( r = .65 \). RCS loaded very highly on the criterion composite \( r = -.99 \) and IS loaded at a moderate level \( r = -.31 \). For the women in combined groups 2 and 3, the canonical correlation \( (R_c = .63) \) between the composite of post-tests for SRAT and CL7 and a composite of post-tests for RCS and IS was significant [Wilks' \( F(4, 232) = 16.81, p = .0001 \)] accounting for 39.69% of the shared variance between the composites (see Table 4). SRAT loaded highly on the predictor composite \( r = .88 \) and CL7 loaded moderately \( r = .68 \). RCS loaded very highly on
the criterion composite ($r = -.94$) and IS loaded at a moderate level ($r = -.63$). Because the correlations for both men and women were significant, $z$-scores were computed for combined groups 2 and 3. The resulting $z$-score for combined groups 2 and 3 ($z = .126 < 1.96$) was not significant (see Table 4). These analyses produced significant differences between men and women (relationship stronger for men) in regard to the relationships of initial state-receiver apprehension and uncertainty to interrogation and confirmation of relational predictions, except in the analysis where all measures were post-tests.

**Results for Second Research Question**

In evaluating the second research question examining if there is a point at which the level of state-receiver apprehension and uncertainty becomes debilitative or dysfunctional in information seeking in initial interactions, one-way analyses of variance with five (5) levels of state-receiver apprehension (SRAT) as the categorical variable and interrogation (IS) as the measured variable were run for each testing period. In other words, groups 1 and 3 (early test), groups 1 and 2 (mid-test), and groups 1, 2, and 3 (post-test) were used because these combined groups provided a sufficient number of observations ($n$) for meaningful tests. The five categorical levels of
state-receiver apprehension represented standard deviation increments beginning with half standard deviations above and below the mean (low, medium low, medium, medium high, high). In the first testing period for SRAT (early test), a significant main effect on IS (post-test) was not observed [$F(4, 224) = 1.52, p = .1978$].

In the second testing period for SRAT (mid-test), a significant main effect on IS (post-test) was observed [$F(4, 309) = 3.04, p = .0176$]. This main effect was probed with t-tests (two-tailed) of sequential cell comparisons on IS means. These t-tests showed there were significant differences on IS between the high level and the medium, medium low, and low levels with the largest drop in IS at level five (see Figure 4).

In the third testing period for SRAT (post-test), a significant main effect on IS (post-test) was observed [$F(4, 380) = 3.84, p = .0045$]. This main effect was probed with t-tests (two-tailed) of sequential cell comparisons on IS means. These t-tests showed there were significant differences on IS between the high level and the medium, medium low, and low levels. As with the mid-test, the largest drop in IS occurred at level five (see Figure 4). These analyses suggest that a significant drop in state-receiver apprehension occurs only at the high level (level
Figure 4. Plot of IS (Post-test) means across SRAT levels for different testing times.
of information seeking, whereas the other levels of information seeking (i.e., low, medium low, medium, medium high) were nonsignificant.

Results for Fourth Hypothesis

Paired t-tests were used to test the fourth hypothesis predicting that after later initial interactions, levels of state-receiver apprehension will be lower than after earlier initial interactions. For group 3, paired comparisons of early and post-tests failed to produce a significant mean difference on state-receiver apprehension [t(70) = -1.52, p = .1332]. For group 2, paired comparisons of mid-tests and post-tests failed to produce a significant mean difference on state-receiver apprehension [t(155) = -1.22, p = .2233]. The only possible comparison of early and mid-tests was in group 1 which had a potential sensitization effect. For group 1, paired comparisons of early and mid-tests produced a significant mean difference on state-receiver apprehension [t(153) = -3.42, p = .0008]. The mean difference was -1.66 accounting for 11.70% of the variance. The fourth hypothesis was only partially supported.

Summary

This chapter reported the results of the statistical analyses conducted on each hypothesis and research question. The next chapter will provide a summary of both the entire
study and each of the research findings. The next chapter will also interpret the results of the study, discuss limitations of the study, and address some implications for future research.
CHAPTER 5

DISCUSSION

The previous chapter reported the results of the statistical analyses conducted on each hypothesis and research question. This chapter will summarize the study and each of the research findings. This chapter will also interpret the results of the study, discuss limitations of the study, and address some implications for future research.

Summary of Study

This research examined and explored the relationships between and among state-receiver apprehension, uncertainty, information seeking, and confirmation of relational predictions. State-receiver apprehension was measured using the State-Receiver Apprehension Test (SRAT) which was developed for this study. Uncertainty was measured using the Attributional Confidence Scale (CL7) (Clatterbuck, 1979). Information seeking was measured using the Interrogation Scale (IS) developed by Gudykunst and his colleagues (e.g., Gudykunst & Nishida, 1984; Gudykunst, Yang, & Nishida,
Confirmation of relational predictions was measured using the Relational Confirmation Scale (RCS) (Wheeless & Williamson, 1992). Essentially, this study replicated Wheeless and Williamson's (1992) study with the exception of examining state-receiver apprehension instead of communication apprehension. Indeed, every hypothesis and research question involved the relationship between state-receiver apprehension and at least one of the other variables.

Predictions were made which hypothesized that state-receiver apprehension and uncertainty would be positively correlated in initial interactions. In addition, another prediction was that state-receiver apprehension actually leads to increased uncertainty and that, after information seeking occurs, levels of state-receiver apprehension would decrease as a conversation progresses. Also, a question explored whether the relationships among state-receiver apprehension, uncertainty, interrogation, and confirmation of relational predictions differ for men and women. Finally, a second question asked if there was a point at which the level of state-receiver apprehension becomes debilitating or dysfunctional in information seeking.

A sample of 381 college students enrolled in a basic
communication class at a southwestern college participated in this study. Students were paired with other unacquainted students with whom they have not interacted personally (one on one) of same and different gender to produce initial dyadic interactions. This resulted in approximately 103 (app. 54%) same-sex dyads and 87 (app. 46%) mixed-sex dyads.

Summary of Method

Three different groups were used to test the hypotheses and research questions. The participants in group 1 interacted with the previously unknown students for two minutes before completing the early tests (CL7 and SRAT). They then interacted for an additional eight minutes before completing the same early tests but in reverse order. These participants then interacted for another eight minutes where they then completed the post-tests of CL7 and SRAT, along with the RCS and IS.

The participants in group 2 engaged in an equivalent ten minutes of interaction (two minutes plus eight minutes) before completing the same mid-tests as group 1 (CL7 and SRAT). These participants then interacted for eight additional minutes where they then completed the same post-tests as group 1 (SRAT, CL7, RCS, and IS), with the SRAT and CL7 reversed in order from the previous test period.
Participants in group 3 interacted for two minutes and then completed the same early tests as group 1 (CL7 and SRAT). This group of participants then interacted for a total of sixteen minutes (eight minutes plus eight minutes) with no intervening mid-tests. Following this sixteen minutes of interaction, they completed the same post-tests as the other groups (SRAT, CL7, RCS, and IS) with the SRAT and CL7 reversed in order from the previous test period.

Summary of Results

The first hypothesis predicted that state-receiver apprehension would be positively correlated with uncertainty in initial interactions. This hypothesis was supported. Pearson product-moment correlations between state-receiver apprehension (SRAT) and uncertainty (CL7) for all three groups at all testing periods were positive. That is, as one increases or decreases, so does the other. For the early test, the $r$ was .19 accounting for 3.6% shared variance; for the mid-test, the $r$ was .28 accounting for 7.8% shared variance; for the post-test, the $r$ was .31 accounting for 9.6% shared variance.

The second hypothesis predicted that state-receiver apprehension leads to uncertainty. This hypothesis was only partially supported. After running cross-lagged panel
analyses, the only significant cross-lagged effects occurred in group 1 which had a potential sensitization effect. Significant cross-lagged effects were observed for early and mid-tests on SRAT and CL7 for this group. The Pearson correlation coefficient of SRAT (early test) to CL7 (mid-test) was almost three times as much as the Pearson correlation coefficient of CL7 (early test) to SRAT (mid-test) which suggests that state-receiver apprehension leads to uncertainty more so than uncertainty leading to state-receiver apprehension.

The third hypothesis predicted that a composite of state-receiver apprehension and uncertainty in initial interactions is positively correlated with a composite of interpersonal interrogation and confirmation of relational predictions. The hypothesis was not confirmed. Examination of canonical correlations (for different groups and times), the direction loadings of the variables ($r$'s) on their composites, and the correlation matrix among the variables indicated that the predictor variables (SRAT and CL7) were correlated with the criterion variables (RCS and IS) in the direction opposite of that hypothesized.

The first research question examined whether the relationships of state-receiver apprehension and uncertainty
to interrogation and confirmation of relational predictions differ for men and women. The $z$-tests between canonical correlation coefficients (for different groups and times by sex) revealed significant differences between men and women with regard to the relationships of initial state-receiver apprehension and uncertainty to interrogation and confirmation of relational predictions, except for the time where all measures (SRAT, CL7, RCS, IS) were post-tests. Furthermore, of the significant differences between men and women, the results indicated that the relationship was stronger for men than it was for women.

The second research question examined whether there was a point at which the level of state-receiver apprehension becomes debilitative or dysfunctional in information seeking in initial interactions. One-way analyses of variance with five levels of state-receiver apprehension (SRAT) (low, medium low, medium, medium high, high) as the categorical variable and interrogation (IS) as the measured variable were produced for each testing period. A significant main effect on interrogation (IS) was observed for both the second and third testing periods. In other words, in the second and third testing periods for SRAT (mid-test and post-test, respectively) a significant main effect on IS
(post-test) was observed. After probing these main effects with t-tests (two-tailed) of sequential cell comparisons on IS means, there were significant differences on IS between the high level and the medium, medium low, and low levels. These results indicated there was a significant drop in interrogation at high levels of state-receiver apprehension; even at low levels of state-receiver apprehension, information seeking was not that high (slightly above the neutral point).

The fourth hypothesis predicted that after later initial interactions, levels of state-receiver apprehension would be lower than after earlier initial interactions. This hypothesis was only partially supported. Paired t-tests revealed that the only significant mean difference on state-receiver apprehension (SRAT) occurred between the early test and the mid-test in group 1 which had a potential sensitization effect. Therefore, there was no clear indication that initial interactions with others reduced state-receiver apprehension, at least within the time-frame (18 minutes) used in this study.

Interpretations and Implications of Results

Participants in this study found themselves in a rather unusual situation. After an initial interaction time of two
to ten minutes, the interaction was interrupted and a self-evaluation of state-receiver apprehension and uncertainty was made. In essence, the participants were forced to assess their anxiety about receiving information and their level of certainty about themselves and the other in the interaction. Since this does not occur in this way in normal initial interactions, this may have created a somewhat artificial environment where the participants were reminded that they were participating in a study. Furthermore, the results indicating that both high and low receiver apprehensives had relatively low levels of information seeking (slightly above the neutral point) suggest artificial factors may have been operating.

The first hypothesis. The first hypothesis dealt with the relationship between state-receiver apprehension and uncertainty, and the results indicated that there was a positive relationship. This study suggests that state-receiver apprehension is positively related to uncertainty in initial interactions. Taken together with Wheeless and Williamson's (1992) results, the results of the first hypothesis from this study imply that apprehension on the part of the source and receiver are positively correlated with uncertainty.
The second hypothesis. The second hypothesis posited that state-receiver apprehension leads to uncertainty, and the results indicated that the only significant cross-lagged effects occurred in group 1 which had a potential sensitization effect. In particular, the Pearson product-moment correlation coefficient of SRAT (early test) to CL7 (mid-test) was almost three times as much as the correlation coefficient of CL7 (early test) to SRAT (mid-test). That significant finding suggests that state-receiver apprehension leads to uncertainty more so than uncertainty leading to state-receiver apprehension. Wheeless and Williamson's (1992) study found a trend which indicated that state-communication apprehension could possibly lead to increased uncertainty. Taken together with the results of the second hypothesis from this study, it appears that state-RA could very well lead to increased uncertainty.

The third hypothesis. The third hypothesis posited that a composite of state-receiver apprehension and uncertainty in initial interactions was positively correlated with a composite of interpersonal interrogation and confirmation of relational predictions. The results, however, indicated just the opposite; that is, they were negatively related. After examining canonical correlations,
the direction loadings of variables (r's) on their composites, and the correlation matrix among the variables, results indicated that the predictor variables (SRAT and CL7) were negatively correlated with the criterion variables (RCS and IS). In other words, the results indicated that as state-receiver apprehension and uncertainty increased, interrogation and confirmation of relational predictions decreased. Wheeless and Williamson (1992) examined this same relationship except with state-CA instead and found that as state-communication apprehension and uncertainty increased, interrogation and confirmation of relational predictions also increased.

This distinction further emphasizes the influence of apprehension that is source-based and receiver-based in relation to these communication phenomena. The results of this study tend to indicate that, given the positive relationship between state-RA and uncertainty, it may be that an individual entering an initial interaction with high levels of state-receiver apprehension and uncertainty will seek less information about the other which, in turn, leads to less confirmed relational predictions. In other words, state-RA (in the presence of uncertainty) does not appear to facilitate or motivate an individual to seek information
during initial interactions.

It is interesting, based on this study and previous research (e.g., Wheeless & Williamson, 1992), that both state-CA and state-RA are positively correlated with uncertainty but have different influences on information seeking. Increased uncertainty (in the presence of communication apprehension) typically leads to increased information seeking, but an opposite trend was observed in this study when state-receiver apprehension is present. Indeed, the results of this study suggest that when state-receiver apprehension was involved, information seeking was negatively correlated with uncertainty. It could be that when both state-receiver apprehension and uncertainty are present, the anxiety associated with state-RA overrides the propensity to seek information associated with uncertainty. Thus, state-receiver apprehension may be a more meaningful predictor of information seeking than uncertainty. Replication of this trend would be desirable.

The first research question. The first research question examined the relationships of initial state-receiver apprehension and uncertainty to interrogation and confirmation of relational predictions to see if there were significant differences between men and women. The results
indicated that significant differences did exist, except for the time where all measures (SRAT, CL7, RCS, IS) were post-tests. In particular, the results indicated that the canonical correlation was stronger for men than it was for women. In other words, the correlation of state-receiver apprehension and uncertainty to interrogation and confirmation of relational predictions was stronger for men than for women.

A number of possible reasons may help explain these results. First, the women may be more used to living in a more apprehensive or uncertain environment than the men. As a result of the greater importance that women place on their relationships, they monitor them more closely than do men (Baxter & Wilmot, 1985; Fishman, 1978). As Dickson-Markman and Markman (1988) found, friendship for women serves to develop and maintain intimacy. It could be that the women are more used to living in a more apprehensive and uncertain environment because they more closely monitor relationships and put more emphasis on developing the relationship than do men. In other words, initiating and developing intimate relationships is more important to women than men. As a result, it could be that women are more constantly thinking about the possibility of developing an initial interaction
into a more intimate and personal relationship.

Second, the women might have received more information about the other person through the use of unobtrusive observation (passive strategy) prior to the interaction than the men. Since the research has revealed that women engage in (and are more responsive to) nonverbal immediacy behaviors, women may be more attuned and aware of other people in the environment than the men. If this is the case, it could be that the women in this study received more information prior to the initial interaction than the men.

Third, the women might have disclosed more than the men during initial interactions. As the literature has revealed, women tend to disclose more on topics such as religion, sex, work/school problems, and views on parenting (Cline, 1983; Gudykunst & Hammer, 1987; Lombardo & Berzonsky, 1979). This is consistent with Hacker’s (1981) prior research indicating that women are more likely to disclose weaknesses and hide strengths while men are more likely to disclose strengths and hide weaknesses. However, these possible explanations do not completely explain why the relationship of CL7 and SRAT to RCS and IS is stronger for the men in same-sex dyads.
In summary, it could be that the women in this study used more informational strategies than the men. For example, if the women disclosed more than the men and used more interrogation strategies than the men, that would indicate that they may be more used to dealing with anxiety and uncertainty. Women may have tended to interrogate and confirm relational predictions for reasons other than anxiety and uncertainty. The men, however, would not have the strategies for seeking more information from the women. All of these explanations would suggest that, overall, anxiety and uncertainty tend to be more salient for the men in the interrogation and confirmation process.

These results were not surprising considering previous research indicating that men and women differ in the areas of uncertainty reduction strategies (Hacker, 1981; Sanders, Wiseman, & Matz, 1990; Turner, 1990; Winstead, 1986), disclosure (Cline, 1983; Gudykunst & Hammer, 1987; Lombardo & Berzonsky, 1979), attributional confidence, interrogation (Sanders, Wiseman, & Matz, 1990), communication styles (Gray, 1992), marital uncertainty (Turner, 1990), and marriage expectations (Reibstein & Richards, 1993). However, further examination of the differences in correlations (specifically canonical correlations) found in
this study are desirable to help explain and develop these and other possible explanations.

The second research question. The second research question examined whether there was a point at which the level of state-receiver apprehension becomes debilitative or dysfunctional in information seeking in initial interactions. Originally, this researcher believed that if state-receiver apprehension actually led to uncertainty (as posited in the second hypothesis) and, according to Uncertainty Reduction Theory, uncertainty leads to information seeking, then increases in state-receiver apprehension would lead to increases in information seeking.

In other words, state-RA could facilitate increased interrogation up to a point then become debilitative. The results, however, indicated that a negative correlation exists between state-receiver apprehension and information seeking.

Wheeless and Williamson's (1992) results indicated that information seeking continued in initial interactions thus allowing uncertainty to decrease as time proceeded in the interaction. In fact, both state-communication apprehension and uncertainty were found to decrease over the two time periods in their study. However, when examining state-
receiver apprehension (instead of state-communication apprehension), the results of this study indicate that information seeking significantly decreases at the high levels of state-receiver apprehension. In fact, no level of receiver apprehension appeared to facilitate or motivate an individual to seek more information. The results of this study suggest that state-receiver apprehension is dysfunctional from the start of the initial interaction and does not facilitate increased information seeking at any point. As discussed earlier, it could be that when state-receiver apprehension and uncertainty are present, any level of anxiety associated with state-RA diminishes the propensity to seek more information. It may be that an individual who is apprehensive about receiving information will tend not to seek additional information because of the increased level of apprehension as a result of doing so.

In particular, there were significant differences on IS between the high level and the medium, medium low, and low levels of SRAT. Even at low levels of state-receiver apprehension, information seeking was not that high (slightly above the neutral point). The results also showed that there was a nonsignificant trend at the medium high level which means at high levels of state-receiver
apprehension, the amount of information seeking actually decreases. Therefore, the results of this study suggest the point at which the level of state-receiver apprehension becomes debilitating or dysfunctional in information seeking is at the beginning of initial interactions. In other words, any level of state-receiver apprehension appeared dysfunctional to some degree but particularly at the high level.

The fourth hypothesis. The fourth hypothesis dealt with the effect sequential time periods had on state-receiver apprehension. In particular, the fourth hypothesis predicted that after later initial interactions, levels of state-RA would be lower than after earlier initial interactions. The results indicated the only significant mean difference on state-receiver apprehension occurred between the early and mid-tests in group 1 which had a potential sensitization effect. Therefore, there was no clear indication that initial interactions with others reduces state-receiver apprehension, at least within the time-frame (18 minutes) used in this study.

After the first two to ten minutes of interaction, the participants filled out the two questionnaires (CL7 and SRAT) and then were then forced to continue the interaction.
According to the receiver apprehension literature (Preiss, Wheeless, & Allen, 1990; Wheeless, Preiss, & Gayle, in press), it is logical to assume that those who were highly apprehensive about receiving information would have preferred terminating the interaction at that time. However, they continued to interact for an additional eight minutes until they were interrupted and asked to assess their levels of state-receiver apprehension, uncertainty, information seeking, and confirmation of relational predictions. Although all three groups' means on the SRAT appeared to decrease through the time periods, differences were nonsignificant (except for group 1 between the early test and mid-test). As the results from the second research question indicated, there was a negative correlation between state-receiver apprehension and information seeking. In other words, at higher levels of state-RA, information seeking actually decreased more substantially.

A few possible explanations for these nonsignificant differences in SRAT means could be found in the receiver apprehension literature. First, since the participants in this study had continually seen the other students in class throughout the semester and grown relatively more comfortable with the classroom, the mean level of state-
receiver apprehension for the early test of groups 1 and 3 of 22.15 at the beginning of the initial interaction was probably deflated. If a more realistic environment and initial interaction were to occur, then significant differences between earlier levels of state-receiver apprehension and later levels of state-receiver apprehension might exist.

Second, it could be that the participants in this study possessed a backlog of unassimilated facts and information about each other which may have resulted in a generalized anxiety which was then magnified by the situation (Beatty, 1981). However, not all of the participants were classified as high receiver apprehensives.

Third, it also could be that the strategies normally used to decrease apprehension on the part of the receiver (e.g., additional time - needed to process backlogged information or complex information; improving listening skills; or withdrawing altogether) were not available or socially acceptable considering the participants awareness of being involved in a study and receiving extra credit for their participation. A longer time-frame may have allowed the participants to process the backlogged information thereby reducing their level of state-receiver apprehension
throughout the interaction.

Limitations of Study

The main goal of this study was to determine the relationship of uncertainty to state-receiver apprehension. This study also investigated the relationship of uncertainty and state-RA to confirmed relational predictions and information seeking, as well as the effect sequential time periods of interaction had on both uncertainty and state-receiver apprehension. In addition, one research question examined the relationships of initial state-receiver apprehension and uncertainty to interrogation and confirmation of relational predictions to see if differences existed between men and women. The results of this study offered some support for three of the four hypotheses while the research question examining the relationships of initial state-RA and uncertainty to interrogation and confirmed relational predictions found that there were significant differences between men and women.

There is at least one caution in interpreting the results of this study. All of the participants were college students. Berger (1987) has suggested that a specific context can in and of itself act to reduce uncertainty. There usually exists a commonality among college students
and this commonality may have created a somewhat artificial initial interaction. Furthermore, since the participants in this study engaged in a conversation with a student within the same class, this was yet another commonality. This shared commonality may have reduced some of the initial uncertainty involved in interacting with a stranger. Indeed, the study was conducted over half-way into the semester which allowed the participants to not only get acquainted with the environment (room) but to also acquire information about the other students in the class through unobtrusive observation. This information was most likely obtained using the passive strategy described by Berger and Bradac (1982). Therefore, this prior knowledge and information may have reduced some of the initial uncertainty and state-receiver apprehension involved in interacting with a stranger. Thus, the mean level of uncertainty for the early test of groups 1 and 3 of 53.23 might actually be deflated.

Furthermore, this commonality may have created a somewhat artificial initial interaction. Future research would benefit from using different participants in a more realistic environment and conduct the study earlier in a semester or term to possibly achieve a more genuine measure
of both state-receiver apprehension and uncertainty.

The only time period in which information seeking (IS) was measured was in the post-tests. In order to attain a better indication of the amount of information seeking throughout the sequential time periods, this researcher would include IS in both early and mid-tests as well as the post-tests. In this manner the researcher would be able to detect the effects of sequential time periods on interrogation and its relationship to state-receiver apprehension and uncertainty.

**Implications for Future Research**

Future research dealing with state-receiver apprehension, uncertainty, information seeking, and confirmation of relational predictions should strive to create a more realistic environment for the participants. If college students are to be used, make sure the methodology includes using students from different classes for the dyads instead of using students within the same class. This may help prevent some of the anomalous results obtained in this study (e.g., relatively low levels of uncertainty and state-receiver apprehension at the beginning of the initial interaction).
However, if the methodology includes using students within the same class, then the study should be conducted at the beginning of the semester or term to help ensure that none of the participants have received background information about each other thereby reducing their levels of uncertainty and, possibly, state-receiver apprehension. The use of students from different classes to produce mixed-sex and same-sex dyads would probably be a better solution to this problem though.

In order to attain a better indication of the amount of information seeking throughout the sequential time periods, future research might include a measure of interrogation (IS) in all three test periods (early test, mid-test, post-test). In this manner the researcher would be able to detect the effects of sequential time periods on interrogation and its relationship to state-receiver apprehension and uncertainty.

Future research might consider a design including pretests instead of early tests (as was done in this study), in addition to mid-tests and post-tests, in order to obtain a more accurate measure of uncertainty, state-receiver apprehension, and interrogation levels normally found at the beginning of initial interactions. Results of this type of
design may indicate significant differences between early and later levels of these variables.

Since the findings of this study supported the hypotheses dealing with state-receiver apprehension and uncertainty, there was evidence that a relationship between uncertainty and state-receiver apprehension does exist. This researcher reasoned that it was plausible to think that state-receiver apprehension could lead to uncertainty for two reasons. First, the apprehension associated with a specific situation would magnify the apprehension felt by a person who is a trait-receiver apprehensive. In other words, someone entering an initial interaction will see the situation as more uncertain because of their level of state-receiver apprehension. Second, immediately preceding an initial interaction, a person may realize that they will have to receive new information which, in turn, possibly facilitates awareness of their level of uncertainty. Given the direction of the correlation coefficients of SRAT and CL7 for early and mid-tests of group 1, it seems that state-receiver apprehension does contribute to higher levels of uncertainty. Future research should examine these variables (SRAT, CL7) in terms of which leads to which and to what extent in order to gain a better understanding of these
This study indicated that differences between men and women did exist regarding the strength of relationships of state-receiver apprehension and uncertainty to interrogation and confirmation of relational predictions. Since previous research has indicated that men and women differ in uncertainty and interrogation (Sanders, Wiseman, & Matz, 1990; Turner, 1990), the results of this study imply certain relationships between state-receiver apprehension and uncertainty to interrogation and confirmation of relational predictions could explain more fully their emergence and reduction in continuing initial interactions. Research is needed, however, to understand these relationships more fully.

Summary

This chapter summarized the entire study and each of the research findings. This chapter also interpreted the results of the study, discussed limitations of the study, and addressed some implications for future research.
APPENDIX A

QUESTIONNAIRE
Appendix A

15-Item SRAT

Instructions: The following statements apply to how various people feel about receiving communication. Indicate if these statements apply to how you felt by noting whether you: (5) Strongly Agree, (4) Agree, (3) Are Undecided, (2) Disagree, (1) Strongly Disagree. Place the number of your response in the space to the left of each statement.

____ 1. I sometimes had difficulty concentrating on what the other person was saying.

____ 2. I found it easy to concentrate on what was being said.

____ 3. It was sometimes difficult for me to make sense out of what the other person was saying.

____ 4. I had no fear of listening and adjusting to the other person’s views.

____ 5. I was sometimes afraid that I would not completely understand what was said.

____ 6. When listening to a member of that sex, I found it easy to concentrate on what was being said.

____ 7. I felt relaxed when listening to the new information.

____ 8. I would rather not have had to listen to the other person at all.

____ 9. I was overexcited and rattled when the other person was speaking to me.

____ 10. I often felt uncomfortable when listening to the other person.

____ 11. Receiving the new information made me feel restless.
12. I generally found it easy to concentrate on what was being said.

13. I enjoyed being a good listener.

14. I sought out new ideas to listen to.

15. I sometimes felt uncomfortable when listening to the other person’s ideas.

Note: Items 2, 4, 6, 7, 12, 13, and 14 are reversed coded when scoring.
APPENDIX B

QUESTIONNAIRE
Appendix B

13-Item SRAT

Instructions: The following statements apply to how various people feel about receiving communication. Indicate if these statements apply to how you felt by noting whether you: (5) Strongly Agree, (4) Agree, (3) Are Undecided, (2) Disagree, (1) Strongly Disagree. Place the number of your response in the space to the left of each statement.

_____ 1. I sometimes had difficulty concentrating on what the other person was saying.

_____ 2. I found it easy to concentrate on what was being said.

_____ 3. It was sometimes difficult for me to make sense out of what the other person was saying.

_____ 4. I had no fear of listening and adjusting to the other person's views.

_____ 5. I was sometimes afraid that I would not completely understand what was said.

_____ 6. I felt relaxed when listening to the new information.

_____ 7. I would rather not have had to listen to the other person at all.

_____ 8. I often felt uncomfortable when listening to the other person.

_____ 9. Receiving the new information made me feel restless.

_____ 10. I generally found it easy to concentrate on what was being said.

_____ 11. I enjoyed being a good listener.
12. I sought out new ideas to listen to.

13. I sometimes felt uncomfortable when listening to the other person's ideas.

Note: Items 2, 4, 6, 10, 11, and 12 are reverse coded when scoring.
Appendix C

ID # (01-04)________

Directions: These are a series of scales designed to study communication between people meeting for the first time on a personal level. The answers you indicate are confidential and will be used strictly for the study. Please begin by answering the following questions:

(05) _____ Your Gender (circle: 1 for male, 2 for female)

(06) _____ Your partner’s Gender (circle: 1 for male, 2 for female)

(07) _____ Year in school (circle: 1 for Freshman, 2 for Sophomore, 3 for Junior, 4 for Senior, 5 for Graduate)

(08-09) _____ Age ______ years (e.g. 21)

Instructions: This scale is composed of seven questions pertaining to your feelings about the other person to whom you have been talking with. On a scale from 0% to 100% (with 100% = absolute confidence and 0% = absolute guess), indicate your feelings of confidence based on what you feel you know about this person. Place the percentage of your response (0% to 100%) in the space to the left of each question.

(10) _____ How confident are you of your general ability to predict how he/she will behave?

(11) _____ How certain are you that he/she likes you?

(12) _____ How accurate are you at predicting the values he/she holds?

(13) _____ How accurate are you at predicting his/her attitudes?
Appendix C cont.

(14) _____ How well can you predict his/her feelings and emotions?

(15) _____ How much can you empathize with (share) the way he/she feels about himself/herself?

(16) _____ How well do you know him/her?

Instructions: The following statements apply to how various people feel about receiving communication. Indicate if these statements apply to how you felt by noting whether you: (5) Strongly Agree, (4) Agree, (3) Are Undecided, (2) Disagree, (1) Strongly Disagree. Place the number of your response in the space to the left of each statement.

(17) _____ I sometimes had difficulty concentrating on what the other person was saying.

(18) _____ I found it easy to concentrate on what was being said.

(19) _____ It was sometimes difficult for me to make sense out of what the other person was saying.

(20) _____ I had no fear of listening and adjusting to the other person’s views.

(21) _____ I was sometimes afraid that I would not completely understand what was said.

(22) _____ I felt relaxed when listening to the new information.

(23) _____ I would rather not have had to listen to the other person at all.

(24) _____ I often felt uncomfortable when listening to the other person.
Appendix C cont.

(25) _____ Receiving the new information made me feel restless.

(26) _____ I generally found it easy to concentrate on what was being said.

(27) _____ I enjoyed being a good listener.

(28) _____ I sought out new ideas to listen to.

(29) _____ I sometimes felt uncomfortable when listening to the other person’s ideas.
Appendix D

Instructions: This scale is composed of seven questions pertaining to your feelings about the other person to whom you have been talking with. On a scale from 0% to 100% (with 100% = absolute confidence and 0% = absolute guess), indicate your feelings of confidence based on what you feel you know about this person. Place the percentage of your response (0% to 100%) in the space to the left of each question.

(50) ______ How confident are you of your general ability to predict how he/she will behave?

(51) ______ How certain are you that he/she likes you?

(52) ______ How accurate are you at predicting the values he/she holds?

(53) ______ How accurate are you at predicting his/her attitudes?

(54) ______ How well can you predict his/her feelings and emotions?

(55) ______ How much can you empathize with (share) the way he/she feels about himself/herself?

(56) ______ How well do you know him/her?

Instructions: The following statements apply to how various people feel about receiving communication. Indicate if these statements apply to how you felt by noting whether you: (5) Strongly Agree, (4) Agree, (3) Are Undecided, (2) Disagree, (1) Strongly Disagree. Place the number of your response in the space to the left of each statement.

(57) ______ I sometimes had difficulty concentrating on what the other person was saying.

(58) ______ I found it easy to concentrate on what was being said.
Appendix D cont.

(59) _______ It was sometimes difficult for me to make sense out of what the other person was saying.

(60) _____ I had no fear of listening and adjusting to the other person’s views.

(61) _____ I was sometimes afraid that I would not completely understand what was said.

(62) _____ I felt relaxed when listening to the new information.

(63) _____ I would rather not have had to listen to the other person at all.

(64) _____ I often felt uncomfortable when listening to the other person.

(65) _____ Receiving the new information made me feel restless.

(66) _____ I generally found it easy to concentrate on what was being said.

(67) _____ I enjoyed being a good listener.

(68) _____ I sought out new ideas to listen to.

(69) _____ I sometimes felt uncomfortable when listening to the other person’s ideas.

Directions: The following statements describe your feelings about the other person you have been conversing with. Indicate the degree to which each statement applies to you by marking whether you: (7) Strongly Agree, (6) Moderately Agree, (5) Agree, (4) Are Undecided, (3) Disagree, (2) Moderately Disagree, (1) Strongly Disagree. Place the number of your response in the space to the left of each statement.
Appendix D cont.

(70) _____ My initial predictions (at the end of the first conversation) about the outcome of the interactions were confirmed.

(71) _____ I would like to continue talking to this person.

(72) _____ My initial predictions (at the end of the first conversation) about the outcome of the interactions were negative.

(73) _____ I would like to see this person again.

(74) _____ I would not like to continue talking to this person.

(75) _____ My initial predictions (at the end of the first conversation) about the outcome of the interactions were positive.

(76) _____ I would not like to see this person again.

(77) _____ My initial predictions (at the end of the first conversation) about the outcome of the conversations were not confirmed.

Directions: The following statements describe your feelings about the other person you have been conversing with. Indicate the degree to which each statement applies to you by marking whether you: (7) Strongly Agree, (6) Moderately Agree, (5) Agree, (4) Are Undecided, (3) Disagree, (2) Moderately Disagree, or (1) Strongly Disagree. Place the number of your response in the space left of each statement.

(78) _____ I have asked this person specific questions about his/her attitudes.

(79-81) Check all times that apply regarding this question:
   During First conversation ________
   During Second conversation ________
   During Third conversation ________
Appendix D cont.

(82) _____ I have never asked this person questions about his/her personality.
(83-85) Check all times that apply regarding this question:
    During First conversation _____
    During Second conversation _____
    During Third conversation _____

(86) _____ I have asked specific questions about this person’s values.
(87-89) Check all times that apply regarding this question:
    During First conversation _____
    During Second conversation _____
    During Third conversation _____

(90) _____ I have never asked this person questions about his/her emotions and feelings.
(91-93) Check all times that apply regarding this question:
    During First conversation _____
    During Second conversation _____
    During Third conversation _____

(94) _____ I have asked specific questions about this person’s background.
(95-97) Check all times that apply regarding this question:
    During First conversation _____
    During Second conversation _____
    During Third conversation _____

(98) _____ I have never asked this person questions about his/her experience.
(99-101) Check all times that apply regarding this question:
    During First conversation _____
    During Second conversation _____
    During Third conversation _____
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