

**INTIMACY BETWEEN FRIENDS:
AGE AND GENDER SIMILARITIES AND DIFFERENCES**

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by
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ABSTRACT

The present study was an exploration of intimacy between same-gender friends. The study was designed to extend the existing literature in several important ways. Specifically, careful attention was given to the definition of an intimate or close friend, both self-report and observed behaviour were assessed, and intimacy was conceptualized as consisting of more than self-disclosure. In addition, the relationship between intimacy and gossip was explored, as well as similarities and differences in intimacy as a function of age and gender.

Two studies were done. In the first study, subjects reported the current level of intimacy in their closest same-gender friendship using the Miller Social Intimacy Scale (MSIS) (1982). In the second study, same-gender friends were selected on the basis of their scores on the MSIS and were asked to participate in two unstructured laboratory conversations. One conversation was an intimate or personal conversation and the other was a non-intimate or casual conversation. The conversations were audio recorded and the data were coded with a system designed to assess social processes common in everyday speech (e.g., transfer of information, gossip, self-disclosure). Three age groups of friends were studied (18-21, 26-36, 40-50).

It was expected that females would report higher levels of intimacy in their same-gender friendships than males. Further, it was expected that conversations between female friends would consist of more self-disclosure and affective social processes than conversations of male friends who, in turn, would use more transfer of information than female friends. The results indicated that females did report higher levels of intimacy in their same-gender friendships than males. There were no differences as a function of age. In conversation, women and men of all three age groups were similar in their use of social processes. However, there were effects for topic. That is, the intimate conversations consisted of greater use of high self-disclosure and gossip than the non-intimate conversations which, in turn, consisted of more transfer of information and low self-disclosure. The relationship between talking about others (gossip) and intimacy was discussed and the results were interpreted in reference to the distributions of scores on the MSIS.

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DEDICATION

This work is dedicated, with love, to my father, Elmer Edward Ewert, who died on June 3, 1993 at the age of 87. His life enriched the lives of the people around him and his genuine love for family and friends had a powerful impact on me. Thankyou dad for your encouragement and your quiet confidence in me.

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1. INTRODUCTION

1.1. OVERVIEW

Relationships with others are fundamental to human existence. Friendship appears to be a unique type of human relationship because it transcends legal sanctions, formal social roles, and familial expectations. It is also a voluntary relationship. Although friendship can develop within formal roles, for example when sisters or colleagues become best friends, it is not defined or controlled by formal roles and social institutions. In addition, friendship serves valuable functions. It has been shown that friendship plays a vital role in the maintenance of mental health. Friendship also appears to provide support, companionship, and an enhanced sense of self.

Two interesting findings of past research in friendship are: 1) intimacy is a critical factor in the development of a close friendship and 2) women and men experience their friendships differently. Intimacy has been described on the basis of what people report they think and feel about friendships. As such, we have learned about the psychological variables that comprise intimacy (e.g., self-disclosure, support, trust, emotional expressiveness). However, there have been few attempts to describe the

interaction between two people, so we do not know how these psychological variables are communicated in everyday life. An important next step is to observe the interaction between friends.

Regarding the second finding of gender differences, numerous studies have identified that women are more intimate than men. However, intimacy has been defined in a variety of ways. Some researchers have made strong interpretations of these differences, for example, making references to men as "clams" and women as "blabbermouths" (Hacker, 1981), or using the word "trivializing" to describe men's intimate behaviour (Morton, 1978). More recently there has been a challenge to consider similarities as well as differences in the gender/intimacy debate (Hare-Mustin and Marecek, 1988) and to interpret data more cautiously (Wright, 1988).

The focus of this dissertation is to investigate how close, same-gender friends talk intimately and to explore similarities and differences that occur as a function of age and gender. Same-gender friends were selected in order to be as free as possible from the inequalities of sexuality and power. Friends were selected according to their assessment of the level of intimacy in the friendship. A sample of their "talk" was audio recorded and coded to

describe the process in an exhaustive manner. This study was designed to extend previous research in several important ways. First, descriptive data about observed interactions is an important addition to existing self-report data (Duck, 1990). Second, several methodological issues were addressed, and third, since intimacy may vary as a function of age as well as gender, three different age groups of friends were studied.

The following sections review current knowledge about friendship and intimacy, describe gender differences, present speculations about age, and discuss the methodological issues that determined the direction of the study.

1.2. FRIENDSHIP

1.2.1. Function of Friendship

Friendship is a complex social relationship which, by its presence or absence, touches the lives of all individuals throughout their life span. The value of friendship in North American society is increasing with a concomitant weakening of kinship ties (Bell, 1981a). Traditionally, a sense of belonging and support has come through extensive kinship networks. However, it appears that factors such as emphasis on the nuclear family, increased mobility, a rising divorce rate, and changes in male/female roles may all contribute to the weakening of kinship ties. One could also speculate that the new awareness of family systems and the prevalence of disclosure of childhood sexual abuse has created barriers between adults and their extended family networks. Therefore, it appears that friendship has assumed an increasingly vital role in the maintenance of support and belonging.

Moreover, a growing body of evidence has demonstrated a strong correlation between friendship and mental health. In a review of the literature exploring this relationship, Miller and Lefcourt (1982) suggested that close

relationships are an important predictor of healthy psychological and physiological functioning. In subsequent research (Miller and Lefcourt, 1983) they stated that individuals who were without a current intimate relationship were more subject to emotional disturbance. Although these reports infer a causal relationship, that is, intimate friendship predicts emotional stability, there is no convincing evidence for causality. It may be that emotional stability is a necessary precondition for intimacy. At best, one can conclude that there is a correlation between friendship and mental health.

Perlman and Peplau (1982) and Young (1982) stated that chronic loneliness (the absence of friends) may make one vulnerable to depression, and Henderson and associates (Henderson, Byrne, Duncan-Jones, Scott, and Adcock, 1980) have shown that an inverse relationship exists between social bonds and the presence of neurotic symptoms. Wheeler, Reis and Nezlek (1983) had college students keep diary-like records of social interaction with the Rochester Interaction Record, as well as complete the UCLA Loneliness Scale. They found that the absence of meaningful interaction between college students was the best predictor of loneliness. In addition, in their review of the literature on social support and stressful life events, Ginsberg, Gottman and Parker (1986) concluded that

individuals "are probably better off if they can gather social support, have and be a confidant, and can replace the loss of social support, particularly through major life transitions" (p.48). They cautioned that this conclusion may be tenuous in a scientific sense because of the complexity of the mental health - social support relationship and the methodological problems of using self-report measures of questionable reliability and validity to operationalize both social support and mental health.

Clearly the literature has shown that friendship serves a valuable support function. However, since the social support literature includes numerous variables including support, life events, and individuals' perception and appraisal, it is not known at this time how much of the variance in health is accounted for by friendship. The impression held is that friendship does have a positive influence and that one is better off with a friend than without a friend.

Despite its importance, researchers have been slow to investigate friendship. Existing theories of friendship are essentially theories of interpersonal attraction based upon laboratory studies investigating initial attraction toward strangers (see Perlman and Fehr, 1986 for an excellent review). These theories give little relevant information

about what happens in an ongoing close friendship. However, some propositions have been made about the function of friendship. For example, Duck (1991) stated that: 1) friendship gives a sense of belonging and, 2) it facilitates emotional integration and stability through development of shared concerns, common interests and communal emotionality. A sense of stability is maintained through social comparison (i.e., how am I doing vis-a-vis other people? and do I rate?). Three, friendship provides an opportunity for communication about self. Often what is needed in times of stress is a good listener or a sympathetic ear; friends provide this comfort to one another. Four, friendship provides assistance and physical support when necessary and, five, it offers reassurance of worth and value. Six, it affords an opportunity to help others and, seven, it provides personality support, that is, the bolstering and propping up of individual beliefs and opinions and the right kind of ego support at the right time. Duck stated that this seventh function is the most important.

Duck (1991) did not classify these functions of friendship as specific to any stage of life (childhood, adolescence, adulthood). However, one would think that as people progress through developmental stages, the function of friendship may change. For example, the role of a young child's friend may be very different from the role of a

teenager's friend. Gottman and Mettetal (1986) and Ginsberg et al. (1986) made a significant contribution with their proposals about friendship role variation as a function of age. Several of the functions of friendship specific to childhood - social comparison, physical support, and ego support/enhancement - are consistent with those presented by Duck (1991). Additionally, they proposed companionship, stimulation, and intimacy/affection. Based on a descriptive study of the social processes involved in interactions of children at play (Gottman, 1983), Gottman and Mettetal (1986) proposed that friendships serve different primary functions at different stages of childhood. In young childhood (age 3-7), the primary function of friendship is coordinated play. In middle childhood (age 8-12), the primary function is inclusion by peers. They reasoned that the goal at this developmental stage is to determine the norms of the group, to be accepted, and to minimize rejection. In adolescence (age 13 to young adulthood), the primary function of friendship is self-exploration. The goal is to establish one's self in relation to others and to accept and integrate various aspects of the self.

Gottman and Mettetal (1986) did not extend their proposals of the primary functions of friendship to adulthood. A possible speculation is that this primary

function is ego support/enhancement (Wright, 1978, 1984; Weiss, 1974; Duck, 1991; Reisman, 1981; Ginsberg et al., 1986). Wright (1978, 1984) proposed that, through friendship, people actualize important needs concerning self-image and well-being. Rubin (1985) stated that friendship provides a positive reflection of self and allows for the reworking of past relationship issues. Weiss (1974) also stated that friendship satisfies certain needs such as reassurance of worth, affection, and instrumental help. Although the language varies from one proposal to the next, the ideas appear consistent. That is, adult friendships provide emotional support and enhance self-worth. It is not known if this function is consistent throughout adulthood, for example, if the role of friendship is the same for young and middle-aged adults. It may be that variation in adult developmental tasks is concomitant with variation in the role of friendship. This question could be addressed with longitudinal work.

Another question that has not been addressed is whether the role of friendship changes with the level of intimacy in the relationship. It is assumed that the preceding functions of friendship refer to close friendship but this has not been clearly defined. The word 'friendship' can be used as a generic term to describe a variety of relationships from casual acquaintance to intimate

friendship. In everyday life it is not unusual to hear someone refer to a casual acquaintance as a 'friend'. For example, a statement like, "I met a friend the other day and he told me that he thought tourism was down because of the GST". Further exploration indicates that this 'friend' is the gas station attendant who occasionally fills the speaker's car with gas. Given this variation in the use of the term 'friend', it is important that researchers define the term.

1.2.2. Definition of Friendship

A variety of definitions appear in the literature on friendship. Weiss and Lowenthal (1977) defined friendship as a voluntary, unique, dyadic relationship. That is, friendship is chosen and it is not regulated by social roles or obligations. In their research, friendship is the third point on the continuum consisting of 1) acquaintanceship, 2) friendly interaction, 3) friendship, and 4) intimacy. In this sequence, each type is distinguished by an increment of knowledge about the unique individuality of the other.

Kelley et al. (1983) defined close relationships with the key word "interdependence". A close or intimate relationship in their view is a relationship "of strong, frequent, and diverse interdependence that lasts over a

considerable period of time." (p. 38).

Bell (1981a) defined friendship as a voluntary, close and enduring social relationship (p. 10). Several features implicit in this definition were 1) social equality - friendship typically exists within specific social class levels; 2) non-imposition - friendship is not imposed but is based on private negotiations; and 3) the concept of gift-giving - a friend is not thought of as an instrumental means to achieving some goal; rather, friendship can be thought of as a gift.

Reisman (1981) discussed the definition of friendship in adult life and, in addition to the features previously discussed, he emphasized the dimension of reciprocity. Reciprocity may be implicit in other definitions but it is not explicitly named. Reciprocity involves mutual give and take within a relationship and exists at all relationship levels from casual to intimate. The importance of reciprocity in the development of social relationships has been articulated within the framework of social penetration theory (Taylor, 1968). This theory refers to reciprocal behaviours that occur between two individuals when a relationship is developing, including exchange of information, affect, and mutual activities. Strict reciprocity is said to be important in a developing

relationship but may decrease in the mature, intimate relationship. Morton (1978) has given evidence for this pattern of reciprocity in married couples versus strangers and Won-Doornik (1985) showed that reciprocity of intimate disclosure diminishes with advanced relationships between college students.

Reisman (1981) listed three distinctive types of friendship: 1) associative, 2) reciprocal, and 3) receptive. Associative friendships consist of superficial friendliness and casual relationships between people who work at the same job, live in the same neighbourhood or belong to the same organization. They are distinguished by the absence of loyalty and the sense of commitment. Reciprocal friendships are intimate, close, "true" friendly relationships. They are characterized by loyalty and commitment between friends who regard one another as equals. A receptive friendship is one in which one of the members is primarily a "giver" and the other is primarily a "taker". This latter type of friendship may be due to a difference in status, such as a mentor or friendly teacher-pupil relationship.

Clearly there is a variety of definitions and views of friendship. A review of studies indicates that some researchers define terms carefully while others do not attend to this issue. If researchers do not define their

terms, the results can be misinterpreted and can be spurious because it is not known what kind of relationship is described.

Caldwell and Peplau (1982) did a study of gender differences in friendship and recognized the necessity of operationalizing friendship. They speculated that reported sex differences in friendship might simply reflect differences in language usage, that is, in how men and women define friendship, not in actual behaviour. A questionnaire study and a role-play conversation were designed to assess the possible differences between friendship definition and behaviour. Respondents were presented with definitions of three types of friends: intimate, good, and casual. An intimate friend was defined as "a close friend with whom one could really communicate and in whom one could confide feelings and personal problems. An intimate friend is valued because of the warmth, caring and emotional sharing". A good friend was defined as "a person with whom one enjoys doing things and talking about important interests". A good friend however is not a person with whom one discusses very personal thoughts and feelings. A casual friend was defined as "a person with whom one participates in activities; the interactions are pleasant but are not regular or frequent".

The results from the questionnaire study indicated that males and females value intimate friendships equally and that they agree on their definitions of friendship. However, results from the role-play conversation study showed gender differences in the behavioural expression of intimacy. Intimacy in conversations was assessed by frequency of feeling statements, supportive statements, and talk about others. Conversations of female same-gender pairs contained a significantly greater number of these three types of statements than did conversations of male same-gender pairs. It is possible that males and females have different ways of expressing intimacy in conversations. Another possibility is that males are less intimate than females.

There are several problems evident in Caldwell and Peplau's (1982) conclusions about gender differences in friendship. First, although the authors made reference to the importance of defining friendship, they were not consistent in carrying out this task. There is no evidence that 'friend' was defined in the role-play study and therefore it is difficult to make the case that the results apply to a 'best' or 'intimate' friend. A second question involves the ability of respondents to simulate a 'friendship conversation'. There may be many subtle cues in a friendship interaction that are outside the individuals'

awareness and yet stimulate intimate behaviour. It is not obvious, then, that a contrived laboratory interaction between two unacquainted subjects yields results which answer questions regarding intimate relationships.

Other researchers have not been as careful with definition of terms. For example, Aries and Johnson (1983) and Johnson and Aries (1983a, 1983b) designed the Close Friendship Questionnaire (CFQ) containing 17 frequently discussed topics of varying degrees of personal content. This CFQ was administered to respondents who were asked to assess the frequency and depth of discussion of each topic in reference to a close friend. Their studies yield descriptive data regarding the nature of conversations with friends. However, evidence for the validity of the measures was not cited. In addition, it was not clear that all respondents were describing the same kind of friend because they were asked to respond to questions about a close friend and a detailed description of this close friend was not given.

In conclusion, it is accepted that the provision of definitions of friendship for respondents in a study of friendship is a necessary corollary for meaningful research. However, the extant literature reveals inconsistencies in the management of this task. Definitions may range from

casual acquaintance to intimate friend. In spite of this range, it is clear that an intimate, interdependent, reciprocal, or close friendship (depending on whose terms are used) is comprised of emotional attachment and caring which is not present in the other types of friendship and this emotionality makes an intimate friendship unique from other relationships. This intimate friendship is the focus of the present research. Since intimacy is critical in defining this friendship, the following section will review what we know about intimacy. The section that reviews methodological issues will outline the operational definition for intimate friendship that was used in this research.

1.3. INTIMACY

1.3.1. Intimacy and Friendship

Intimacy is a critical factor in determining the nature of a friendship and the role of intimacy in the development of friendships has been subjected to empirical scrutiny. Walker and Wright (1976) had unacquainted confederates and subjects in same-gender pairs discuss an intimate or non-intimate topic. The confederate always chose the first topic so that half the time he or she chose the intimate topic, and half the time the non-intimate topic. The subject always chose the second topic. A week earlier, subjects and confederates were introduced and subjects were asked to complete the Acquaintance Description Form in reference to the confederate. This instrument measured important components of a friendly relationship. Following the conversations, the subjects again completed the form. The dependent variable was the change in the level of friendship after termination. As expected, the level of intimate self-disclosure varied directly with the level of ensuing friendship achieved at termination.

A second demonstration of the importance of intimacy in friendship was reported by Knapp and Harwood (1977). Five hundred female and male undergraduate students were asked to

rate the importance of 39 variables in the formation of an intimate same-sex friendship. Examples of variables selected were: sincerity, accurate feedback, trust, loyalty, generosity, self-disclosure, personality complementarity and completeness, understanding, need-for-approval, education, religion, and reciprocity of time and material things. Results were factor analyzed and three primary factors emerged: 1) attitudinal agreement (e.g., personality similarity and similar opinion about issues), 2) intimate accessibility (e.g., expectation of being liked, need-for-approval, generosity) and, 3) reciprocal candour (e.g., accurate feedback, self-disclosure, sharing things). The authors stated that these three factors are critical ingredients in friendship and that the absence of any one would result in what is commonly termed "acquaintance" rather than "friendship".

These three primary factors are synonymous with the proposals of the function of friendship stated previously. For example, attitudinal similarity corresponds with Duck's proposal (1991) of shared concerns and common interests and ego support may be facilitated through being liked (intimate accessibility).

A third assessment of the importance of intimacy in friendship was a longitudinal study of friendship

development (Hays, 1985). At the beginning of the university fall term, female and male undergraduate students were asked to select two strangers with whom they thought they could become friends. Initially, as well as every three weeks until the end of term, subjects completed the Friend Observation Checklist (FOC) designed by the author. The FOC contained 190 items describing typical behaviours that might occur in a friendship. For example, "my friend and I went to a movie", "I discussed a personal problem with my friend", or, "my friend hugged me". Items on the checklist were scaled for intimacy (superficial, casual, intimate) and content area (companionship, communication, affection, consideration). The author did not report who did the 'scaling' or what the reliability was. The results were based on 42 relationships that did, and 42 relationships that did not develop into close friendships by the end of the fall term. Close friendship was defined as a subject's rating of the friendship on a 7-point scale with 1 = acquaintance, 3 = casual, 5 = close, and 7 = best. Close friend was a rating of 4 or more, not close friend was a rating of 3 or less. The results of interest to this discussion regarding intimacy were that the successful relationships progressed from superficial to intimate levels over time and the intimacy level accounted for an increasing percentage of the variance in friendship intensity ratings. Moreover, this percentage of variance in friendship

intensity accounted for by intimacy was beyond that accounted for by the quantitative aspects of the relationship, that is, amount of time spent together in shared activities.

These three studies show that intimacy is pivotal in the development of friendship and the degree of intimacy in a relationship is related to the intensity and the value placed on the friendship. However, these studies all address the role of intimacy in developing relationships. They do not contribute to our knowledge of the role of intimacy in ongoing close friendships, or our knowledge of how intimacy is communicated, particularly in conversations. Another unresolved issue is how intimacy is defined. One would expect that some critical factors are liking and being liked, generosity, and shared opinions (Knapp and Harwood, 1977), and self-disclosure (Walker and Wright, 1976; Knapp and Harwood, 1977). However, additional factors have been cited and, in order to consolidate findings, an understanding of the description of intimacy is important.

1.3.2. What is Intimacy?

Just as friendship can be defined in a variety of ways, so intimacy has been conceptualized in diverse ways by various theorists. This review includes the literature on

intimacy specific to friendship and excludes studies of intimacy in marriage or romantic relationships (e.g., Waring, Tillman, Frelick, Russell and Weisz, 1980; Waring and Chelune, 1983). It is thought that intimacy between partners is subtly different from intimacy between same-gender friends. It is not known what these differences are. Perhaps sexuality and power create inequalities (Rubin, 1985). There is evidence that sexuality has an impact on friendships that are not romantic relationships (Monsour, 1992), that is, sexual activity is part of the description of closeness.

In communication research, intimacy is thought to imply acts of self-disclosure which have been defined as any information about self that person A communicates verbally to person B (Cosby, 1973). This definition is the traditional view of intimacy and appears to have been used in most of the studies throughout the 1980's. The majority of the empirical studies in self-disclosure concern the exchange of self-relevant facts and have yielded valuable information. However, it is clear that defining intimacy in relation to the depth or breadth of self-disclosure and the nature of topics discussed is too simplistic (Fisher, 1984; Reis and Shaver, 1988).

Other conceptualizations of intimacy include emotional

expressiveness (Monsour, 1992), sexual activity (Helgeson, Shaver, and Dyer, 1987), trust (Jones, 1991), the giving and receiving of support (Newcomb, 1990), and shared activities (Hays, 1985; Aries and Johnson, 1983). McAdams (1988) stated that although many definitions of intimacy have been offered, they all converge on the central theme of sharing that which is inmost with others. The preceding is not an exhaustive list of how intimacy has been defined, but it is thought to be representative of the work in the field.

Recently there have been several impressive attempts to define intimacy by asking respondents what they think intimacy means and how they express it. Helgeson, Shaver, and Dyer (1987) investigated differences in male and female conceptualizations of intimacy and distance in close relationships. University students (N = 79) described a recent intimate and a distant experience with a friend of the opposite sex and a friend of the same sex. Descriptions were coded and assigned a category label (e.g., appreciation, feeling comfortable). Male and female descriptions of intimacy were very similar and indicated three defining issues: 1) sex and physical contact, 2) appreciation and happiness and, 3) talking versus shared activities. There were, however, some gender differences. For opposite-gender relationships, physical contact and sex were the primary factors of intimacy for males. Females

reported the expression of appreciation to partner more than males. In same-gender relationships, males reported more feelings of appreciation toward partner than women, and women reported more expression of appreciation. In addition, more women than men reported feelings of happiness. Males reported equal proportions of talking and shared activities, whereas women reported more talking.

Two features of intimacy, self-disclosure and happiness, were associated with females, that is, both males and females were happier and disclosed more in relationships with a female. The authors concluded that although there is substantial overlap in male and female definitions of intimacy, the differences may create misunderstandings between genders. Overall, they cautioned against the tendency to emphasize differences and overlook similarities.

The importance of this study was the demonstration that intimacy consists of more than self-disclosure. Intimacy involves feelings of appreciation, happiness, shared activities (primarily for males), and sexual activity in cross-gender friendships. Unfortunately, most of the work prior to this publication used self-disclosure as the operational definition of intimacy.

A more recent study of the meaning and expression of

intimacy found similar results (Monsour, 1992). University students (N = 164) were asked to define the term "intimacy" and indicate how it was expressed in a same- and cross-gender friendship. The authors specified a "good" friendship and not a dating or romantic relationship. Respondents designated one to five meanings for intimacy and these were coded into categories by two raters. Seven common definitions resulted: 1) self-disclosure, 2) emotional expressiveness, 3) unconditional support, 4) physical contact, 5) trust, 6) sharing activities, and 7) sexual contact. Of these response categories, self-disclosure was the one most frequently listed in all groups. Women in same-gender friendships identified this definition more than all other groups. The second most frequently used definition was emotional expressiveness for males and physical contact for females. The third most frequent for females was emotional expressiveness and physical contact for males. Trust was ranked as fourth in order of significance for females and fifth for males whereas support was fourth for males and fifth for females. Shared activities was a definition used by males in same-gender friendship but not females and only the cross-gender friends identified sexual activity in their description of intimacy and this was identified by a higher percentage of males (16%) than females (8%).

It can be seen that females and males describe intimacy similarly and self-disclosure is primary to both. The differences between gender are largely in the ordering of importance of the defining characteristics. In cross-gender friendships, males consistently identify sexual activity more than females, even when the friendship is not a romantic relationship. The linking of sexual contact and intimacy for males may be seen as support for the proposition that males more than females express intimacy through sexual activity.

These studies (Helgeson et al., 1987 and Monsour, 1992) are important because they describe how people think about intimacy and how they report they behave intimately. However, these results are not comparable with other literature on intimacy. The studies cited above have shown that males and females in same-gender friendships describe intimate experiences similarly and yet there is a substantial body of evidence indicating that female same-gender friendships are more intimate than male same-gender friendships. What is the explanation for these divergent results? One explanation may be the way intimacy has been defined and measured. That is, if intimacy is defined as self-disclosure, then males appear less intimate than females, whereas, if more inclusive definitions are used (e.g., Monsour, 1992), males and females are more similar

than different. In addition, if intimacy is measured by self-report, the findings differ from those measured by observation of actual behaviour (e.g., Caldwell and Peplau, 1982). A second explanation for the divergent results may be the bias or inclination of the researcher. The psychological inquiry into gender has traditionally held the conceptualization of gender as 'difference'. A researcher adhering to the more traditional view would investigate differences rather than similarities, and yet similarities are also theoretically interesting. Recently there has been a trend toward no differences in gender research. For example, Hare-Mustin and Marecek (1988) reviewed the work which reexamined gender differences and concluded that male-female differences were not "as universal, as dramatic, or as enduring as has been asserted" (p. 456).

One additional issue from the preceding research (Helgeson et al., 1987; Monsour, 1992) is generalization of these descriptions of intimacy to other age groups. University undergraduates are the most common subject pool, and it is not known if the results from this population generalize to other age groups. The subsequent sections are a review of the studies of gender differences and the proposed exploration of age.

1.4. GENDER DIFFERENCES

Bell (1981) stated that "there is no social factor more important than that of sex in leading to friendship variations" (p. 55). Studies of friendship from childhood to old age indicate that female friendships may be more intimate than male friendships. However, there is no consensus between studies about the definition of intimacy.

In an exploration of children's friendships, Rubin (1980) noted that there is a tendency for boys to gather in large groups more often than girls and that girls are found in pairs more often than boys. "Boys tend to view the group as a collective entity, emphasizing loyalty and solidarity, girls are more likely to view the group as a network of intimate two-person friendships" (p.106). In their review of the literature on children's friendships, Dickens and Perlman (1981) corroborated these findings; the consistent observation is that boys interact in larger groups or gangs while girls interact in two's or three's (p.102).

It appears that an assumption is made that large groups are less intimate than pairs. This assumption may be based on the subtle differences between bonding and intimacy. The clearest understanding of bonding is the relationship that can develop between a parent and infant. Although this is a

profound connection, few would describe this relationship as intimate. As noted, intimacy consists of emotional expressiveness, a sharing of self that happens between equals. Bonding, which can be described as solidarity and loyalty may be a precursor to intimacy but it can exist without intimacy.

The focus of friendship may change as individuals develop. In a national survey of 11-18 year old girls and boys, Douvan and Adelson (1966) found both age and sex differences in adolescent friendship. Girls move from an activity orientation (age 11-13) toward an emphasis on emotional closeness in their same-sex friendships. However, the gang is more important to boys than close individual friendships throughout the adolescent period and they are less eager for intimacy than girls. Boys do not value the affective elements of a relationship; there are no demands for closeness, mutual understanding, or emotional support. A friend for a boy is one who shares a common interest in reality-oriented activities, whereas a girl reaching late adolescence values the relational aspects of friendship (pp. 195-196). Although Douvan and Adelson's survey is dated, it is still frequently cited (e.g., Dickens and Perlman, 1981; Tesch, 1983; and Blyth and Foster-Clark, 1987) and regarded as a significant description of adolescent friendships.

Blyth and Foster-Clark (1987) examined gender differences in adolescent reports of perceived level of intimacy with important individuals within their social networks. Respondents (N = 2403) were asked to describe the quality of their relationships with others and an intimacy scale consisting of acceptance, understanding, shared feelings, and advice seeking was developed. In same-gender friendships these researchers found that girls reported higher levels of intimacy than boys and these differences were the greatest if the friends were in the same grade.

These results support Douvan and Adelson's (1966) observations in that boys may value acceptance as part of a gang (one of the items on Blyth and Foster-Clark's intimacy scale) but not the 'relational' aspects such as understanding and shared feelings.

Hays's (1985) study of university-age friendship demonstrated that males showed more companionship behaviour (activities) in the early stages of a relationship and females showed more communication behaviour than males. In addition, at time one (3 weeks) affection was the most highly correlated behaviour with friendship for females and the least correlated for males for whom companionship and consideration were the behaviours most highly correlated with friendship. However, with the passage of time the

correlations between friendship and affection were equal for both genders.

These results suggest that shared activities play a greater role for men than women in a developing friendship, and communication may be instrumental for women and not men.

Caldwell and Peplau's (1982) questionnaire data demonstrated similar results. Females got together "just to talk" more than males, males preferred an activity. In addition, personal topics were discussed more by females than by males. The telephone conversations, analyzed for expression of feeling, solicitation of feeling and supportive statements, indicated that females showed more feeling and were more emotionally supportive than males. It appears that the authors' measure of intimacy related to depth and breadth of self-disclosure and with this measure they concluded that females were more intimate than males. As stated, the meaning of this conclusion is questionable because it is not clear that strangers can simulate a friendship conversation.

In a series of three studies, Johnson and Aries (1983a, 1983b, and Aries and Johnson, 1983) also found that women prefer to talk. Twenty adult women were interviewed in their homes (1983b). Questions focused on a close, same-sex

friend and concerned the history of the relationship, the types of interaction between the friends, functions of the friendship and feelings about the friendship. Johnson and Aries (1983b) found that "talk" was central to friendships between two women. Common themes of women's talk were non-critical listening, support, enhancement of self-worth, exclusiveness and self-discovery, and personal growth.

In a questionnaire study assessing frequency and depth of conversational content between same-gender university friends, Johnson and Aries (1983a) found that females conversed more frequently and in greater depth about intimate topics involving themselves and their close relationships (for example, family activities and problems, doubts and fears, intimate relationships), while males conversed more frequently and in greater depth about sports, hobbies, shared activities, and reminiscences about past activities. The authors concluded that women engage in more intimate conversation than the men.

In the study of adult same-gender friendship (Aries and Johnson, 1983), the results showed that females again exceeded males in the frequency and depth of personal topics discussed and males reported more frequent and in-depth conversation about sports and work. However, in this adult sample, women reported more frequent and in-depth

conversations about hobbies, shared activities, and reminiscences than did males.

Aries and Johnson did not compare the results of the two studies but they are suggestive of some changes as a function of age. That is, university-age males talk about hobbies, reminiscences, and shared activities more frequently and in greater depth than university-age females and yet the results are reversed when comparing adult males and females.

Additional studies using self-reported depth and breadth of disclosure have shown similar results. Booth (1972) concluded that women's friendships were "affectively richer" than men's friendships because women expressed more confidences (personal difficulties and worries) to their friends.

An interview study of male versus female friendship dyads (Hacker, 1981) did not show significant gender differences in the amount of self-disclosure but there were differences in the content of what was revealed. The interview data were not scaled for intimacy so it is not possible to conclude that female self-disclosure was more intimate than male self-disclosure. However, previous research has indicated that when items are scaled for

intimacy females disclose more than males on high intimacy items (Morgan, 1976).

More recently, Dindia and Allen (1992) completed a meta-analysis of 202 studies involving the exploration of sex differences in self-disclosure. These authors concluded that, across studies, women disclosed slightly more than men. These sex differences were found to be moderated by the sex of the target, relationship to the target, and the measure of self-disclosure (self-report or observation). That is, women disclosed more than men to women, but not more than men to men. In addition, women disclosed more than men to people with whom they had a relationship when disclosure was measured by both self-report and behaviour. Women also disclosed more than men to strangers when disclosure was measured by observed behaviour. Men reported (self-report) that they disclosed similarly to women when interacting with strangers. The authors cautioned that the effect size for sex differences in self-disclosure is small and researchers need to consider the magnitude of sex differences when forming conclusions.

In their review of women's friendships, Block and Greenberg (1985) observed that women's friendships consist of warm emotional exchanges and "free-flowing" conversation, whereas men's friendships are primarily activity-oriented.

Females more than males appear to derive satisfaction in relationships involving emotional support and discussion of personal problems. Similarly, Rubin (1983, 1985) highlighted differences between female and male experiences of friendship. Whereas intimacy for males involves proximity and activity, it involves communication for females.

Although a distinction has been drawn between communication and activity, it is clear that 'talk' is a part of the everyday life of both women and men. Duck (1990) stated, "social participation does not consist of thoughts and evaluations moving at random through the air, but is built substantially on talk in all its complexity" (p. 21). If talk provides the foundation for social interaction, it can be seen as serving "indexical functions" (Duck, 1990) such as showing intimacy, denoting power, or indicating disagreement. As such, everyday talk is an ideal behaviour for research about relationships.

The previous results, with the exception of Caldwell and Peplau (1982), were derived from what people report they do in and think about their friendships. Several studies have assessed everyday talk or conversations of friends. For example, Duck, Rutt, Hurst and Strejc (1991) did three studies wherein subjects kept diaries of everyday

conversations. The results were based on subjects' reports of conversations, not observed behaviour, and suggested that females compared to males reported higher quality conversations. In addition, females more than males reported the potential of conversations to change their behaviour and their relationships.

Other studies of everyday conversations have assessed observed behaviour. Krahn (1986) investigated both self-report and observational data in same-gender friendship dyads. Females and males, matched on self-reported level of intimacy in their closest friendship, participated in a laboratory conversation task with their closest friend. Conversations were coded for two levels of disclosure (descriptive and evaluative) with a system developed by Morton (1976). As expected, female same-gender friends disclosed more than male same-gender friends, even when females and males were matched on self-reported level of relationship intimacy. This study suggested that there may be discrepancies between self-report and behaviour. More observational research is needed to supplement existing knowledge derived through self-report. One problem in this research was that the coding system (two levels of self-disclosure) was not representative of the numerous processes in everyday speech. That is, everyday conversations consist of more than self-disclosure, and as this review indicates,

intimacy involves more than self-disclosure.

Additional studies of conversations include a study by Hornstein (1985) and a second study by Hornstein and Truesdell (1988). These studies were not relevant to gender differences but demonstrated a methodology for studying conversational style. In both studies, a primary female subject recorded naturally occurring telephone conversations with other female subjects whom the primary subject categorized as either a friend, an acquaintance, or a stranger. In the first study, Hornstein (1985) found that there were differences in the structure of conversations between friends and strangers. That is, in comparison with strangers, friends used more implicit openings (e.g., "Hi. It's me."), raised more topics, and were more responsive to each other (e.g., asked questions). Acquaintances were generally more similar to strangers. In the second study (Hornstein and Truesdell, 1988), the conversation topics were analyzed with Morton's two dimensional coding system for self-disclosure. As noted previously, this system does not appear to provide an adequate description of everyday conversation.

Reis, Senchak, and Solomon (1985) did two studies to explain the psychological processes underlying gender differences. Male and female subjects kept diary reports of

their everyday conversations and participated in an intimate conversation with a same-sex best friend. The diary reports showed that male same-gender interactions were less intimate than female same-gender interactions. The laboratory conversations were rated for intimacy with six intimacy measures. However, it appears that the measures for intimacy were very global (e.g., intimacy of topic, general intimacy of the interaction, shared important thoughts and feelings) and the authors did not define or explain how raters made judgements. The results showed that there were no gender differences in conversations of female and male same-gender friends. The authors concluded that males and females have equivalent capacity for intimacy and that males generally socialize in a less intimate manner than females do.

Although these studies of conversations between friends have yielded some information about the structure of conversation and the global assessment of intimacy in conversation, the studies do not contribute significant information about the conversation process between two friends. Ginsberg and Gottman (1986) made a substantial contribution in this area with their study of the relationships between college roommates. Four female and four male close same-gender roommate pairs and four female and four male distant same-gender roommate pairs were given

tape recorders and asked to turn them on whenever they were alone talking in their room. The conversations were coded using a system that described conversation exhaustively and self-disclosure was only one of several social processes assessed.

Analysis of the coded conversations between the roommate pairs yielded a multitude of complex results. In the interest of brevity, only the data regarding gender differences will be documented herein. They found that 1) females disclosed more than males, 2) gossip was a precursor of self-disclosure in female pairs, 3) females were more likely than males to be affective and less informational in their interactions, 4) female pairs were more likely to explore differences and demonstrate negative affect than male pairs, and 5) females were more likely than males to use directives.

This research introduced the question about the role of gossip in intimacy. Although some studies have assessed gossip indirectly by asking or observing whether friends talk about other people (e.g., Aries and Johnson, 1983; Caldwell and Peplau, 1982), none of the researchers cited herein has noted, directly, that gossip may be relevant to a description or understanding of intimacy. Ginsberg and Gottman (1986) proposed that familiarity or trust between

two people is a prerequisite of gossip. In fact, the results showed that for female close same-gender friends, gossip was a precursor to self-disclosure. It may be that one would feel more confident disclosing private facts and feelings about self if the friend's attitude about these private facts was first explored in reference to third persons. For example, a man may not wish to reveal the fact that he was having an affair to a friend who acted with disapproval to the news of another man's affair.

In two recent studies, differences between friends' and acquaintances' conversations were investigated and the results showed that gossip was a variable that discriminated between the two types of conversations. In the first study (Planalp and Benson, 1992), conversations were rated by naive judges who were asked to assess if conversations between friends differed from conversations between acquaintances and, if so, why they differed. In the second study (Planalp, 1993), the variables articulated by the judges in the first study were operationally defined and used to code the same conversations. One variable, mutual knowledge, was found to distinguish friends' and acquaintances' conversations in both studies. A type of mutual knowledge was shared knowledge about other people, that is, friends talked about other people in a manner that made their conversations distinctive from the conversations

of acquaintances.

Gossip is most often viewed as negative and 'stereotypical' women's behaviour. Tannen (1990) made a distinction between talk against others and talk about others. It may be that talking about others is a way of establishing rapport and connection. Although Duck (1990) may not have been referring to gossip, he suggested that friendship serves the function of social comparison (how am I doing vis-a-vis other people). Perhaps gossip serves this function between friends. Although the function of gossip is not known and its relationship to intimacy is not understood, further exploration would be beneficial.

At this juncture, it is noteworthy that some researchers include frequency of contact or interaction between friends as one indicator of closeness in a friendship. Both Hays (1985) and Caldwell and Peplau (1982) reported these data. Powers and Bultena (1976) also highlighted frequency of interaction as a measure of intimacy in their study of friendships of old age (70+). Total interaction with others was recorded for men and women and the results demonstrated that women interacted more with an intimate friend than men while men's interaction was limited in intimacy in that they interacted more with family (children) and casual friends.

Although frequency of interaction may give some information about friendship, it is not thought to be significant in determining the level of closeness in the friendship. There are many examples in adult life of intimate friends who live in different locations and are still able to maintain intimacy in spite of limited contact.

In summary, it appears that women report greater intimacy in their same-gender friendships than men when intimacy is described as self-disclosure. Also these gender differences in intimacy appear to be consistent throughout the life span although there is some support for the speculation that the nature of friendship may vary as a function of the age of the respondent. The relationship between age and friendship requires further exploration and is highlighted in the following section.

1.5. AGE

It has been assumed that gender accounts for more of the variation in friendship than any other factor (Bell, 1981). However, age is another factor that is consistently questioned throughout the literature. For example, Caldwell and Peplau (1982) noted that gender may interact with age and closer attention should be paid to subgroups of friends differing in age (p. 722). Hays (1985) stated that subjects were predominantly young, single college students and "friendships of individuals of other age and social groupings may show very different patterns" (p. 923). Helgeson et al. (1987) concluded that college student reports of intimacy and distance may not be "valid representations of older adults' experiences" (p. 230). In addition, Tesch (1983) concluded that exploration of friendship across age groups would increase our information. In her review of gender-differences in friendship, Winstead (1986) stated that "sex differences in functions of same-sex friendships in stages of adult development other than the college years need further exploration" (p. 88).

One study explored age differences in the function of friendship (Tesch and Martin, 1983). University students' (average age 20) and alumni (average age 25) responses to questions about the meaning and value of friendship were

coded into 23 categories thought to represent friendship. Results showed that alumni were less likely than students to identify trust, acceptance, confiding and respect and were more likely to emphasize individuality and communication. One could speculate that if there are age differences in the function of friendship, there may also be age differences in how intimacy is communicated. This latter question has not been explored.

As stated previously, most of the studies on intimacy have been done with university undergraduates as subjects. It may be that students of that age and level of experience are not the appropriate subject population for the investigation of intimacy. For example, Erikson (1963) viewed intimacy as a developmental stage which could be reached only when an individual had achieved a stable identity; identity is achieved in adolescence and intimacy is achieved in young adulthood. However, there is no agreement about what age demarcates the end of adolescence and the beginning of adulthood. In the studies cited herein, university students have been referred to both as older adolescents and as young adults. If one accepts Erikson's theory, then one questions the validity of conclusions about intimacy derived from a university population because students' may not be old enough, or experienced enough, to understand the meaning of intimacy.

It is suggested that intimacy involves a sharing of self with other and this sharing of self presumes a stable identity. One could speculate that identity is linked to separateness from others, autonomous or independent behaviour. The developmental process could be described as: dependent - independent (identity) - interdependent (intimacy) and it may be that these stages are accomplished at different ages depending on a variety of factors (e.g., gender, culture). The word 'intimacy' has been used for the study of closeness in friendships of children and adolescents (e.g. Blyth and Foster-Clark, 1988). However, it appears that intimacy does not apply to children and adolescents, and that 'bonding' is perhaps a more accurate descriptor of closeness in these friendships.

Given the call to study different age groups (adults) and the questionable validity of studies on intimacy with university students, this study will explore differences in intimacy as a function of gender and age.

1.6. METHODOLOGICAL ISSUES

The focus of this dissertation is how close same-gender friends talk intimately. It is an exploration of friends' reported level of intimacy in a close friendship as well as a description of how friends talk intimately. The study is designed to extend the existing literature by addressing methodological issues that have been noted in the review of previous research. Hence, contrary to conventional presentation style, the methodological issues are presented before the specific purpose of the investigation is outlined.

The methodological issues presented include: 1) lack of clarity in definitions of friendship, 2) reliance on self-report data, and 3) operationalizing intimacy as self-disclosure. This section presents each of these issues separately and outlines the method whereby the present study addresses them.

1.6.1. Definition of Close Friendship

As stated previously, a variety of definitions of friendship and intimacy have been proposed. It was emphasized that careful definition of a close or intimate friend is essential. Although numerous terms have been

used, most descriptions of intimacy and friendship appear to incorporate emotional support, caring, trust, and sharing that which is inmost. Accordingly, the definition of an intimate or close friend adopted herein is "a person in whom you can confide personal feelings and problems. You value this friendship because of the trust, warmth, caring and emotional support it provides". A review of the literature indicates that this definition applies equally to what women and men consider to be an intimate friend.

1.6.2. Self-report

The two salient issues with regard to self-report data are 1) the reliability and validity of the measurements used, and 2) the nature of the information gathered, that is, self-report data are comprised of how people think, feel, and perceive their own, and others' behaviour; they do not describe actual behaviour. The following is a discussion of these two issues.

The majority of researchers have employed self-report measures for data collection and it appears that minimal attention has been given to the psychometric properties of the measures. Numerous questionnaires assessing the depth and breadth of disclosure have been devised by individual researchers to facilitate the exploration of self-disclosure

in friendship. For example, Aries and Johnson (Johnson and Aries, 1983; Aries and Johnson, 1983) devised a questionnaire to assess intimacy through self-report of conversational content (the Close Friendship Questionnaire). Sharabany developed the Sharabany Intimacy Scale which was used to measure age and sex differences in intimate friendship in Israel (Sharabany, Gershoni and Hofman, 1981). Caldwell and Peplau (1982) and Williams (1985) developed questionnaires to assess emotional intimacy in friendship based on the important dimensions of intimacy articulated in the literature.

In addition, many researchers have assessed intimacy in friendship through the use of self-report data collected in structured interviews (e.g., Booth, 1972; Weiss and Lowenthal, 1977; Tesch and Martin, 1983; Powers and Bultena, 1976; Bell, 1981a and 1981b). Information gained from respondents during the interview process has been coded for intimacy in a variety of ways by different researchers. Another method used to assess intimacy has been the coding of self-descriptions wherein a respondent describes the extent to which she or he is willing to disclose to another (Winstead, Derlega and Wong, 1984).

As can be seen there are various methods employed in the measurement of intimacy but psychometric data for

reliability and validity are not consistently provided (e.g., Johnson and Aries, 1983a; Aries and Johnson, 1983; Caldwell and Peplau, 1982). In addition, there is the potential of a cultural confound (e.g., Sharabany Intimacy Scale). Although self-report data can yield valuable information, the value is contingent on the validity and reliability of the measures. It is clear that researchers must exercise caution in selection of a measurement scale.

In response to the call for development of a reliable and valid measure of intimacy, Miller and Lefcourt (1982) introduced the Miller Social Intimacy Scale (MSIS). The MSIS consists of 17 items, 6 requiring frequency and 10 requiring intensity ratings on 10-point scales. The development sample ($N = 252$) consisted of 188 undergraduate students, 17 married couples, and 15 couples seeking marital therapy. An initial item pool of 30 items was generated through interviews with 50 undergraduate students. The interview explored the nature and function of their relationships. From this item pool, 17 items were selected if inter-item and item-total correlations were greater than .50. Internal consistency, assessed by calculating the Cronbach alpha coefficient for two groups of subjects revealed that the seventeen items were consistent or reliable ($\alpha = .91$ and $.86$). Test-retest reliability was high: $r = .96$ over a 2-month interval, $r = .84$ over a 1-

month interval.

Evidence for the validity of the MSIS included the finding that students who scored high on a measure of trust and intimacy also scored high on the MSIS, while students who described themselves as lonely (UCLA Loneliness Scale) also scored low on the MSIS. Further evidence for the validity of the scale was supported by a positive correlation between the MSIS and the Tennessee Self-Concept Scale ($r = .48, p < 0.002$). In addition, comparison of the MSIS and Jackson's Personality Research Form indicated that males who scored high on the MSIS were characterized by high needs for affiliation, dominance, and exhibition, and low need for aggression. Females with high intimacy scores also scored high on the need for nurturance subscale. The validity of the measure was supported further by the finding that mean MSIS scores were significantly higher for descriptions of close friends as compared to descriptions of casual friends ($t(49) = 9.18, p < 0.001$).

Miller and Lefcourt (1982) assumed a unidimensional structure of the scale and Sabatelli (1988) indicated that a major weakness of the scale was that it appeared to equate intimacy and self-disclosure. As stated previously, this is an oversimplification of the meaning of intimacy. Perusal of the scale, however, leads to the conclusion that it

assesses related descriptions of intimacy including spending time together, showing affection, valuing the friendship, and supporting each other. That is, intuitively, the scale assesses more than self-disclosure.

Recently, this intuitive supposition was supported. Downs and Hillje (1991) tested the dimensionality of the MSIS with factor analysis of the individual item responses of male and female university students. All subjects assessed the current level of intimacy in both a same- and cross-gender nonspousal relationship. They found a minimum of three factors for each of the four types of relationships (i.e., male rating male intimate, male rating female intimate, female rating female intimate, female rating male intimate). For male/male relationships the factors were 1) other-directed support, 2) affective support (mutual affection), 3) self-disclosures. Male/female relationship factors were 1) mutual affection, 2) unidirectional disclosure, 3) mutual disclosure and, 4) resilience against disagreement. Female/female factors were, 1) mutual affection, 2) mutual disclosure, 3) self-directed support, 4) other-directed disclosure. Female/male factors were 1) mutual affection, 2) other-directed support, 3) mutual communication and support.

These factors appear to indicate more similarities than

differences between male and female responses. The most salient differences concern the ordering of the factors (e.g., mutual affection is the first factor in three groups, and second only in the male/male group), and direction of response (e.g., unidirectional versus mutual disclosure and other- and self-directed support). Of primary interest for this review is that the factors correspond with the multiple meanings of intimacy described in other research (e.g., Monsour, 1992; Helgeson et al., 1987), thus providing further evidence of the appropriateness of the measure.

The second issue regarding self-report data is the nature of the information collected. It has been argued that self-report does not predict behaviour. McCarthy clearly (1981) made this point in his statement that self-disclosure data based on self-report tell us more about what the respondent thinks s/he discloses or thinks s/he should disclose than about actual disclosure behaviour. Winstead et al. (1984) also observed that self-report data "may lead to contradictory and inconclusive results if they are the only source of information about a subject's actual behaviour" (p.551). This line of argument may lead to questioning the validity of self-report and that is not the intent of this study. Both self-report and observation of behaviour are thought to yield important information and an important next step is the investigation of what people do

in a close relationship. Duck (1990) suggested that everyday talk can serve the function of promoting and showing intimacy and is an ideal medium of study.

In the present study, self-report and behaviour were assessed. The MSIS, a reliable and valid measure of social intimacy, was used for subjects' assessment of the current level of intimacy in their same-gender closest friendship. A select group of friendship pairs then participated in two unstructured laboratory conversations (personal and casual) which were audio recorded.

Whose report or assessment of intimacy is an additional issue. The term 'relationship' implies two people and it may be that each person experiences the relationship differently. Duck (1990) and Waring (1985) have called for data collection from both partners in a pair. In this study, assessment of the degree of intimacy in the friendship by both friends was investigated.

1.6.3. Self-disclosure

In research on intimacy, a recurrent issue is the operationalization of intimacy as a unitary dimension consisting of self-disclosure. Although self-disclosure is a prominent factor of intimacy, the two are not synonymous

and it has been shown that additional factors are relevant (Helgeson et al., 1987; Monsour, 1992). In the present study, the questionnaire used has been shown to assess several factors including disclosure, support, and affection. In addition, the conversations were coded with a coding system that assesses a variety of social processes, not only self-disclosure. The coding system was developed by Ginsberg and Gottman (1986) and it is explained in a subsequent section.

1.7. SUMMARY AND PURPOSE OF INVESTIGATION

1.7.1. Summary and Directions for the Study

It has been shown that friendship serves valuable functions throughout the life span and that these functions may change with developmental stages. Gender differences in intimacy have been demonstrated but it has been suggested that these differences may be a function of the method and measures used and of over-interpretation of the data. One needs to attend carefully to definition of terms and reliability and validity of the measures used as well as greater focus on the process of relationships. It has also been suggested that age may be a significant variable in the expression of intimacy and this has been largely unexplored. Gossip is another social process that has not been investigated in relation to intimacy and it would be interesting to speculate about the role of gossip in intimate friendships.

This dissertation is an attempt to address these issues. Two studies were done. In the self-report study, subjects assessed the current level of intimacy experienced in their closest same-gender friendship. For the conversation study, subjects were selected according to their scores on the self-report questionnaire and pairs of

friends participated in two unstructured laboratory conversations (personal and casual). Three age groups of friends were studied. There is no theoretical basis for imposition of age groups but Tesch and Martin (1983) showed that an age difference between groups of five years was adequate. The arbitrary age groups used in the present study were 18-21 (young), 26-36 (middle) and, 40-50 (older). Subjects for the first group (18-21) were university students who had participated in previous research (Krahn, 1986), subjects for the second two groups (26-36 and 40-50) were teachers in Saskatoon.

1.7.2. Purpose of Investigation

The intent of the present investigation was to assess self-reported level of intimacy in a current close friendship and to describe how male and female same-gender friends of different ages talk intimately. It has been shown that, in conversations with intimate same-gender friends, females disclose more than males. However, we are relatively uninformed about other processes in everyday speech that may index intimacy.

A review of the literature led to the formulation of several expectations for the current study. These were:

1. It was expected that female same-gender friends would report higher levels of intimacy in their friendships than male same-gender friends.

2. It was expected that in conversation females would self-disclose more than males. Support for this gender difference has been demonstrated by Morton (1978), Ginsberg and Gottman (1986), and Krahn (1986).

3. A consistent finding in the literature is that women's friendships are affectively richer than men's friendships. It was therefore expected that females would demonstrate greater use of affect in their speech.

4. Ginsberg and Gottman (1986) proposed that men more than women tend to withdraw from conflict in relationships and therefore focus on information transfer rather than the more affective aspects of conversation. It was expected that males would demonstrate greater use of information transfer than females.

In addition to the preceding expectations, age and gossip were explored. As stated, age may affect the way people think about friendship. If so, some differences may occur in the level of intimacy that people report about their friendships and in how they talk to their close

friends. In addition, the role of gossip is not known, and although it is traditionally thought of as something women do when they get together, it may be that talking about others facilitates intimate connection between friends. If this is the case, then men may talk about others (gossip) as much as women do and people may talk about others more in intimate than in non-intimate conversations.

2. SELF-REPORT STUDY

2.1. METHOD

2.1.1. Subjects

Subjects for the young adult group (18-21) were students who participated in previous research (Krahn, 1986). Seven hundred and fifty-three undergraduate students from the University of Saskatchewan who were enrolled in first- and second-year courses volunteered to complete a questionnaire in an in-class screening procedure.

Subjects for the middle and older adult groups were teachers in Saskatoon. The Saskatoon Public and Catholic School Boards granted consent to present the questionnaire to teachers at staff meetings in 13 schools. One hundred and ninety teachers volunteered to participate. Nineteen of the questionnaires were incomplete and were not used, leaving 181 completed questionnaires.

2.1.2. Measures

The Miller Social Intimacy Scale (MSIS) was selected to assess current level of intimacy in the friendship. It is a

17 item questionnaire that appears to assess the behavioural expression of intimacy through self-report. The psychometric properties cited previously support the reliability and validity of the measure. This measure does not focus only on self-disclosure; it is also comprised of factors such as support and affection. It is short, easily scored and appropriate for screening individuals regarding their assessment of the current level of intimacy in a same-gender friendship. The combination of these properties of the MSIS led to the selection of this instrument for the assessment of reported level of intimacy in friendships studied herein.

For this research, the use of "him/her" was changed to "your friend". For example, the item " How often do you feel close to him/her?" was changed to "How often do you feel close to your friend?". This change was made to increase the salience of a same-gender friend as opposed to a romantic partner. The MSIS is presented in Appendix A as the main body of the friendship questionnaire. A paragraph containing instructions and definition of friend has been added. Data regarding name, telephone number, age, gender, and name of friend were collected to facilitate subject selection for the Conversation study.

2.2. RESULTS

The method of data collection resulted in two data samples herein described as 1986 (university students, Krahn, 1986) and 1993 (teachers). These two data samples were combined to test the first expectation of gender differences in self-reported level of intimacy in the friendship. Therefore, they were assessed for equivalence. Table 1 shows the comparison of the 1986 and 1993 data. As expected, they were equivalent in all relevant aspects except age as indicated by a t-test for independent means, $t(921) = -31.62, p < 0.0001$.

TABLE 1
COMPARISON OF TWO DATA SAMPLES

	1986	1993
Number of Subjects	753	181
Percentage Male	38.6	40.3
Percentage Female	61.4	59.7
Mean Age	22	38 *
Standard Deviation for Age	5.71	7.98
Range for Age	17-55	21-60
Mean MSIS Score	122.5	121.4
Standard Deviation for MSIS	20.13	19.72
Range for MSIS	40-167	69-166

* $p < .0001$

2.2.1. Assessment of Gender Differences

To test the first expectation that females would report higher intimacy than males in their same-gender friendship the scores on the MSIS were compared. The 1986 and 1993 data samples were combined and the effects of gender and age were analyzed using a 2 x 3 analysis of variance (ANOVA). To assess age, the proposed age groups (18-21, 26-36, and 40-50) were imposed on the combined data.

The ANOVA resulted in a significant main effect for gender, $F(1,915) = 91.37, p < 0.0001$; no effect for age, $F(2,915) = 0.364, p < 0.7$; and no interaction, $F(2,915) = 1.23, p < 0.3$. The ANOVA summary table for the MSIS score by age and gender is presented in Table 2.

The means and standard deviations for age and gender are presented in Table 3. As expected, females' scores on the MSIS were higher than those of males. The expectation regarding gender differences was supported; women reported a higher level of intimacy in their same-gender friendships than men.

TABLE 2
ANOVA SUMMARY TABLE FOR MSIS SCORE BY AGE AND GENDER

SOURCE	d.f.	SS	MS	F	p
Gender	1	30766.45	30766.45	32.43	0.0001
Age	2	244.95	122.48	0.36	0.695
Age x Gender	2	824.78	412.38	1.23	0.294
Error	915	308094.86	336.72		
Total	920	366954.81	398.86		

TABLE 3
 MEANS AND STANDARD DEVIATIONS OF MSIS SCORES

	MEAN	STANDARD DEVIATION	NUMBER OF SUBJECTS
AGE GROUP 18-21	122.13	20.92	543
MALE	111.39	21.12	211
FEMALE	128.91	17.75	332
AGE GROUP 26-36	122.50	18.63	271
MALE	113.46	19.12	114
FEMALE	129.07	15.26	157
AGE GROUP 40-50	122.89	18.31	107
MALE	115.49	17.23	37
FEMALE	127.77	17.75	70
OVERALL	122.31	19.97	921
MALE	112.41*	20.13	362
FEMALE	128.56*	17.31	559

p < 0.0001

3. CONVERSATION STUDY

3.1. METHOD

3.1.1. Subjects

For the age group 18-21, conversational data from four female and four male same-gender friendship pairs (university students) were randomly selected from subjects who were above the mean for gender on the MSIS in the data base of previous research (Krahn, 1986).

For the 26-36 and 40-50 age groups, teachers were selected from the self-report study according to the following criteria: 1) score on the MSIS above the mean for gender of the sample (mean for females was 128.56; mean for males was 112.41), 2) the closest friend lived in Saskatoon, and 3) age ranges were 26-36 or 40-50. From the sample of 181 completed questionnaires in the self-report study, conversation data were collected for four female and four male same-gender friendship pairs in each of the two age groups.

The method of subject selection resulted in 24 same-gender friendship pairs. Means for the twelve female and

twelve male friendship pairs were subjected to a t-test for independent means, $t(22) = -1.22$, $p < 0.24$. This test indicated that self-reported level of intimacy in the friendship was equivalent for males and females in this sample (males = 134.33, females = 138.92).

3.1.2. Procedure

Subjects selected according to the prescribed criteria were contacted by telephone and invited to participate in the conversation study together with their closest same-gender friend referred to in the questionnaire. The experimental task was explained and they were told that participants in the conversation study would receive a 20 dollar gift certificate for Lakeshore Garden Centre. Since participation was contingent on the friendship pair, subjects who agreed to participate were asked to contact the friend whose name was written on the questionnaire, and request his/her participation. Following receipt of consent of both parties, scheduling was arranged. A total of 62 subjects were contacted by telephone. Of these subjects, 19.5% of the male pairs and 38.1% of the female pairs agreed to participate. The time span between the self-report study and the conversation study for most subjects ranged from three to twelve months. Details of the telephone script are presented in Appendix B.

When subjects arrived at the testing room, they were invited to make themselves comfortable. The room in which the conversations took place was small and quiet and was furnished with two comfortable chairs for the subjects and a table for the audio equipment. A dimmer switch on the lights helped facilitate a more comfortable setting. Subjects were told that the session would be audio recorded, that all information collected was confidential and anonymous, that their participation was voluntary and they could choose to leave at any time, if desired. The task was explained. They would have a short practice conversation with the experimenter present, then two 15-minute conversations with the experimenter absent. Following these conversations they would independently complete a short questionnaire. Questions for clarification were invited and they were then given a consent form to sign. The consent form is presented in Appendix C.

The session was conducted in accordance with a procedure prepared and pilot tested with four same-gender friendship pairs of graduate students. This same procedure was used in previous research (Krahn, 1986). The procedure script is presented in Appendix D. The friends selected any topic they had previously discussed for the practice conversation. This practice was included to give the friends time to accommodate to the setting and the

microphones, to affirm that they understood the nature of the task, and to give the experimenter opportunity to adjust recording levels.

Following the practice conversation, the friends were instructed to engage in either a personal or casual conversation. All friends participated in both the casual and personal conversations and these two conditions were counterbalanced across subjects. The personal topic was described as a personal conversation in which private facts and feelings or emotions were disclosed. The casual topic was described as a casual conversation of general interest in which there was little disclosure of private facts and feeling or emotion. The friends were advised to choose topics that were typical of their conversations.

When the friends had selected the first topic, the experimenter left the room so the friends could converse in private. When the 15-minute time period had elapsed, the experimenter knocked on the door to signal the end of the conversation. They were then given thirty seconds to wind down the conversation so the experimenter would not interrupt any private disclosures. The experimenter then entered the room and the friends selected the topic for their second conversation with the experimenter present, and the same procedure was followed. Upon completion of the

conversations, both friends independently completed a short questionnaire. This post-experimental questionnaire consisted of each person's assessment of how typical his or her conversations had been, a rating of the friendship, as well as the MSIS. The questionnaire is presented in Appendix E.

After the friends had completed the questionnaire, they were asked two questions: 1) What did you think the study was about? and 2) Did you change your typical style of interacting to correspond with what you thought? The friends were then debriefed and given opportunity to discuss any comments or concerns they had. They were informed that a summary of the results would be mailed to them if they were interested.

3.1.3. Measures

The Extended MICRO coding system was selected for descriptive coding of the conversation data. It was developed by Gottman for the analysis of children's conversations, and was extended for analysis of adult conversations (Ginsberg and Mauger, 1980). The variables included in the system are "index variables". They do not define or equal social process, rather they are indices of the process. The Extended MICRO coding system consists of

five double codes and 33 content codes. Double codes are codes that can be used in combination with any content code or another double code. The code names, abbreviations, definitions, and examples of codes from adult speech are listed in Table 4.

TABLE 4
EXTENDED MICRO CODING SYSTEM

Code	Definition	Examples
<u>Double Codes</u>		
F/: Fantasy	Pretending to be someone else or speaking within a framework of fantasy.	"You don't grasp these concepts." (speaker imitating his instructor) "I'm flying."
Q/: Question	Asking a question.	"Did she get a job?"
J/: Joke	Any utterance accompanied by laughter, silliness, or joking. This includes humour, good-natured teasing, laughter, and exuberance.	"Oh poop!" (said mischievously) "Whee! Whee! Whee!"
G/: Gossip	References to third persons.	"Mary is in my class."
S/: Squabble	Angry, annoyed, disgusted or aggressive behaviour. This includes insults, yelling, whining, sarcasm, verbal or physical threats, retaliation, and tattling.	"Cut it out!" "Fight, fight, that's all you ever do."
<u>Content Codes</u>		
COM: Command	Direct imperatives	"Give me that." "Water the plants."
ATT: Attention getters	An utterance used to get the others attention. This includes greetings and salutations.	"You know what?" "See."
Q/PRE: Polite Requests	Polite requests for a response of something from the other.	"Would you gimme that?"
SUG: Suggestions	Advice or a suggestion to do something.	"You could put it under the bed."
Q/SUG: Question Suggestions	Suggestions in question form.	"Why don't you invite Jane?"
Q/ASK: Asking Permission	Attempts to obtain something from the other by using a question for information.	"Can I look when you're done?" "Will you let me wear your scarf?"
Q/IND: Demands as Questions for Information	Attempts to obtain something from the other by using a question for information.	"Do you have a pencil?" "Have you got any sugar?"

TABLE 4
EXTENDED MICRO CODING SYSTEM

Code	Definition	Examples
WA: Wanna	Statements of feelings or needs that are actually demands.	"I need more mustard." "I wanna play play bridge."
Q/WA: Question	Questions about feelings that are actually polite forms of demand or suggestion.	"Do you wanna play tennis?"
HWA: We'll have to	"We" statements of feeling that are actually demands.	"We'll have to leave soon." "We have to buy more coffee."
LTS: Lets	"Lets" statements that are actually demands.	"Let's see it."
Q/LTS: Question Lets	"We" questions that are actually polite forms of demand or suggestion.	"Shall we go for coffee?"
ME: Me	Statements about oneself. This includes plans, accomplishments, activities, attributes, personal possessions. It also includes exclamations and made-up words.	"I'll phone the the middle of June." "Oh God!"
FE: Feelings	Statements about the speaker's feelings, wants, likes, dislikes, opinions, and needs. This includes feelings and opinions about other people.	"I feel so good about it." "We're very jealous of that night." (speaker referring to family night)
MR: Mind-reading	The attribution of feeling, motive, personality trait, experience, behaviour or opinion to the other person.	"You don't like him." "You can't take a a compliment."
ROL: Roles to Both	Statements that unite the speaker with the other person to work for a common goal by assigning roles or tasks to each of them.	"You make the hotdogs I'll toast the buns."
WE: We're both	"We" statements that show solidarity.	"We're friends." "We're so classy."

TABLE 4
EXTENDED MICRO CODING SYSTEM

Code	Definition	Examples
TOO: Me Too	Statements that directly express similarity with some aspect of the other person.	"Same here." "I have one like that too."
WEG: We against Others	"We statements that show solidarity by aligning with the other against a common enemy.	"We're much better that she is." "We hate her."
REP: Repetitions	Statements or portions of statements repeated by the other.	"I'm going to get up." and the other person says "I'm going to get up."
JOI: Joining In	Joining in which usually occurs in songs where one starts singing and the other joins in. This could also occur in wit.	"Oh my heart!" and the other joins in with "Oh my heart my hero"
IN: Information	Factual information that is asked for or given.	"Convocation is Thursday and then these interviews." "What do you mean?"
CM: Clarifies Message	Clarification that is asked for or given in order to avoid or eliminate confusion. This includes giving instructions clearly.	"The one up <u>there.</u> <u>The one with the red on it.</u> " (The underlined portion clarifies "there")
AG: Agreement	Agreement, approval, or a positive attitude in regards to the other. This includes acknowledging a statement of the other, praise, compliments, and politeness.	"You're the smartest person in the class." "Yeah."
OP: Opinion	Opinions or generalizations about the state of the world. Note that this is a less personal opinion than those included in the Feeling code.	"It's still a man's world." "You can't over-study."

TABLE 4
EXTENDED MICRO CODING SYSTEM

Code	Definition	Examples
DG: Disagreement	Negativity, noncompliance, or disapproval towards the other. This includes disagreements, criticism, insults, sarcastic teasing, and refusal to share.	"Don't get so upset!" "No, I don't agree."
SY: Sympathy	Attempts to console, protect defend, or ease the distress of someone who is unhappy.	"Don't worry, he'll probably call again." "It's OK, it'll work out."
OF: Offers	Helpfulness, thoughtfulness, or generosity.	"I'll clean it for you." "You can use mine if you want to."
AH: Asks Help	Requests for help or assistance.	"Can you show me what to do?"
RU: Rule	Rules or principles for behaving or proceeding that are either implied, invoked, or created.	"We're not supposed to play the stereo after midnight."
NCM: Failure to Clarify	Inadequate or illogical responses to a question or the failure to clarify a message in response to the other's confusion.	"Which one?" <u>"You know."</u> (The underlined sentence would be coded (NCM).
REAC: Reactive	References to the tape recorder, experimenter, or the experimental procedure.	"Is the tape recorder on?" "I wonder if we should be talking about this now?"
DG/CM: Disagreement with clarification	Disagreement in which an explanation is implied.	"Let's use this." <u>"I'm using it."</u> (The last sentence would be coded DG/CM because it shows noncompliance with a reason being implied.

Note: Adapted from D. Ginsberg (1980 pp. 41-44)

The selection of a coding system for analysis of speech involves consideration of a variety of factors. First, it is important to choose a system that directly addresses the research question. In this study, the question is 'how do people speak intimately?' and it involves investigating the conversation process between intimate friends. Because the Extended MICRO coding system includes codes that are thought of as "index variables", the system is ideal for description of social process in verbal interaction. For example, the double code gossip (G) indicates that at certain times in conversation, friends were involving third persons in their talk. Therefore, the code gossip is an "index" of the occurrence of the social process of gossip. Moreover, the Extended MICRO coding system was chosen because it has the capacity to assess multiple social processes (e.g., humour, asking questions, conveying information, self-disclosure, gossip). As noted, intimacy has been operationalized primarily as self-disclosure and, with this system, other social processes that may be relevant to intimacy can be explored.

A second consideration in the selection of a coding system is the unit of analysis. Several different types of units have been used in previous research. The most frequently used include the utterance, the phrase, the sentence, and the time interval. Each type of coding unit

has its disadvantages. The utterance, a unit of speech separated by pauses, may create meaningless divisions because people sometimes pause in conversation while expressing an idea. The phrase, a unit separated by punctuation, may not capture a complete thought because people may require several phrases to express an idea. Using a sentence is problematic because people do not always speak in complete sentences. A time interval can be difficult to code reliably because several code categories may be used in one interval and both speakers may be talking. The subjective judgment of the rater is required to determine which code category takes priority.

In the Extended MICRO coding system, the coding unit is the "thought unit". Speech is separated into units on the basis of the meaning of a set of utterances defined by the coding system itself. Thus, the categories in the coding system determine how the behaviour will be segmented. Consider, for example, this segment of speech from the transcript in Appendix F. "I was coming down the street/ and she was already there waiting/ and she came down the driveway and started coming down the sidewalk/ and I looked at her/ and I said you've got a job (both laughing)/ she said 'Who told you'/ I said 'nobody'/" . In this example, each thought unit is marked by "/" . It is apparent that there were pauses in this story that could have created many

more units of speech which may have been meaningless. It is also difficult to assess where a sentence begins or ends. The "thought unit" is advantageous because it provides a meaningful method of data reduction. More than one utterance, phrase, or sentence can be considered as one code if, in combination, they express a single idea. In addition, the thought unit is sensitive to context. Context is important because in the description of social relationships the meaning of thought units must be considered in relation to the conversation as a whole.

In the example of the previous speech segment, the coding system (Table 4) would be used in the following way: "I was coming down the street" - ME (the speaker is making a statement about self), "and she was already there waiting" - G/IN (information about a third person), "and she came down the driveway and started coming down the sidewalk" - G/IN (information about a third person); "and I looked at her" - J/G/IN (past activity with a third person and speaker is laughing); "and I said you got a job" - J/ME (statement about self while laughing); "she said 'Who told you'" - J/G/IN (information about third person while laughing); "I said 'nobody'" - ME (statement about self).

In the Ginsberg and Gottman study (1986), data reduction was necessary to simplify analysis. This

reduction was accomplished by "lumping and splitting" codes and resulted in 19 mutually exclusive and exhaustive summary codes. Modification of the feeling (FE) code and the me (ME) code was necessary in order to facilitate exploration of different levels of intimacy. The feeling (FE) code was split between superficial feelings (FE1) and intimate feelings (FE2). The me (ME) code was split to distinguish simple exclamations (ME1), simple self-statements (ME2), and personally-revealing self-statements (ME3). These codes were then "lumped" to form two summary codes representing two different levels of intimacy. High-intimacy self-disclosure (HSD) was composed of FE2 and ME3 sub codes, low-intimacy self-disclosure (LSD) was composed of FE1, ME2, and the opinion (OP) sub codes. Exclamations (ME1) remained a separate coding category. In addition, the agreement code (AG) was split to distinguish between acknowledgment (AG1) and praise (AG2). A summary code, acknowledgment (ACK) was created by amalgamating acknowledgment (AG1), repetition (REP), and joining in (JOI). The summary code praise (PRA) consisted of the sub code praise (AG2).

The types of demands including command (COM), attention getters (ATT), polite requests (Q/PRE), suggestions (SUG), question suggestions (Q/SUG), asking permission (Q/ASK), demands as question for information (Q/IND), wanna (WA), question wanna (Q/WA), we'll have to (HWA), let's (LTS),

question let's (Q/LTS), roles to both (ROL), asks help (AH), and rule (RU) were lumped into a summary code labelled controlling statements (CONT).

Squabble (S) was lumped with the content codes disagreement (DG), and disagreement with clarification (DG/CM), to form the summary code negativity (NEG).

The summary code you and me (YM) was composed of the sub codes we both (WE), me too (TOO), and we against others (WEG). Clarifies message (CM) was lumped with the information code (IN), creating the summary code labelled Information (IN). Sympathy (SY) and offers (OF) were combined in a summary code labelled Support (SUP). The codes 'tape off' (OFF) and 'inaudible' (INAU) are self explanatory. The 19 summary codes are presented in Table 5.

TABLE 5
19 SUMMARY CODES

Summary Code	Subcodes
Fantasy (F)	Fantasy (F/) double code in combination with any content code, including content codes in which (F/) co-occurs with the double codes joke (J/), question (Q/), squabble (S/), and gossip (G/)
Joke (J)	Joke (J/) double code in combination with any content code, including content codes in which (J/) co-occurs with the double code (G/).
Questions (Q)	Question (Q/) double code in combination with any content code, including content codes in which (Q/) co-occurs with the double code (G/)
Gossip (G)	Gossip (G/) double code in combination with any content code
Negativity (NEG)	Squabble (S/) double code in combination with any content code; content codes with double codes: disagreement (DG), disagreement with clarification (DG/CM)
Controlling Statements (CONT)	Command (COM), attention getters (ATT), polite requests (Q/PRE), suggestions (SUG), question suggestions (Q/SUG), asking permission (Q/ASK), demands as questions for information (Q/IND), wanna (WA), question wanna (Q/WA), we'll have to (HWA), let's (LTS), question let's (Q/LTS), roles to both (ROL), asks help (AH), rule (RU)
You and Me (YM)	We're both (WE), me too (TOO), we against others (WEG)
Exclamations (EXCL)	Exclamations (ME1)
Acknowledgement (ACK)	Acknowledgement (AG1), repetition (REP), joining in (JOI)
Information (IN)	Information (IN), clarifies message (CM)

TABLE 5
19 SUMMARY CODES

Summary Code	Subcode
Support (SUP)	Sympathy (SY), offers help (OF)
Praise (PRA)	Praise (AG2)
Other-directed statements (YOU)	Mindreading (MR)
Low self-disclosure (LSD)	Simple self-statements (ME2), superficial feelings (FE1), opinions (OP)
High self-disclosure (HSD)	Personally revealing self-statements (ME3), intimate feelings (FE2)
Failure to clarify message (NCM)	Failure to clarify message (NCM)
Reactive (REAC)	Reactive (REAC)
Tape off (OFF)	Tape off (OFF)
Inaudible (INAU)	Inaudible (INAU)

In this study, several revisions were made to the coding system to facilitate the coding process. To differentiate between the use of the coding system in this study and the use in the study by Ginsberg and Gottman (1986), the codes formed in the lumping and splitting process in the present study were labelled 'aggregate codes' rather than 'summary codes'. The opinion code (OP) was deleted because it was thought to be a replication of the feeling code (FE). All opinion codes (OP) were coded as feeling codes (FE). In the lumping and splitting process, the splitting of the agreement code (AG) into acknowledgment and praise did not fit this data set because praise statements did not occur. Therefore, the aggregate code 'acknowledgment' (ACK) remained the same but the aggregate code 'praise' (PRA) was not formed. In addition, the aggregate code 'information' (IN) was expanded to include 'failure to clarify' (NCM) because this code is comprised of information. The summary codes 'joke' (J) and 'negativity' (NEG) were combined into an aggregate code and labelled affect (AFF). The summary codes 'tape off' (OFF) and 'inaudible' (INAU) did not apply to these data. This aggregation resulted in 14 aggregate codes. These are listed in Table 6.

TABLE 6
14 AGGREGATE CODES

Aggregate Code	Subcodes
Fantasy (F)	Fantasy (F/) double code in combination with any content code, including content codes in which (F/) co-occurs with the double codes joke (J/), question (Q/), squabble (S/), and gossip (G/)
Questions (Q)	Question (Q/) double code in combination with any content code, including content codes in which (Q/) co-occurs with the double code (G/)
Gossip (G)	Gossip (G/) double code in combination with any content code
Controlling Statements (CONT)	Command (COM), attention getters (ATT), polite requests (Q/PRE), suggestions (SUG), question suggestions (Q/SUG), asking permission (Q/ASK), demands as questions for information (Q/IND), wanna (WA), question wanna (Q/WA), we'll have to (HWA), let's (LTS), question let's (Q/LTS), roles to both (ROL), asks help (AH), rule (RU)
You and Me (YM)	We're both (WE), me too (TOO), we against others (WEG)
Exclamations (EXCL)	Exclamations (ME1)
Acknowledgement (ACK)	Agreement (AG), repetition (REP), joining in (JOI)
Information (IN)	Information (IN), clarifies message (CM), failure to clarify message (NCM)
Support (SUP)	Sympathy (SY), offers help (OF)
Other-directed statements (YOU)	Mindreading (MR)
Low self-disclosure (LSD)	Simple self-statements (ME2), superficial feelings (FE1),
High self-disclosure (HSD)	Personally revealing self-statements (ME3), intimate feelings (FE2)
Affect (AFF)	Negativity (NEG) summary code in combination with joke (J)
Reactive (REAC)	Reactive (REAC)

3.1.4. Coding of Audiotapes and Interrater Reliability

The two 15-minute conversations from each friendship pair were extracted from the audiotape of the entire experimental session. These conversation audiotapes were assigned a code number, transcribed verbatim, checked for accuracy, and divided into thought units by the experimenter.

One female and one male undergraduate student who were blind to the experimental procedure and expectations independently coded all transcripts of conversations while listening to the audiotape. They received more than 50 hours of training, practice, and feedback with the use of the manual and audiotapes and transcripts of conversation data similar to that collected for this study. They reached an acceptable level of initial reliability of 92% agreement. To prevent criterion drift, the raters and experimenter continued to meet for feedback about and reliability assessment of each transcript throughout the duration of the project.

To prevent loss of data, when the two raters disagreed on code assignment for a specific unit, the raters and the experimenter reached consensus about the appropriate code. Of course, these "consensus codes" were not included in the

reliability assessment.

Cohen's Kappa (1960) and percent agreement were both used to assess interrater reliability. Bartko and Carpenter (1976) recommended the kappa statistic for use with polychotomous data that are coded by two raters. The kappa coefficient is calculated from a contingency table and represents the proportion of agreement after chance has been removed. It is therefore a more conservative method of assessing reliability. The formula for the derivation of Kappa is presented in Appendix G. The formula used for the calculation of percent agreement was the number of agreements divided by the total number of codes. It was thought that agreement due to chance was minimal in these data because of the number of codes and therefore kappa and percent agreement may be similar. This assumption was correct. Overall Kappa was .915 and overall percent agreement was 92.9%. Agreement per transcript ranged from 87.3% to 97.7%.

It is important to note that in the Extended MICRO coding system each thought unit can be assigned a number of codes, depending on the content and the context of the unit. Agreement was assessed for each code rather than for the unit. For example, the thought unit "they just phoned him and said 'Be here Tuesday night; breakfast is at six

Wednesday morning and you start work'" was assigned two codes, 'gossip' (G) and 'information' (IN). Agreement was assessed on each individual code (G and IN).

The experimenter and a male rater reached consensus about the splitting of the ME and FE codes into ME1 (simple exclamations), ME2 (simple self-statements), ME3 (personally revealing self-statements), FE1 (superficial feelings) and, FE2 (intimate feelings). Some examples from the data are: ME1 - "Oh God"; ME2 - "I always bugged you and I said you wear your heart on your sleeve"; ME3 - "I remember I was real scared to go to the funeral"; FE1 - "I think that's something that I admire"; FE2 - "I really needed somebody who was ready to deal with my emotions, and the grief". Overall, reaching consensus between superficial and intimate feelings and simple self-statements and personally revealing self-statements was uncomplicated. The only complication was statements about money or personal finances. It was thought that some people are very sensitive about their bank accounts and the decision was made that all FE and ME statements that had money in the content of the statement would be coded intimate or personally revealing self-statements.

A reliability assessment for the 14 aggregate codes showed that an acceptable level of agreement was maintained

for all the codes used for analysis. Percent agreement ranged from 98.1% to 50.0%. The 50% agreement was for the Support code which occurred infrequently (12 times out of 24,698 codes). Given infrequent occurrence and poor reliability, the decision was made to exclude this code from data analysis. The mean frequency of occurrence and percent agreement for the 14 aggregate codes are shown in Table 7.

TABLE 7
 MEAN FREQUENCY, PERCENT OF TOTAL AND PERCENT AGREEMENT
 OF 14 AGGREGATE CODES

	MEAN	PERCENT OF TOTAL	PERCENT AGREEMENT
Low Self-disclosure (LSD)	246.83	24.2%	91.1%
Information (IN)	197.13	18.9%	81.0%
Gossip (G)	195.21	18.5%	98.1%
Acknowledgment (ACK)	182.75	17.7%	96.6%
High Self-disclosure (HSD)	57.63	6.0%	95.7%
Question (Q)	57.50	5.7%	95.1%
Affect (AFF)	37.12	3.5%	86.0%
Reactivity (REAC)	12.96	1.4%	97.1%
Exclamation (EXCL)	11.25	1.1%	83.7%
Other-directed Statements (YOU)	10.00	0.9%	82.9%
Fantasy (F)	8.63	0.8%	92.3%
Control Statements (CONT)	7.54	0.7%	80.7%
You and Me (YM)	4.08	0.4%	81.6%
Support (SUP)	.50	0.0%	50.0%

3.2. RESULTS

3.2.1. Validity Check

The questions in the post-experimental questionnaire (Appendix E) were intended as an assessment of the stability of the MSIS over time and as an appraisal of the friends' agreement regarding the definition of the friendship. In addition, friends' were asked to rate the typicality of their conversations as a validity check of the experimental procedure.

To assess the stability of the MSIS over time and the agreement between friends' report, t-tests for correlated means were calculated. Comparison of the MSIS score from the self-report study (for those who participated) and the MSIS score from the post-experimental questionnaire should provide an indication of the stability of the MSIS. The MSIS mean score for those subjects who participated in the self-report study was 136.63 and the MSIS mean score for those same subjects in the post-experimental questionnaire was 136.67, $t(23) = -0.02$, $p < 0.98$. This finding indicated that there were no differences in subjects' appraisal of the level of intimacy in the friendship at time one and time two. Similarly, tests of each friend's independent assessment of intimacy in the relationship indicated that

both members of the friendship pair agreed in their assessment. The mean post-experimental questionnaire MSIS score for the subject that participated in the self-report study was 136.67 and the mean MSIS score for the closest friend was 137.54, $t(23) = -0.31$, $p < 0.76$.

To assess how natural or how much the laboratory conversations simulated everyday talk, the friends were asked to rate how typical the content and the expression of feeling were in both the personal and casual conversation (see Appendix E). Ratings were on a scale of 1-10 with 10 being very typical. Average ratings for all subjects were well above the mid-point on the scale with an average overall rating of 8.56. The means and standard deviations for typicality ratings of content and feeling by gender are presented in Table 8. These results indicated that the experimental procedure solicited the equivalent of everyday talk between friends, although typicality ratings for the personal topic were consistently lower than ratings for the casual topic.

Responses to question three on the post-experimental questionnaire (see Appendix E) indicated that all 48 subjects rated their friend as "someone in whom you can confide personal feelings, someone you trust and care for and enjoy spending time with" (response 1).

TABLE 8
 MEANS AND STANDARD DEVIATIONS FOR TYPICALITY RATINGS

	MALE		FEMALE		OVERALL	
	MEAN	SD	MEAN	SD	MEAN	SD
PERSONAL						
CONTENT	8.15	1.81	9.00	1.84	8.57	1.86
FEELING	7.60	1.64	7.92	1.89	7.76	1.75
CASUAL						
CONTENT	8.90	1.16	9.50	0.59	9.20	0.96
FEELING	8.40	1.51	8.96	1.08	8.68	1.33
OVERALL	8.26	1.60	8.84	1.54	8.55	1.59

Responses to the two questions at the end of the experiment were consistent across subjects. Typical responses to "what did you think the study was about?" were: communication, expressions people use and how they may relate to personality, ease of communication, how friends interact, how male friendships work, assessing levels of emotion and intimacy, and no idea. Responses to the question "did you change your typical style of interacting to correspond with what you thought?" were unanimously "No". Examples from subjects were: "no way", "couldn't think about it, I was too busy talking", "absolutely no influence" and "our talk was exactly the same as usual".

3.2.2. Description of Data

The method of data collection resulted in 48 transcripts of conversations, two for each of the 24 friendship pairs. See Appendix F for an example of a transcribed conversation. Data were recorded as a rating report wherein the names of the codes were transposed to numbers. The rating report included both raters' judgements of each thought unit, as well as the consensus judgement (final rating) in cases of disagreement. In addition, the speaker of the unit was tracked. See Appendix H for the rating report that coincides with the transcript from Appendix F.

Although the 48 conversations were all timed for 15 minutes, there was considerable variability in amount of talk. Number of thought units per conversation ranged from 199 to 572. The total number of thought units in the 48 transcripts was 17,676. As stated, each thought unit can be assigned more than one code and the number of codes assigned per transcript ranged from 269 to 748. Total number of codes assigned on the 48 transcripts was 24,878.

The method of coding described previously resulted in five double codes and 32 content codes for a total of 37 codes. Of these 37 codes, 10 were not evident in these data. These were: question suggestions (Q/SUG), asking permission (Q/ASK), demands as questions for information (Q/IND), question lets (Q/LTS), wanna (WA), asks help (AH), roles to both (ROL), we against others (WEG), joining in (JOI), and rule (RU). Omitting these codes left a total of five double codes and 22 content codes, for a total of 27 codes.

Examination of Table 9 gave an indication of the social processes common to everyday talk. In these data, the most common social processes were: the expression of feelings, wants and opinions (FE), talking about others (G), transfer of information (IN), agreement with other and minimal encouraging responses such as "yeah" and "um hm" (AG),

TABLE 9
FREQUENCY OF 27 CODES

Feeling (FE)	6038
Gossip (G)	4685
Information (IN)	4300
Agreement (AG)	4239
Me (ME)	1539
Question (Q)	1380
Joke (J)	734
Clarifies Message (CM)	317
Reactive (REAC)	311
Mindreading (MR)	240
Fantasy (F)	207
Repetition (REP)	146
Failure to Clarify (NCM)	114
Disagreement (DG)	103
Command (COM)	88
We're Both (WE)	69
Suggestions (SUG)	64
Squabble (S)	48
Me Too (TOO)	29
We'll Have To (HWA)	11
Attention (ATT)	11
Sympathy (SY)	7
Clarify Disagreement (DG/CM)	6
Offers (OF)	5
Lets (LTS)	3
Polite Requests (Q/PRE)	3
Question Wanna (Q/WA)	1
Total	24,698

Note: The total frequency in this table (24,698) is the "final rating" (consensus code among raters and the experimenter). At times the raters would code two content codes together (e.g., ME and IN) or disagree on a double code and in these cases only one final code was applicable. The disagreements between raters account for the difference between total frequency of codes assigned (24,878) and total frequency in the table (24,698).

statements about self (ME), asking questions (Q) and humour, joking or teasing (J). These seven social processes accounted for the majority of the data (92.8%).

To explore whether intimate talk differed from everyday talk, the mean frequencies of the 13 aggregate codes for the casual and the personal conversations were collated. (Recall that one of the aggregate codes (SUP) was used infrequently and had low reliability so was omitted from analysis). The mean frequencies are presented in Table 10. The means in this table were rank ordered according to the overall occurrence. The first seven codes accounted for the majority of the data (94.5%). Examination of the table indicated that there were some differences between the ordering of codes for the personal and casual conversations. That is, some social processes took precedence over others in intimate talk. For example, gossip was the first ranking social process in the personal topic and comprised 20.5% of the conversation as compared to the casual topic where gossip was ranked fourth and comprised 16% of the conversation.

TABLE 10
 MEAN FREQUENCY OF 13 AGGREGATE CODES BY TOPIC

	OVERALL	PERSONAL	CASUAL
Low self-disclosure (LSD)	246.83	100.08(2)	146.75(1)
Information (IN)	197.13	83.63(4)	113.50(2)
Gossip (G)	195.21	105.13(1)	90.08(4)
Acknowledgment (ACK)	182.75	84.63(3)	98.13(3)
High Self-disclosure (HSD)	57.63	51.75(5)	5.88(7)
Question (Q)	57.50	25.33(6)	32.17(5)
Affect (AFF)	37.12	19.13(7)	18.00(6)
Reactivity (REAC)	12.96	6.54(8)	6.42(8)
Exclamation (EXCL)	11.25	4.83(11)	6.42(9)
Other-directed Statements			
(YOU)	10.00	5.04(9)	4.96(10)
Fantasy (F)	8.63	5.04(10)	3.58(12)
Control Statements (CONT)	7.54	2.88(12)	4.67(11)
You and Me (YM)	4.08	1.92(13)	2.17(13)

Note: Numbers in parentheses indicate rank order of mean frequencies for the specific topic.

3.2.3. Tests of Specific Social Processes

To assess gender differences in speech processes and to explore the variable of age, the aggregate codes relevant to the specific expectations listed previously were analyzed. That is, HSD and LSD were used to assess differences in self-disclosure, AFF was used to assess whether women were more affective than men, and the IN code was analyzed for differences in information transfer. In addition, talking about others was explored with the G code. These five aggregate codes, HSD, LSD, AFF, IN, and G, accounted for 78% of the complete data sample.

The data consisted of two types of gender, three levels of age, two levels of topic, and five levels of frequency counts of the aggregate codes. These data comprised a $2 \times 3 \times 2 \times 5$ contingency table which was subjected to loglinear statistical procedures. The loglinear statistical models are designed to test the associations among variables in complex multidimensional contingency tables. The reader is referred to Appendix I for an explanation of loglinear statistical models. The first step in analysis was to determine the most parsimonious yet adequate model to describe the data. The hierarchical, nonhierarchical, and logit loglinear models were applied with consistent results for all models. That is, only the saturated model fit these

data, meaning that all terms were necessary to explain the complex associations among variables. One other model, an ANOVA-type model for categorical data (SAS CATMOD procedure) was tested and yielded the same result; all terms were needed for explanation. These results indicated that the present data were not testable with loglinear statistical models because the saturated model is untestable. As a consequence, the decision was made to use analysis of variance (ANOVA).

The choice to use a univariate approach rather than a multivariate approach was based on consideration of the experimental design, the number of subjects, and the risk of Type 1 error. Since the data consisted of several dependent variables (five speech codes), the multivariate approach (MANOVA) appeared to be the best solution. However, since topic was a within-subject independent variable, a doubly multivariate design was required. Tabachnick and Fidell (1989) stated that a limiting factor of doubly multivariate designs is that the number of measures required for each cell of the design equals the number of dependent variables times the number of repetitions of the independent variable. To meet this requirement, the present study needed ten measures per cell (5 DV's x 2 repetitions of topic), and there were four measures or observations per cell of the design. Tabachnick and Fidell (1989) clearly emphasized

that if the sample is small, the choice between univariate and multivariate approaches is automatically resolved in favour of the univariate approach, with adjustment for inflated Type 1 error. One additional consideration was that univariate models require counterbalanced experimental designs whereas multivariate models do not. The design of the present study was counterbalanced with an equal number of subjects in each cell. Given these considerations, the univariate approach was chosen.

If a univariate approach is chosen, one additional recommendation is to subject the data to both univariate and multivariate analyses and compare the solutions from the two sets of results (Tabachnick and Fidell, 1989). If the conclusions from both sets of results are similar, the veracity of the univariate solution is confirmed and the researcher is advised to report the univariate solution while noting that the data were also subjected to multivariate analyses, and the results from both approaches were similar. Accordingly, in the present study, the univariate results were reported, and the multivariate results were appended. (See Appendix J for the results of the doubly multivariate procedure).

As noted previously, there was considerable variability in the amount of talk between transcripts. To determine

whether there were differences in amount of talk for gender, age, or topic, the data for the number of codes and the data for number of thought units in each of the three groups of age and two groups of gender were subjected to separate repeated measures analyses of variance (ANOVAS) with topic as the within-subject repeated measure. The results showed no effects for number of codes; however, there was a significant effect for number of thought units by topic, $F(1,18) = 20.17, p < 0.0003$. Inspection of the means showed that topic 1 (personal) mean number of thought units was 344.63 and topic 2 (casual) mean number of thought units was 391.88. The summary tables for the repeated measures ANOVAS for number of codes and number of thought units are presented in Table 11 and Table 12.

These results indicated that there were more thought units in the casual conversation than in the personal conversation. As a result of this finding, the decision was made to transform the data to proportions rather than use frequencies for the analyses of variance.

TABLE 11
ANOVA SUMMARY TABLE FOR NUMBER OF CODES

SOURCE	d.f.	SS	MS	F	p
<u>Between Subjects</u>					
Gender	1	78327.521	78327.521	2.33	0.1439
Age	2	66887.375	33443.687	1.00	0.3886
Gender x Age	2	13702.042	6851.021	0.20	0.8172
Error	18	603973.375	33554.076		
<u>Within Subjects</u>					
Topic	1	16170.021	16170.021	2.54	0.1282
Topic x Gender	1	9436.021	9436.021	1.48	0.2389
Topic x Age	2	17276.542	8638.271	1.36	0.2821
Topic x Gender x Age	2	17054.042	8527.021	1.34	0.2865
Error	18	114444.875	6358.049		

TABLE 12
ANOVA SUMMARY TABLE FOR NUMBER OF THOUGHT UNITS

Source	d.f.	SS	MS	F	p
<u>Between Subjects</u>					
Gender	1	18486.750	18486.750	1.24	0.2802
Age	2	48961.625	24480.813	1.64	0.2214
Gender x Age	2	3037.625	1518.813	0.10	0.9037
Error	18	268485.000	14915.833		
<u>Within Subjects</u>					
Topic	1	26790.750	26790.750	20.17	0.0003
Topic x Gender	1	147.000	147.000	0.11	0.7432
Topic x Age	2	3948.875	1974.438	1.49	0.2526
Topic x Gender	2	4418.375	2209.188	1.66	0.2173
x Age					
Error	18	23905.000	1328.056		

In order to determine if subjects' speech code use differed depending on gender, or age, or intimacy of topic, the data for gender, age, and topic, were subjected to five separate univariate repeated measures analyses of variance (ANOVAS), one for each of the five aggregate codes. These ANOVAS consisted of one within-subject variable (two levels of topic), two levels of gender, and three levels of age. The dependent variable was the mean proportion of the aggregate code. A Bonferroni procedure (Cohen and Cohen, 1983) was applied to all five ANOVAS to control for experimentwise error. To maintain experimentwise error at an alpha level of 0.05, an alpha level of 0.01 was used for each test.

3.2.3.1. Assessment of Self-disclosure

The second expectation was that female same-gender friends would disclose more than male same-gender friends. The codes analyzed were HSD and LSD. The ANOVA summary table of the results for HSD is presented in Table 13 and the ANOVA summary table for LSD is presented in Table 14.

A significant effect for topic was obtained in the repeated measures ANOVA for HSD, $F(1,18) = 37.50$, $p < 0.0001$, but no other main effects or interactions were significant. Similarly, the repeated measures ANOVA for LSD

showed a significant effect for topic, $F(1,18) = 23.88$, $p < 0.0001$, but no other effects were significant. These results indicated that female friends in this study did not disclose more than male friends. There were also no differences as a function of age. Examination of the means for HSD and LSD showed that subjects in this study used more high self-disclosure when involved in a personal conversation (mean = .118, standard deviation = .083) as compared to a casual conversation (mean = .011, standard deviation = .014), and more low self-disclosure in a casual (mean = .281, standard deviation = .064) than in a personal conversation (mean = .202, standard deviation = .047).

TABLE 13
ANOVA SUMMARY TABLE FOR HSD

SOURCE	d.f.	SS	MS	F	p
<u>Between Subjects</u>					
Gender	1	0.000081	0.000081	0.02	0.8941
Age	2	0.002912	0.001456	0.33	0.7245
Gender x Age	2	0.007055	0.003753	0.85	0.4456
Error	18	0.079872	0.004437		
<u>Within subjects</u>					
Topic	1	0.138354	0.138354	37.58	0.0001
Topic x Gender	1	0.000416	0.000416	0.11	0.7408
Topic x Age	2	0.001243	0.000622	0.17	0.8460
Topic x Gender x Age	2	0.003952	0.001976	0.54	0.5938
Error	18	0.066269	0.003682		

Note: Significance level was $p < 0.01$

TABLE 14
ANOVA SUMMARY TABLE FOR LSD

SOURCE	d.f.	SS	MS	F	p
<u>Between Subjects</u>					
Gender	1	0.003437	0.003437	0.96	0.3394
Age	2	0.006896	0.003448	0.97	0.3994
Gender x Age	2	0.000866	0.000433	0.12	0.8865
Error	18	0.064233	0.003569		
<u>Within Subjects</u>					
Topic	1	0.073835	0.073835	23.88	0.0001
Topic x Gender	1	0.000680	0.000680	0.22	0.6447
Topic x Age	2	0.011634	0.005817	1.88	0.1812
Topic x Gender x Age	2	0.001403	0.000701	0.23	0.7993
Error	18	0.055659	0.003092		

Note: Significance level was $p < 0.01$

3.2.3.2. Affective Social Processes

The third expectation was that female speech would be more affective than male speech. This expectation was evaluated with analysis of the AFF aggregate code. The ANOVA summary table is presented in Table 15. No significant main effects or interactions were found. For the subjects in this study, females and males were similar in their use of jokes, disagreements, and arguments and this similarity was consistent across all age groups.

TABLE 15
ANOVA SUMMARY TABLE FOR AFF

SOURCE	d.f.	SS	MS	F	p
<u>Between Subjects</u>					
Gender	1	0.000063	0.000063	0.06	0.8142
Age	2	0.003186	0.001593	1.44	0.2619
Gender x Age	2	0.002132	0.001066	0.97	0.3992
Error	18	0.019851	0.001103		
<u>Within Subjects</u>					
Topic	1	0.000015	0.000015	0.04	0.8484
Topic x Gender	1	0.001861	0.001861	4.67	0.0445
Topic x Age	2	0.000178	0.000089	0.22	0.8021
Topic x Gender x Age	2	0.003974	0.001987	4.98	0.0190
Error	18	0.007181	0.000399		

Note: Significance level was $p < 0.01$

3.2.3.3. Transfer of Information

The fourth expectation was that males would convey more information in their conversations than females. This expectation was tested with the IN code. The results showed that there was a main effect for topic, $F(1,18) = 14.09$, $p < 0.002$, but no other significant effects. The ANOVA summary table is presented in Table 16. The prediction that males would be more informational in their speech than females was not supported and this finding was consistent for all ages. Examination of the means for IN indicated that the casual conversations of female and male same-gender friends were comprised of more transfer of information (mean = .215, standard deviation = .054) than the personal conversations (mean = .161, standard deviation = .048).

TABLE 16
ANOVA SUMMARY TABLE FOR IN

SOURCE	df	SS	MS	F	p
<u>Between Subjects</u>					
Gender	1	0.000000	0.000000	0.00	0.9985
Age	2	0.003367	0.001683	0.48	0.6273
Gender x Age	2	0.003236	0.001618	0.46	0.6384
Error	18	0.063299	0.003517		
<u>Within Subjects</u>					
Topic	1	0.035178	0.035178	14.09	0.0015
Topic x Gender	1	0.001555	0.001555	0.62	0.4403
Topic x Age	2	0.001608	0.000804	0.32	0.7288
Topic x Gender x Age	2	0.003720	0.000186	0.07	0.9285
Error	18	0.044940	0.002497		

Note: Significance level was $p < 0.01$

3.2.3.4. Speculations About Gossip

In addition to the expectations about the preceding speech processes, it was proposed that gossip may be a speech process of interest in relation to intimacy. Specifically, it was suggested that if talking about others facilitated intimate connection between people, then, perhaps, people would talk about others more in intimate than in non-intimate conversations. The speculations about gossip were explored with analysis of the G aggregate code. The repeated measures ANOVA summary table for G is presented in Table 17. A significant effect for topic was obtained, $F(1,18) = 7.48, p < 0.0136$. There were no main effects of gender or age. Examination of the means for G indicated that subjects in this study talked about other people more when involved in a personal conversation (mean = .205, standard deviation = .069) as compared to a casual conversation (mean = .160, standard deviation = .088). These data supported the speculations about the relationship between gossip and intimacy and did not support the stereotypical assumption that women gossip more than men.

As stated previously, the data were also subjected to a repeated measures MANOVA and similar results were obtained for the two analyses (see Appendix J). This similarity confirmed the efficacy of the univariate ANOVAS.

TABLE 17
ANOVA SUMMARY TABLE FOR GOSSIP

Source	df	SS	MS	F	p
<u>Between Subjects</u>					
Gender	1	0.031678	0.031678	4.92	0.0397
Age	2	0.035270	0.017635	2.74	0.0917
Gender x Age	2	0.012075	0.006037	0.94	0.4102
Error	18	0.116003	0.006445		
<u>Within Subjects</u>					
Topic	1	0.024957	0.024957	7.48	0.0136
Topic x Gender	1	0.015498	0.015498	4.65	0.0449
Topic x Age	2	0.006748	0.003374	1.01	0.3834
Topic x Gender x Age	2	0.009860	0.004930	1.48	0.2544
Error	18	0.060031	0.003335		

Note: Significance level was $p < 0.01$

3.2.3.5. Trends in the Data

In addition to the stated results, some trends in the data were noted. As shown in Appendix J, the MANOVA suggested that the main effect for gender could be interpreted as approaching significance (Wilks' Lambda = 0.509, multivariate $F(5,14) = 2.700$, $p < 0.0654$). Inspection of Tables 15 and 16 indicated that effects approaching significance for gender were contained in the processes of affect and gossip. That is, for affect, the topic by gender interaction and the three-way topic by gender by age interaction approached significance ($p < 0.0445$ and $p < 0.0190$ respectively). For gossip, the main effect for gender and the interaction of topic by gender approached significance ($p < 0.0397$ and $p < 0.0449$ respectively). Pairwise comparisons of these means were done with a Ryan-Einot-Gabriel-Welsch multiple F test to control for Type I experimentwise error. Results indicated no significant differences between means for the variable 'affect'. However, for the variable 'gossip', results indicated a significant difference between female and male means in the casual topic (female mean = 0.2032, standard deviation = 0.091, male mean = 0.1159, standard deviation = 0.060). It appeared, therefore, that the effects approaching significance for gender were largely accounted for by the gender differences in the variable 'gossip' with

a tendency for females to talk about others more than males. It is noted that these results only approach significance and must be interpreted with caution.

3.2.4. Summary of Results

In summary, the results of the present study showed that when female and male same-gender friends were matched on their self-reported assessment of the level of intimacy in the relationship, the use of specific social processes in conversation was similar for male and female friends of all three age groups. However, there were effects for topic. That is, the personal or intimate conversations of friends consisted of greater use of the processes of high self-disclosure and gossip than the casual or non-intimate conversations which, in turn, consisted of greater use of low self-disclosure and transfer of information.

4. DISCUSSION

4.1. SELF-REPORT STUDY

The purpose of this study was to investigate people's assessment of the current level of intimacy in a close same-gender friendship. It was expected that females would endorse higher levels of intimacy on the MSIS than males and differences as a function of age were explored. The expected gender difference was found (female mean score 128.56, male mean score 112.41), but there was no effect for age. The gender differences are consistent with previous research (Krahn, 1986) as indicated by the comparison between "1986" and "1993" data samples in Table 1. However, these means are not consistent with those reported by Miller and Lefcourt (1982). They did not find gender differences. The difference between studies was that Krahn (1986) and the present research specified a same-gender closest friend and Miller and Lefcourt (1982) specified a close friend. Subjects in the Miller and Lefcourt study may have reported about the intimacy level in a cross-gender friendship and the gender of the friend could result in substantive differences in the subject's assessment. Arnold (1985) found significant differences for male scores on the MSIS depending on whether they were assessing same- or cross-

gender friendship (same-gender = 102.73; cross-gender = 130.37). Therefore, if males in the Miller and Lefcourt study reported about a cross-gender friendship, the mean for males would be expected to be significantly higher. It is not known if there are same- and cross-gender differences for female ratings of intimacy but one speculation is that the differences would not be as pronounced for females. Helgeson et al. (1987) offered some support for this speculation with the finding that both males and females reported that they disclosed more and were happier in their relationships with females, that is, cross-gender for males and same-gender for females.

Additional support for the speculation that differences in ratings of intimacy in same- and cross-gender friendship may not be as pronounced for females as for males was found in the data presented by Downs and Hillje (1991). Although they did not assess gender differences, they presented individual mean scores for each of the 17 items in the MSIS for both males and females in both same- and cross-gender friendships. Addition of these individual mean scores yielded an overall mean for the MSIS for males and females in both types of friendships. These means are presented in Table 18 together with means from other relevant studies for comparison purposes. Inspection of the means indicated that there were similarities between studies and the means from

TABLE 18
 MEANS FOR THE MSIS ACROSS STUDIES

	MALES		FEMALES	
	Same ^a	Cross	Same	Cross
Downs and Hillje	111.8	136.4	127.3	135.4
Arnold	102.7	130.4		
Miller and Lefcourt		137.3		143.1
Krahn	112.6		128.6	

^a = "same" is same-gender friendship, "cross" is cross-gender friendship

the Miller and Lefcourt study were more similar to the means for cross-gender friendships in the Downs and Hillje study, while the means from the current study were synonymous with the same-gender means from the Downs and Hillje study. It is possible, then, that subjects in the Miller and Lefcourt study may have responded in reference to a cross-gender friend, whereas subjects in the present study assessed a same-gender friend. Moreover, the differences between ratings of intimacy in same- and cross-gender friendship do not appear to be as pronounced for females as they are for males (Downs and Hillje, 1991).

This research was formulated as a study of the behaviour of same-gender friends. It was proposed that same- and cross-gender friendships were different in subtle ways and, therefore, the two kinds of friendship were best studied separately so the differences could be unravelled. The preceding discussion suggested that males assess cross-gender friendships as more intimate than same-gender friendships. The studies by Helgeson et al. (1987) and Monsour (1992) suggested that one possible difference between men's and women's perceptions of intimacy in same-versus cross-gender friendships may be sexual contact. In the Monsour study, subjects were requested to describe a friend, not a lover or partner. In the Helgeson study, the researchers did not specify what kind of relationship the

subjects were asked to describe; the instructions referred to same and opposite sex "partners". Subjects receiving these instructions may have described a relationship with a lover or spouse. Even though Monsour's subjects were asked to describe intimacy with a friend, not someone they were dating or married to, 16% of the males and 8% of the females in the sample described sexual contact in their definitions of intimacy. Helgeson et al. reported that "physical contact and sex were the key features of opposite sex intimacy for males. Females did not report sexual activities in their experiences, and some specifically mentioned the absence of sex" (pp.225-226). Given these results, it appears that one of the aspects of intimacy that changes when describing cross-gender rather than same-gender friendships is sexual contact, and the salience of sexual contact changes most dramatically for men. If women's descriptions of intimacy are similar for both kinds of friendships, their ratings of the levels of intimacy in both kinds of friendships may be similar. This proposal requires further exploration.

4.2. CONVERSATION STUDY

The purpose of this study was to answer the general research question about how same-gender close friends talk intimately and to explore gender and age similarities and differences in the social processes of everyday speech. The expected results were not found. When males and females were matched on the level of reported intimacy in a same-gender friendship, conversations between male friendship pairs and female friendship pairs of all ages were similar. However, the results showed significant differences as a function of the topic of conversation, that is, whether the friends were having a personal or a casual conversation of general interest. These findings indicated that intimate talk is different from non-intimate talk and that women and men in this sample were more similar than different. A clear understanding of these results involves consideration of the nature of the subjects selected for the study. Therefore, the discussion of the findings in the following sections is preceded by a section which highlights relevant aspects of subject selection. In addition, the methodological and theoretical contributions of the research are presented.

4.2.1. Subject Selection

The nature of the subjects selected for the conversation study may have had an impact on the obtained results. Although it is assumed that subject selection typically does affect results, there were four relevant issues in the present study that merit further consideration. The four issues discussed in this section include: 1) distribution of male and female scores on the MSIS, 2) voluntary participation, 3) the representativeness of the three age groups, and 4) the number of subjects.

4.2.1.1. Distribution of Scores

Male and female subjects who were selected from the self-report study for the conversation study were matched on their self-reported level of intimacy in the friendship. That is, there were no differences on the MSIS scores for males and females in the conversation study. The mean for males was 134.33 (standard deviation = 11.03) and the mean for females was 138.92 (standard deviation = 6.88), $t(22) = -1.22$, $p < 0.24$. However, the mean for males was significantly lower than the mean for females in the larger data sample of the self-report study (male mean = 112.41, standard deviation = 20.13; female mean = 128.56, standard deviation = 17.31). The contrast of the mean ratings of

intimacy between the self-report study and the conversation study indicated that, as a result of matching males and females in the conversation study, males in the conversation study were less typical of males in the larger group (self-report study) than was the case for females. The means and standard deviations indicated that the average male in the conversation study was within the second standard deviation above the mean for males (the 95th percentile), whereas the average female was within the first standard deviation above the mean for females (the 68th percentile). The distributions suggest that the 'relative' intimacy of males in the conversation study was greater than the 'relative' intimacy of females. In the present study, then, it may be more correct to conclude that there were no differences between the conversations of very close male friends and close female friends.

The differences in 'relative' intimacy signify an important underlying issue regarding the meaning of 'difference'. That is, conclusions based on mean differences may vary substantially from conclusions based on consideration of range and overlap of distributions. The results in most of the literature on intimacy in friendship are derived from mean differences. Although conceptualizing 'difference' as 'mean difference' is acceptable research practice, it is clear that consideration of overlap of

distributions is essential to interpretation of results.

4.2.1.2. Voluntary Participation

The second issue with regard to subject selection is voluntary participation. Although it is generally understood and accepted that people who volunteer to participate in psychological research may self-select in unknown ways, it appeared that there may have been a gender difference in the self-selection process in the conversation study. That is, it was more difficult to obtain consent from male friendship pairs than from female friendship pairs. For example, in order to collect conversation data for the eight male and eight female friendship pairs in the middle and older age groups, eleven male and eight female friendship pairs were scheduled. Three of the male subjects called to cancel their appointments and new scheduling was arranged. However, these subjects eventually withdrew their consent. In addition, the men who did participate appeared to be individuals who were highly invested in their friendship and were eager to disclose the value of friendship in their lives. For example, one male friendship pair spent an extra half-hour after the debriefing talking about the books they had read about male friendships and how helpful they had been. Another pair of male friends asked numerous questions about male-female differences, wondering

if they were valid. It therefore appeared that the male friends who participated in the study may have self-selected in some relevant way. If there was a selection process, one speculation is that the males who participated were more relationship-oriented than males in the general population. This possibility of relevant self-selection together with males' greater 'relative' intimacy, discussed previously, indicated that the males who participated in the conversation study were less typical of males in the general population than was the case for females.

Although it appeared that there were relative differences in male and female voluntary participation in the present study, it is possible that these relative differences are typical of studies on intimacy. For example, in the present self-report study approximately 60% of the volunteer sample was female and 40% was male. Perusal of the research on intimacy and friendship indicated that this female/male proportion of voluntary subjects is typical throughout studies. Only one comment was found regarding male participation. Walker and Wright (1976) studied intimate self-disclosure and its relationship to friendship development. Male and female subjects talked with a confederate about an intimate or a non-intimate topic. The authors stated that 50% of the males in the intimate condition refused to co-operate and had to be

discarded as subjects (p. 740). It may be that the 'typical' male who volunteers for studies on intimacy is not typical of males in the general population.

4.2.1.3. Representativeness of Age Groups

As stated in the Method section, the subjects in the young age group were undergraduate students from the University of Saskatchewan who were enrolled in first- and second-year classes, whereas subjects in the middle and older age groups were teachers in Saskatoon. Given that the data from the 1986 study were collected from university students, and that one of the foci of the present study was the investigation of age in a cross-sectional design, it was necessary that individuals have a university degree in order to be selected for the middle and older comparison groups. Several professional groups were considered including, physicians, nurses, teachers, and mental health workers (e.g., social workers, psychologists). Consideration of factors such as power, occupational status, and communication training led to the selection of teachers as the most representative comparison group. Since teachers were selected, the most ideal comparison group for the young age group would have been Education students. However, not all the subjects in the young age group were Education students. The data for the 1986 study were collected from

students in the Colleges of Arts and Science, Education, and Engineering and the proportion of students who participated from each separate college was not recorded.

Although the comparison groups may not have been ideal, the important factors such as education, status, and age were carefully considered. Therefore, the impact of the representativeness of the groups on the results is thought to be minimal.

4.2.1.4. Number of Subjects

The number of subjects in the conversation study was small relative to much research using an ANOVA design. There were four subjects in each cell and a total of 12 male and 12 female friendship pairs. However, the small sample size is characteristic of this area of research. For example, Ginsberg and Gottman (1986) also had four subjects in each cell of the research design for a total of eight male and eight female roommate pairs. Most studies of conversation yield a large amount of data for each individual subject and coding the data is a complex and time-consuming task (the present data were coded in 11 months). Given the complexity of coding and of data collection, any increase in the standard number of subjects would make the task of completing research in this area an

onerous one. Although it could be argued that there was insufficient power to detect certain effects, it can also be concluded that those effects that were found are likely fairly robust.

4.2.2. Intimate and Non-intimate Talk

The results of this study showed that intimate talk is different from non-intimate talk and appeared to support the conclusion that self-disclosure is a primary way that intimacy is conveyed by both men and women (Monsour, 1992). In this study, high self-disclosure, low self-disclosure, transfer of information, and gossip were the speech processes that differentiated intimate and non-intimate talk. That is, intimate talk contained more high self-disclosures and talk about other people than non-intimate talk which, in turn, involved more low self-disclosures and transfer of information. The results regarding self-disclosure and information transfer support an intuitive understanding of the distinction between intimate and non-intimate talk and suggest that people are versatile and may attend to subtle cues or social conventions regarding the appropriateness of disclosure. Certainly, clinical impressions indicate that self-disclosure is a double-edged sword; both too little (e.g., repression) and too much (e.g., poor personal boundaries) are unhealthy. Men and

women in this study appeared able to regulate their self-disclosure according to situational demands and their perceptions of appropriateness. This versatility may be a socially adaptive skill.

The finding that both males and females talked about others more in a personal as compared to a casual conversation has theoretical implications. First, this finding suggests that both women and men talk about others (although there was a nonsignificant trend for females to talk about others more than males) and second, it suggests that talking about others may be one behavioural measurement of intimacy. In the present study, the 'others' that were talked about most frequently were spouses or partners, children, and close friends. In most cases it was clear that both of the friends knew the 'other' that was talked about. The shared interests and common knowledge between friends and among others in a larger community may enhance a sense of belonging and intimate connection.

Although talking about others has not been identified as a description or prototype of intimacy (Monsour, 1992; Helgeson et al., 1987), perhaps, in the process of intimate communication or intimate experiences, a person is not aware of how frequently he or she talks about significant others. The lack of awareness would account for the difference in

results between the present study and the studies by Helgeson et al. (1987) and Monsour (1992). In the latter two studies, the results were based on self-report data, whereas in the present study, the results were based on observed behaviour.

4.2.3. Gender Differences

The data in the present study did not confirm the expected gender differences. In addition to the differences in 'relative' intimacy discussed previously, it will be argued that these results did not replicate previous results because of differences in interpretation and in methodology between studies. Examples from the literature include the research of Johnson and Aries (1983a; Aries and Johnson, 1983), Caldwell and Peplau (1982), Krahn (1986) and, Ginsberg and Gottman (1986).

The results reported by Aries and Johnson (1983; and Johnson and Aries, 1983b) may differ from the results of the present study because of 1) interpretation of the data, 2) definition of terms and, 3) reliance on self-report. These authors reported that more women than men talk frequently and in-depth about personal concerns, family problems, intimate relationships, while more men than women talk frequently and in-depth about sports and work. They stated

that these results supported the "sex-stereotyped assumptions" about the nature of male-male and female-female conversations (i.e., women's conversations are more intimate than those of men). This conclusion is open to alternate interpretation. Close inspection of the data from the studies indicates that the conclusion may mislead the reader. For example, although 52% of the males in the sample reported that they talk in-depth about sports, 56% of the males reported that they talk in-depth about personal problems (compared to 84% of females). In addition, 56% of males reported talking in-depth about doubts and fears (compared to 83% of females), and 49% of males reported that they talked in-depth about intimate relationships (compared to 67% of females) (Johnson and Aries, 1983a). Although the differences between males and females were significant, a conclusion based on the significant difference obscures the fact that more than half of the males in the sample also report talking about the intimate topics. Clearly males and females talk in-depth about similar things. However, on average, more women than men talk in-depth about intimate topics.

The second difference between the work of Aries and Johnson and the present study was that subjects who participated in their study were not given a definition of a close or intimate friend. In fact, the instructions on the

questionnaire were: "we would like you to pick one person of your sex whom you feel is a close friend. If there is no one person whom you feel is a close friend, pick the person of the same sex whom you feel closest to currently" (p. 1186, Aries and Johnson, 1983). Given the variety of perceptions of the meaning of the term "close friend", it is not clear that the reported results yield valid conclusions about intimate friendship.

The third understanding of differences relates to the possible differences between self-report and actual behaviour. Subjects in Aries and Johnson's studies had to recall conversations with friends, decide whether certain topics had been discussed and then recall how frequent and how in-depth the topics were. Conventional clinical wisdom dictates that person A's perception of his or her own behaviour frequently differs from person B's perception of person A's behaviour. This difference is not to imply that either perception is right or wrong; they are just different. In addition, socialization may affect what males and females choose to report. For example, boys may be trained to complain less than girls and to acknowledge fewer emotions. Therefore, one might expect that males would report more judiciously about topics involving personal fears than topics involving sports or work. Both self-report and behaviour are important in reaching conclusions

about human behaviour and the information may differ depending on the source. The present study used everyday talk rather than self-report about everyday talk as the dependent variable and this difference may explain the divergent results.

Another comparison is the work of Caldwell and Peplau (1982). They found that when unacquainted subjects role-played a "friendship" conversation, females expressed feeling and used supportive statements more than males. The validity of the results is questionable because it is not known if strangers can simulate a friendship conversation. The friendship conversations in this study were conversations between close friends. The manipulation check of the experimental procedure showed that the conversations which formed the data base were typical of the everyday talk between these two friends.

Krahn (1986) found that females disclosed more than males. The experimental procedure was the same as the one used in this study. The difference between the 1986 study and the current work is the coding system. In the 1986 study, intimacy was operationalized as self-disclosure and the coding system was designed to rate every segment of speech as a kind of disclosure. Clearly the system did not accurately describe everyday conversation and a different

coding system was proposed for this study. Moreover, there were problems with interrater reliability in the 1986 study. It is thought that the current results contain a reliable description of typical talk.

Given that the coding system used herein is thought to be a reliable and valid conceptualization of everyday talk, it was difficult to understand why these findings were different from those of Ginsberg and Gottman (1986) when both studies used the same coding system. One possible explanation is that the gender variable was confounded with a personality variable. Ginsberg and Gottman (1986) investigated social interaction as a function of reported degree of closeness in the relationship (close and distant) and gender. The primary focus was sequences of talk in everyday speech. For example, if one member of the pair made a disclosure they assessed the subsequent speech behaviour of the other member. They also looked at dominance and asymmetry in relationships by determining a "dominant" and a "subordinate" member within each roommate pair. In addition to differences in sequences of speech variables, they reported a gender difference on the discrete measure, self-disclosure. That is, regardless of the level of closeness, the "subordinate" female roommate was more likely to self-disclose than the "subordinate" male roommate. However, closer examination of the data indicated

that there were no differences between "dominant" females and "dominant" males. Thus it appears that only some females disclosed more than some males. The significant difference may not have been sustained if all females had been compared to all males. This comparison was not reported. Perhaps some unknown variable (dominant - subordinate) may account for the variability rather than gender. This unknown variable may be a personality variable. Similarly, reported gender differences on the other discrete speech variables (e.g., IN) were confounded by the "dominant" and "subordinate" variable. Thus, one speculation about the divergence between the results of this study and the study by Ginsberg and Gottman is that the effects attributed to gender in the latter study could be described as variation due to dominant and subordinate individuals.

Clearly, gender or sex of a subject is a variable that is correlated with many other characteristics, only some of which are known (Wright, 1988). Consequently, results pertaining to the sex of the subject are potentially confounded. Some of the confounding variables that have been proposed are sex-role orientation, that is, masculinity, femininity, and androgyny (e.g., Winstead et al., 1984; Williams, 1985), the intimacy and power motive (McAdams, 1988), and high and low self-monitoring (Snyder

and Smith, 1986). There is considerable overlap between reported gender differences and the findings regarding masculinity/femininity, intimacy/power motive, and high/low self-monitoring. Take, for example, the findings that females are more affective, more focused on the relational aspects such as support and nurturance, and that they self-disclose more than males. These findings can be understood as describing femininity rather than the sex of the subject. High self-monitoring individuals are also affect-oriented in their friendships while low self-monitoring individuals are activity-oriented. This affective/activity distinction has been used to describe sex differences in friendships. In addition, people with high intimacy motivation, rather than power motivation, emphasize sharing and support, independent of their sex. It may be that the evidence of sex differences has been confounded with these and other unexplored personality and sociological variables. Researchers exploring gender differences need to consider these relevant psychological and sociological influences.

4.2.4. Age

This study was designed to extend existing research by exploring differences as a function of age. Age differences were not found. Tesch and Martin (1983) showed that an age difference of five years was enough to note changes in the

reported function of friendship. In this study, the difference between the average ages in the three age groups was greater than five years (young = 19, middle = 29, older = 45). It may be that there are enough commonalities in everyday speech that the coding system employed could not be sensitive to age differences. Perhaps a system that coded certain non-verbal and paralinguistic aspects of speech would be more sensitive to age differences. The raters' impressions were that certain transcripts were more difficult to code than others because of frequent talk-overs, rapid speech, shifts in topic, and background noise from fidgeting movement in the chair, playing with pens, and tapping fingers or toes. These transcripts were invariably the young age group. It was also my clinical impression in listening to the conversations that friends in the older age groups were more sensitive to each other's concerns and had a more thoughtful, organized way of speaking. It appeared that older subjects also spoke more about how they valued each other. For example, one pair of male friends in the 40-50 year old group talked about the imminent retirement of one of the speakers and noted how they would miss the daily interaction at work. A female friendship pair in the same age group talked about their anger toward each other about a recent event and resolved an important relationship issue. This conversation content was not evident in the young age group. In future research, a coding system derived from

these qualitative aspects in everyday talk may differentiate age groups.

4.2.5. Methodological and Theoretical Contributions

The present study was designed to extend the literature on intimacy and friendship by addressing several important methodological issues. Results derived from observation of behaviour are a valuable addition to the results derived from self-report and one of the strengths of this study was the utilization of a procedure that facilitated the exploration of everyday talk in a controlled environment. The validity check showed that subjects rated their conversations as typical of everyday talk. In addition, subjects' spontaneous responses at the end of the experimental session included statements like "that went very quickly", "is an hour up already?", "I really enjoyed the visit" (referring to talk with friend), "I'm glad we talked about that". Frequently, the pairs of friends decided to go for coffee and continue their conversations.

Another important contribution is that both of the members of the friendship pair rated the friendship and assessed the current level of intimacy (MSIS) in the friendship. Other studies have reached conclusions about friendship on the basis of only one friend's report (e.g.,

Hays, 1985) and since friends' definitions and perceptions may differ, the validity of the results is questionable. In this study, both members of the friendship pair concurred on their rating of the friendship and their assessment of the current level of intimacy. It is evident, then, that these results apply to a close friendship as defined.

One critical methodological issue addressed in the present study was definition of terms. It was not the intent of the study to present a definitive and all-inclusive definition of intimacy and friendship. Rather, the essential focus was that researchers need to be clear about the definitions they are using and about why terms are operationalized in a specific manner. This task has not been managed adequately in the literature in the area of friendship and intimacy. The two studies presented were studies of intimate behaviour, both persons' perceptions of intimate behaviour and observers' ratings of intimate behaviour. As a result, a behavioural definition was employed. It is recognized that there are numerous ways of conceptualizing intimacy. For example, intimacy may be conceptualized as behaviour, as an experience, as an attitude, as a phenomenon, to list a few. In addition, it is not always clear what the boundaries are between terms like 'intimacy', 'love', 'affection', 'bonding'. Intimacy has been presented as a component of love (Sternberg, 1986)

along with passion, and decision/commitment. Intimacy and friendship have been listed as subtypes of love (Fehr and Russell, 1991). Clearly, more research is needed to understand the multiple meanings and/or types of intimacy for a variety of different people.

This study was focused on a small segment of the overall conceptualization of intimacy. The results supported the conclusion that self-disclosure is part of intimate behaviour, that some males are as intimate as some females, and that overall, males endorse lower levels of intimacy in same-gender friendships than do females, as assessed with the MSIS. In addition, talking about others may be an important addition to the measurement of intimate behaviour.

The major theoretical contribution of this study was the exploration of the relationship between intimacy and age, and the measurement of gossip. The results indicated that conversations of friends of all age groups were similar and therefore, age may not be a relevant factor in the future exploration of intimacy. Additional research is needed before definitive conclusions can be reached.

The present results indicated that gossip comprised 18.5% of the conversations of friends in this study, 20.5%

of the personal conversation, and 16% of the casual conversation. The percentages indicate that a considerable proportion of everyday speech consists of gossip and yet, the importance of gossip has not been addressed and the relationship between gossip and intimacy has not been articulated. The present findings indicate that a more inclusive conceptualization of intimacy would be achieved with the addition of talking about others.

5. CONCLUSION

This study was formulated on the belief that friendship is a life-sustaining experience. The literature on intimacy in same-gender friendship showed that women's friendships were "affectively richer" and that women were able to self-disclose and establish more intimate connections than men. This literature supported anecdotal reports from women and from men that they perceived women's friendships to be phenomenologically different and more intimate than men's friendships. It was expected that evidence to support gender differences would be found.

The results of this research showed that women reported a greater level of intimacy in their same-gender friendship than men did, and when women and men were matched on their assessment of the current level of intimacy in the friendship, the level of intimacy assessed in their conversations was similar. There were no differences in perceived or observed level of intimacy as a function of age, and differences were found between intimate and non-intimate conversations, indicating that both men and women in this sample changed their conversational style when they talked intimately. The expected gender differences in intimate conversation were not found, and consideration of the distribution of intimacy ratings on the MSIS and the

subject selection process lead to the conclusion that these factors may have attenuated the expected female/male differences.

The most parsimonious conclusion appears to be that it is time for yes/and thinking. Yes, women have been shown to disclose more than men, to talk about intimate topics, and to endorse higher levels of intimacy in their friendships, and some men can do the same, perhaps, on average, not as frequently or easily as women.

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APPENDIX A
FRIENDSHIP QUESTIONNAIRE

FRIENDSHIP QUESTIONNAIRE

Name _____ Telephone _____ Age _____ Sex _____

Below is a list of items that can be used to describe a very close friendship. Think about your closest same-gender friend. This friend is a person in whom you can confide personal feelings and problems. You value this friendship because of the trust, warmth, caring and emotional support it provides. Record this friend's first name.

Friend's Name _____ Does this friend live in Saskatoon? Yes No

With this friend in mind, answer questions 1 to 6 using the rating scale given below. Remember, if you are female rate your closest female friend, if you are male rate your closest male friend.

Rating Scale (Circle the correct response)

very rarely	some of the time	almost always
1 2 3	4 5 6 7	8 9 10

-
1. When you have leisure time how often do you choose to spend it with your friend alone?
1 2 3 4 5 6 7 8 9 10
 2. How often do you keep very personal information to yourself and do not share it with your friend?
1 2 3 4 5 6 7 8 9 10
 3. How often do you show your friend affection?
1 2 3 4 5 6 7 8 9 10
 4. How often do you confide very personal information to your friend?
1 2 3 4 5 6 7 8 9 10
 5. How often are you able to understand your friend's feelings?
1 2 3 4 5 6 7 8 9 10
 6. How often do you feel close to your friend?
1 2 3 4 5 6 7 8 9 10

Now, with the same friend in mind, please use the rating scale on the next page to answer questions 7 to 17.

Rating Scale (Circle the correct response)

not much a little a great deal
1 2 3 4 5 6 7 8 9 10

7. How much do you like to spend time alone with your friend?
1 2 3 4 5 6 7 8 9 10
8. How much do you feel like being encouraging and supportive to your friend when s/he is unhappy?
1 2 3 4 5 6 7 8 9 10
9. How close do you feel to your friend most of the time?
1 2 3 4 5 6 7 8 9 10
10. How important is it to you to listen to your friend's very personal disclosures?
1 2 3 4 5 6 7 8 9 10
11. How satisfying is your relationship with your friend?
1 2 3 4 5 6 7 8 9 10
12. How affectionate do you feel toward your friend?
1 2 3 4 5 6 7 8 9 10
13. How important is it to you that your friend understands your feelings?
1 2 3 4 5 6 7 8 9 10
14. How much damage is caused by a typical disagreement in your relationship with your friend?
1 2 3 4 5 6 7 8 9 10
15. How important is it to you that your friend be encouraging and supportive to you when you are unhappy?
1 2 3 4 5 6 7 8 9 10
16. How important is it to you that your friend show you affection?
1 2 3 4 5 6 7 8 9 10
17. How important is your relationship with your friend in your life?
1 2 3 4 5 6 7 8 9 10

APPENDIX B
TELEPHONE SCRIPT

Hello is _____ there?

Hi _____, my name is Ellen Krahn and I am doing a study on friendship. Do you remember when I was in your school and you volunteered to complete a questionnaire for me? (If no explain). For the second and final part of this study I need individuals like yourself to come in with the closest friend you had in mind when you completed the questionnaire. The two of you would talk together for two 15-minute time periods about a topic you would choose. These conversations would be audio recorded. The study will take about one hour and all the information I collect will be confidential and anonymous. Everyone who participates in this study will receive a 20 dollar gift certificate from Lakeshore Garden Centre.

Would you be interested in participating?

(If no) Before you say no, can I answer any questions or tell you more about the study?

(If yes) Good. On the questionnaire you wrote your close friend's name was _____. Would you be willing to phone this friend and ask that he/she participate with you?

We will meet in the Psychology Services Centre at the University of Saskatchewan, room 190 in the Arts building. The times I have available to meet with you are _____. You and your friend can choose one of these times that is suitable

for both of you. I will call you back at _____ to find out what you have chosen.

APPENDIX C
CONSENT FORM

University of Saskatchewan
Department of Psychology

CONSENT FORM

Friendship is very important in our society for the maintenance of physical and mental health. Therefore, it is necessary that we develop a clearer understanding of the dimensions of friendship. The objective of this study of Friendship is to observe how close friends interact with one another.

As subjects in this study your participation is completely voluntary. You will be asked to recall two conversations you have had in the recent past. One will be a casual conversation in which there is little or no disclosure of facts or feelings. The other conversation will be an in-depth discussion of a personal topic wherein very private facts and feelings or emotions are disclosed. The experimenter will not be present or listening while you talk. You will begin with a short practice conversation and then you will discuss each of the two chosen topics for 15 minutes. These conversations will be tape recorded. Following this you will be asked to fill out a short friendship questionnaire. Names will not be assigned to any of the data collected so confidentiality and anonymity are assured.

I understand that this research has been approved by the Human Research Ethics Committee, Department of Psychology, University of Saskatchewan, and thus if I have any complaints I may submit them to that Committee through the department (966-6657).

I, _____ of _____ have read the above protocol and agree to participate. The procedures have been explained to me by Ellen Krahn and I understand them.

I understand that I am free to withdraw from this study at any time.

(signature)

(researcher)

(date)

APPENDIX D

PROCEDURE SCRIPT

Before we begin the two conversations we agreed upon let's start with a short practice conversation to help you feel comfortable in this situation and so I can make sure the equipment is working properly. During this practise conversation I will remain with you in the room. Later, during the two 15-minute conversations, I will leave the room so you may converse privately. Start with something easy, perhaps what you were discussing as you came to participate in this study. (If there is silence) If you would rather not talk about that, choose a different topic you may have discussed recently.

(When topic is selected) Do you both agree to having a short conversation about _____?

(If no) Choose another topic.

(IF yes) Good. I would like you to talk very briefly about _____. Remember, this is just a practice, just pick up where you may have left off, address your conversation to each other and talk for a few minutes. I will stop you when the time is up. Are there any questions?

(If yes) Address them.

(If no) Good. Go ahead and start you conversation about _____. I will tell you when to stop.

(If silence, pause or laughter) I know this might be difficult for you but try to imagine that the two of you are

in a comfortable, familiar setting and do the best you can.
(When finished) Good, you've done well. Most people say it gets a little easier with time so I'm sure it will be easier for you as well, especially after I leave the room.
Any questions?

Personal Conversation

I would like you to think back over the recent weeks and recall a very personal conversation the two of you have had. This conversation included disclosure of private facts and feelings or emotions by both of you. Can either of you recall a conversation of this nature? (There will be some discussion as both parties determine a suitable topic.) (If yes) What is the topic? Was the conversation typical of those you frequently have? Do you consider this to be conversation you are both personally involved in? Are you both willing to discuss this topic for 15 minutes?

(If no) Here are some examples, are any of them suitable? Romantic experiences, personal doubts and fears, family concerns.

(If yes to questions) As we agreed earlier, I would like you to discuss _____ for 15 minutes now. Just pick up where you left off or add new thoughts and feelings about _____. If you have difficulty staying on topic you may move to a related topic of very personal concern of interest. Just

keep this conversation as natural and typical as possible.

I'm going to leave the room and I won't be listening to you as you talk. You may experience some awkwardness beginning the conversation but it will get easier. Just discuss _____ as you normally would.

I will knock on the door when 15 minutes is up. Then I will give you 30 seconds to wind down your conversation and I will knock on the door before I enter the room. Any questions?

(IF yes) address them

(If no) Good. Begin your conversation about _____.

(Leave the room)

Casual conversation

The same script as for the personal conversation except "casual conversation of general interest" was substituted for "personal conversation". The casual conversation of general interest was defined as a conversation wherein there was little or no disclosure of private facts and feelings or emotions. Examples given, if needed were: TV shows, movies, holidays.

APPENDIX E
POST-EXPERIMENTAL QUESTIONNAIRE

FRIENDSHIP QUESTIONNAIRE

Please answer the following questions in reference to the friend you are with right now. Circle the correct responses for all questions.

1. How typical of your private, personal discussions with this friend was the content of the personal discussion you just had?

Not at all
1 2 3 4 5 6 7 8 9 10
Very typical

How typical of your private, personal discussions with this friend was the amount of emotion or feeling expressed in the personal discussion you just had?

Not at all
1 2 3 4 5 6 7 8 9 10
Very typical

2. How typical of your casual discussions of general interest with this friend was the content of the casual discussion you just had?

Not at all
1 2 3 4 5 6 7 8 9 10
Very typical

How typical of your casual discussions of general interest with this friend was the amount of emotion or feeling expressed in the casual discussion you just had?

Not at all
1 2 3 4 5 6 7 8 9 10
Very typical

3. How would you rate this friend?

- 1). Someone in whom you can confide personal feelings and problems, someone you trust and care for and enjoy spending time with.
- 2). A person with whom you participate in various activities but with whom you do not discuss personal thoughts and feelings.
- 3). A person you occasionally do things with; one of you is primarily a "giver", one is primarily a "taker".

Now please use the following rating scale in answering questions 4-9. Remember to answer in reference to the friend you are with right now.

very rarely	some of the time	almost always
1 2 3	4 5 6 7	8 9 10

4. When you have leisure time how often do you choose to spend it with your friend alone?

1 2 3 4 5 6 7 8 9 10

5. How often do you keep very personal information to yourself and do not share it with your friend?

1 2 3 4 5 6 7 8 9 10

6. How often do you show your friend affection?

1 2 3 4 5 6 7 8 9 10

7. How often do you confide very personal information to your friend?

1 2 3 4 5 6 7 8 9 10

8. How often are you able to understand your friend's feelings?

1 2 3 4 5 6 7 8 9 10

9. How often do you feel close to your friend?

1 2 3 4 5 6 7 8 9 10

Now, please use the rating scale on the next page to answer questions 10-20.

Rating Scale (Circle the correct response)

not much a little a great deal
1 2 3 4 5 6 7 8 9 10

10. How much do you like to spend time alone with your friend?
1 2 3 4 5 6 7 8 9 10
11. How much do you feel like being encouraging and supportive to your friend when s/he is unhappy?
1 2 3 4 5 6 7 8 9 10
12. How close do you feel to your friend most of the time?
1 2 3 4 5 6 7 8 9 10
13. How important is it to you to listen to your friend's very personal disclosures?
1 2 3 4 5 6 7 8 9 10
14. How satisfying is your relationship with your friend?
1 2 3 4 5 6 7 8 9 10
15. How affectionate do you feel toward your friend?
1 2 3 4 5 6 7 8 9 10
16. How important is it to you that your friend understands your feelings?
1 2 3 4 5 6 7 8 9 10
17. How much damage is caused by a typical disagreement in your relationship with your friend?
1 2 3 4 5 6 7 8 9 10
18. How important is it to you that your friend be encouraging and supportive to you when you are unhappy?
1 2 3 4 5 6 7 8 9 10
19. How important is it to you that your friend show you affection?
1 2 3 4 5 6 7 8 9 10
20. How important is your relationship with your friend in your life?
1 2 3 4 5 6 7 8 9 10

APPENDIX F
TRANSCRIPT OF A CONVERSATION

125F(138)A2-2:

- Q/IN
S1. What do you have new to tell me?/
G/IN
S2. Well, ____ got a job./
Q/IN
S1. Did he?/
AG
S2. Yes./
Q/IN
S1. Where?/
NCM
S2. You knew that he had been laid off./
AG
S1. Yes./
G/Q/AG
S2. Like he is, like when he came to finish at your place./
AG
S1. Yeah./
G/IN
S2. And ah he is gone to Meadow Lake./ He had the option/
G/Q/FE
S1. What do they think about that./
NCM
S2. Well, I talked to ____ about it yesterday,/
G/IN
actually I
G/IN
had found out the day before um from ____ and,/
and ah
so when I picked up the kids yesterday she said well, I
G/IN
think I'm dealing with it better than ____ is./ They
just phoned him and said be here Tuesday night,
breakfast is as six Wednesday morning and you start
G/FE
work,/
so and he's not a terribly secure person./ So
G/FE
he's going into something that he has no idea what he's
doing, when he's
G/FE
S1. And yet he has done so many different things./
S2. When he's going to come home./
J/G/IN
S1. I know I mean the guy used to be a biker./ (chuckle)
ME Q/AG G/IN
S2. I know,/
isn't that funny./ I know the guys he used to
hang around with in Banff, _____./
AG
S1. Yeah./

- G/IN
 S2. So, he's, he was feeling a little bit uptight about it/
 G/IN
 but he left yesterday anyway and he also um/
 G/IN
 S1. Oh cause Monday afternoon he was at the track meet/ I
 G/IN
 saw him with the boys.
 G/Q/AG AG G/IN
 S2. Oh was he,/ okay, yeah./ He has um also possibility of
 FE
 Key Lake/ which would really be nice because it would
 G/IN
 be a week in a week out/ and then they could get
 something done you know he'd be around to to help for
 FE
 that week./ I think it'll be a little more difficult
 with being gone for a whole week and only home on the
 weekend./
 AG FE
 S1. Um hm./ And that's a long drive from Meadow Lake when
 you're tired./
 AG AG G/FE
 S2. Well it is,/ Yeah,/ and he's the type of person, he's
 sort of borderline diabetic so if he doesn't eat
 properly you know he finds himself getting really
 G/IN
 drowsy and that kind of thing./ His energy level gets
 pretty low./
 Q/AG
 S1. Hypoglycaemic kind of thing./
 AG G/FE
 S2. Yeah./ So they're ultimately hoping that the Key Lake
 FE
 thing will come up/ but I guess Key is really slow./
 G/IN
 But he was the only person who had applied for this
 FE
 position/ in and it had been in the paper for two or
 G/IN G/FE
 three weeks/ and his was the only application/ so I
 FE
 suspect if they offered him that he'd say yeah./ But
 it's something in the meantime./
 G/IN
 S1. Plus, they fly you in and out, it's not like he has to/
 MR AG
 S2. To Key,/ yeah./
 G/FE
 S1. So he wouldn't, he could leave the van/
 AG G/IN
 S2. Yeah,/ you see this way too _____ is without a van./

G/FE

So, um, I need to talk to her and tell her that if she does need a vehicle and then either one of ours are available she is welcome to them because/

AG

S1. Um hm./

FE

J/CM

S2. I would find that really hard./ Being at home without a car./ (both chuckle).

J/AG J/IN

S1. Yeah,/ or without a friend's car./

J/AG

S2. That's right./ (chuckle).

G/FE

S1. But I'm glad that ah he's finally got something/

AG

S2. Yeah./

G/FE

S1. It gives them a little more security./

AG G/FE

S2. Yeah./ I think he's got, well I know he's got all

G/FE

kinds of ability,/ lots of times it's just he doesn't have enough push, you know./

FE

S1. But that's when when you you don't feel good about yourself or you don't feel um confident, that's what happens./

AG

S2. Um hm./

FE

S1. You lose your energy, your/

AG

S2. Yeah. Yeah./

FE

S1. Cause I know this selling the house thing

AG

S2. Um hm./

S1. The more I think about it the tireder I get/

AG

S2. Yeah./

FE

S1. And I've got to get it in shape and just do it. You know./

AG

S2. Yeah./

AG

S1. And that's what you ultimately do in the end./

FE

S2. And once it's done, once you actually do it or get

G/IN

started on it then it rolls and it's okay, so./ And

- the other thing is that um _____ called the other day on
 G/IN G/IN
 my day off/ and I was just on my way to _____/ and
 she said I have to run a couple of errands, I'm on my
 G/IN
 bike,/ she said could I stop by for coffee about you
 ME
 know later on in the afternoon./ I said sure, I'll be
 G/IN G/IN
 home at 3:30./ So I went down to _____/ and as I was
 sitting there I said to her you know she sounded
 awfully excited on the phone./
 G/Q/IN
- S1. Did she get a job?/
 NCM ME
- S2. I said I bet she got a job./ And I was coming down the
 G/IN G/IN
 street/ and she was already there waiting/ and she came
 down the driveway and started coming down the sidewalk/
 J/G/IN J/ME
 and I looked at her/ and I said you've got a job!/
 J/G/IN ME
 (both laugh) She said who told you?/ I said nobody,/
 ME
 I said it just hit me from the tone of your voice on
 G/IN
 the phone that something must be up./ She's going to
 Kindersley./
 FE
- S1. Well that's just really close./
 FE AG G/IN
- S2. It's wonderful./ Yeah./ And she's got Home Ec and
 English, grade eight, nine, ten./
 AG
- S1. Um hm./
 G/FE
- S2. And she's just thrilled./
 G/FE
- S1. Oh good for her./
 G/IN
- S2. She had an interview in Humboldt, ah, the Humboldt one
 G/IN G/IN
 was first/ and then she had one in Kindersley/ and she
 knew there were two people, her and another girl in
 G/IN G/IN
 both jobs/ and she knew both other girls./ Well the
 G/IN
 other girl got the one in Humboldt/ and she said that
 was okay but she kinda, she said it was kind of a blow
 to my ego, you know, to start with./
 AG
- S1. Um hm./

- G/IN
- S2. But she said it didn't last too long because I knew I
G/IN
had this other interview coming up anyway./ So, she
G/Q/AG
went and and got it/ and do you know she got it because
IN
of her on-campus interview?/ They hadn't advertised
IN
this job in the paper,/ they had just referred, gone
G/IN
back to their on-campus interviews/ and then they
called her and asked her if she had a job and if she
G/IN
was interested in coming out./ And the assistant ah ah
G/IN
director was the one that had interviewed her/ and she
IN
met the director who was a woman/ and then she said
well if so and so thinks he's really impressed and he's
pleased with
F/TOO
- S1. Then I am too.
- S2. What you've got going for you,/ she said that's good
IN
enough for me./
- FE
- S1. Oh, wonderful./
- AG G/FE
- S2. Yeah,/ so she's so, she was just hopping./ Convocation
IN
Thursday and then these interviews,/
- AG
- S1. Um hm./
- IN Q/ME
- S2. One was Thursday,/ was it Thursday night or one was
Friday morning and Friday afternoon or something like
that - last week./
- G/Q/AG
- S1. So she drove from Humboldt, all the way out to
Kindersley, and/
AG
- S2. Yeah, yeah./
- ME FE Q/FE
- S1. Oh,/ see that is so scary./ Do you realize the only
interview I've gotten is Kelowna?/
FE
- S2. Have you applied for the other ones though/
IN
- S1. Oh yes!/
AG J/Q/AG
- S2. Yeah./ All around, like even in Saskatchewan/
(chuckle)

- J/IN
- S1. In Saskatchewan, but not in all school divisions./
AG AG FE
- S2. Okay./ Yeah,/ see I wasn't sure cause I hadn't talked
for a while about about that./
FE
- S1. But not everyone knows the extent to which I've
applied./ You know that's my business./ Um So I'll
phone the middle of of June./
AG
- S2. Right./
FE
- S1. I know, it feels like it's leaving it so long/ but I
feel so good about it./
AG
- S2. Yeah./
Q/AG
- S1. Isn't that just a strange sort of thing/
FE
- S2. Well, I think that goes a long way though. You know,
how you feel,/ and if you're feeling that way then I
think it's probably best to go with that./ So, anyway,
I'm happy for her./
AG
- S1. Um hm./
G/IN
- S2. Because it means that, she said I always pictured
myself going out of Saskatchewan,/ she thought, I
thought for sure I was heading to Alberta to teach or
B.C./ And now she said now that I've got it it's gonna
be kind of nice to know that I'm still close to my
family./ She said I don't know how long dad'll be in
Swift Current,/ like her dad is pastoring a church in
Swift Current./
AG
- S1. Um hm./
G/FE
- S2. But he's there for the next you know little while
anyway./
G/IN
- S1. Well, and she's close when she needs resources or
something too that she's familiar with./
ME FE
- S2. Well that's just it./ And it's no big deal to zip into
the city and/

- AG
S1. Um hm./
G/FE IN
- S2. You know, so she was really pleased/ and the other the
position in Humboldt was a special ed position in the
high school./ Which was which was okay/ um was doing
would have been a lot of programming for aids to work
with these handicapped kids and stuff./ But she said I
just, I couldn't ask for a better workload to get
started./
AG
- S1. Um hm./
G/FE
- S2. You know her major is English and Social Studies but
she has a keen interest in the food part of the Home Ec
and that is what she is going to be teaching. So./
FE
- S1. Oh good./
FE
- S2. That's good./
AG G/Q/IN
- S1. Yeah./ And so what's this about you and _____?/
NCM G/IN
- S2. Well, ah, a little while ago there was meeting/ and
they the people the parents and the kids would like to
see a junior youth group get started./ Grade six,
seven, eight./
G/IN
- S1. See we have seven, eight at our church./
AG G/IN
- S2. Yeah,/ they thought about doing it down to five, or
maybe yeah six, seven, eight./
FE
- S1. I wouldn't put grade five, yeah I wouldn't put grade
fives with grade eights./
AG G/IN
- S2. No,/ what they were trying to do was have something for
the kids to go to when they leave awanna in grade
five./
AG
- S1. Um hm./
AG G/FE
- S2. Okay,/ but there are some parents who feel that grade
six is too young/ and they'd like to see awanna pushed
up where they will send their kids to different awanna
groups that have grade six kids in it./ Anyway, um,

- G/IN
- they had this meeting/ and the parents and the kids
 G/IN
 were there/ and they asked the kids to you know put
 down names of people that they would like to see lead
 it./
 AG
- S1. Um hm!/
 G/IN
- S2. Well, _____ was one and _____ was the other one./
 G/FE _____ G/FE
 Well _____ is kinda out of the question,/ you know
 G/FE
 he's got a full plate doing the job that he does/ so ah
 but there's someone else who is interested in doing it
 and that is _____./
 AG
- S1. Um./
 G/IN
- S2. Um, and his name wasn't down/ but he is one that's
 G/FE
 interested in doing it./ So I think it's going to,
 G/FE
 _____ and I have mulled this over/ and if if we were
 to let our names stand because that's what we would do,
 G/FE
 we don't want to just say okay yeah we'll do it./ We
 want to let our names stand and have it put to a vote./
 G/IN
- Um. If we do it, it means that _____ is going to
 pull out of everything else.
 AG
- S1. Um hm./
- G/FE
- S2. That he's involved in/ and I don't know whether that
 means that he would still stay as moderator but just in
 that position where he would meet with the board
 AG
- S1. Um hm./
- S2. And chair the meeting kind of thing./
 AG
- S1. Um hm./
 G/FE
- S2. But he wouldn't be involved in all the other little
 meetings and stuff that go on which he is doing right
 now./
 AG FE
- S1. Yeah,/ that's a full time job./
 AG
- S2. Yeah./

- AG
 S1. Um hm./
- FE G/FE
 S2. And there's a really big difference./ I know the kids
 really love _____ when she teaches Sunday school/ but
 they run her you know./ Like they're up on the table/
 and they're noisy/ and they are they don't pay
 attention and then./ Not that they don't like her but
 because she is not strict enough/
 MR
- S1. Firm./
 G/FE
- S2. With them, firm enough with them./
 MR
- S1. Firm but kind./
 G/FE
- S2. They just kind of run all over./ Yeah./ So anyway, I
 don't know what would happen,/ we, it would be nice to
 have somebody, I think that we would if we were going
 to do it we would do it on a full-time basis./ And
 have those other somebody else there to assist with
 certain things or with everything or whatever. Or to
 pinch-hit if there was something up that we couldn't be
 there for./
 AG
- S1. Um hm./
 G/FE
- S2. So those are kind of some of things we're running
 around./
 Q/IN
- S1. What night?/
 IN G/IN
- S2. I think Monday./ We won't do it on the weekend./
 G/IN
 Friday night is our family night./
 AG
- S1. Um hm./
 G/FE G/FE
- S2. And we're very jealous of that night./ Um, so I think
 it would I think we're looking at a Monday, running
 it for an hour and a half/ and I think that's plenty
 for kids of that age group./
 AG
- S1. Um hm./

- G/FE
 S2. So we'd go from 7 to 8:30 or something like that./
 G/IN
 S1. We just recently switched over to Friday nights./
 Q/AG
 S2. Did ya/
 AG G/FE
 S1. Yeah./ But it's we've got totally different options
 CM
 and facilities/ because it's such a large church./
 AG
 S2. Yeah./
 G/IN
 S1. We're going to be going to two services in the fall./
 Q/AG
 S2. Are you/
 FE
 S1. I feel like I'm leaving it sort of in the middle like
 if I leave./
 AG
 S2. Yeah, yeah./
 FE
 S1. You know on one hand you're excited that it gets to
 that point./
 AG
 S2. Um hm./
 FE
 S1. But on the other hand you know you lose something/
 G/Q/ME
 and are we willing to lose so that we can gain./
 AG
 S2. Yeah./
 FE G/IN
 S1. But it's um, I really enjoyed it/ but we're going to be
 looking for two new pastors. Um./
 AG
 S2. Hm./
 G/IN
 S1. The one has been asked to serve on an executive
 director position./
 AG
 S2. Um hm./
 G/IN
 S1. Um, in the interim while they're looking for a
 permanent director for a board at missions in Winnipeg/
 G/IN
 and the other one has gone down to Seminary.
 G/Q/IN
 S2. Hm. Who's the one that's gone to Seminary?/
 G/IN
 S1. _____ ././

- IN
S2. Oh, don't know him./
G/IN
- S1. And _____, the music guy, is the one that's/
MR
- S2. Trying to get in./
DG IN
- S1. No./ That is um doing the executive position/
AG
- S2. Um./
G/FE G/IN
- S1. And he's wonderful./ Him and his wife are just/
AG
- S2. Yeah./
G/FE
- S1. So for once he'll get to sit in the congregation./
G/IN
He'll still be based out of Saskatoon./
AG FE
- S2. Yeah./ Well that's good./
AG G/FE
- S1. Yeah./ But that he carries an awful lot of
responsibility./
AG
- S2. Um hm./
FE
- S1. And whoever comes in will sure be in for a shock./
AG
- S2. Yeah./
G/FE
- S1. He's just one of those people that you can trust
implicitly/

APPENDIX G
DERIVATION OF KAPPA

$$\text{KAPPA} = \frac{P_0 - P_c}{1 - P_c}$$

P_0 = the proportion of units in which raters agree
(the diagonal of the crosstab)

P_c = the proportion of units for which agreement is expected
due to chance (the joint probabilities of the marginal
proportions)

From: Cohen, J. (1960).

APPENDIX H
RATING REPORT

Id	Data Set	Topic	Rec #	Utt #	Codes			Speaker
					Rater 1	Rater 2	Final	
125	2	2	1	1	2	2	2	1
125	2	2	2	1	31	31	31	1
125	2	2	3	2	5	5	5	2
125	2	2	4	2	31	31	31	2
125	2	2	5	3	2	2	2	1
125	2	2	6	3	34	34	34	1
125	2	2	7	4	34	34	34	2
125	2	2	8	5	2	2	2	1
125	2	2	9	5	31	31	31	1
125	2	2	10	6	33	33	33	2
125	2	2	11	7	34	34	34	1
125	2	2	12	8	5	5	5	2
125	2	2	13	8	31	2	2	2
125	2	2	14	8		34	34	2
125	2	2	15	9	34	34	34	1
125	2	2	16	10	5	5	5	2
125	2	2	17	10	31	31	31	2
125	2	2	18	11	5	5	5	2
125	2	2	19	11	31	31	31	2
125	2	2	20	12	5	5	5	1
125	2	2	21	12	2	2	2	1
125	2	2	22	12	19	19	41	1
125	2	2	23	13	33	33	33	2
125	2	2	24	14	5	5	5	2
125	2	2	25	14	31	31	31	2
125	2	2	26	15	5	5	5	2
125	2	2	27	15	31	31	31	2
125	2	2	28	16	5	5	5	2
125	2	2	29	16	31	31	31	2
125	2	2	30	17	5	5	5	2
125	2	2	31	17	19	19	41	2
125	2	2	32	18	5	5	5	2
125	2	2	33	18	19	19	41	2
125	2	2	34	19	5	5	5	1
125	2	2	35	19	19	19	41	1
125	2	2	36	20	3	3	3	2
125	2	2	37	20	5	5	5	2
125	2	2	38	20	31	31	31	2
125	2	2	39	21	18	18	39	1
125	2	2	40	22	2	2	2	1
125	2	2	41	22	34	34	34	1
125	2	2	42	23	5	5	5	1
125	2	2	43	23	31	31	31	1
125	2	2	44	24	34	34	34	2
125	2	2	45	25	5	5	5	2
125	2	2	46	25	19	19	41	2
125	2	2	47	26	5	5	5	2
125	2	2	48	26	31	31	31	2
125	2	2	49	27	5	5	5	1
125	2	2	50	27	31	31	31	1
125	2	2	51	28	5	5	5	1

Id	Data Set	Topic	Rec #	Utt #	Codes			Speaker
					Rater 1	Rater 2	Final	
125	2	2	52	28	31	31	31	1
125	2	2	53	29	5	5	5	2
125	2	2	54	29	2	2	2	2
125	2	2	55	29	34	34	34	2
125	2	2	56	30	34	34	34	2
125	2	2	57	31	5	5	5	2
125	2	2	58	31	31	31	31	2
125	2	2	59	32	19	19	41	2
125	2	2	60	33	5	5	5	2
125	2	2	61	33	31	31	31	2
125	2	2	62	34	19	19	41	2
125	2	2	63	35	34	34	34	1
125	2	2	64	36	19	19	41	1
125	2	2	65	37	34	34	34	2
125	2	2	66	38	34	34	34	2
125	2	2	67	39	5	5	5	2
125	2	2	68	39	19	19	41	2
125	2	2	69	40	5	5	5	2
125	2	2	70	40	19	31	31	2
125	2	2	71	41	2	2	2	1
125	2	2	72	41	34	34	34	1
125	2	2	73	42	34	34	34	2
125	2	2	74	43	5	5	5	2
125	2	2	75	43	19	19	41	2
125	2	2	76	44	19	19	41	2
125	2	2	77	45	5	5	5	2
125	2	2	78	45	31	31	31	2
125	2	2	79	46	19	19	41	2
125	2	2	80	47	5	5	5	2
125	2	2	81	47	31	31	31	2
125	2	2	82	48	5	5	5	2
125	2	2	83	48	19	19	41	2
125	2	2	84	49	19	19	41	2
125	2	2	85	50	5	5	5	1
125	2	2	86	50	31	31	31	1
125	2	2	87	51	20	2	2	2
125	2	2	88	51		31	31	2
125	2	2	89	52	34	34	34	2
125	2	2	90	53	5	5	5	1
125	2	2	91	53	19	19	41	1
125	2	2	92	54	34	34	34	2
125	2	2	93	55	5	5	5	2
125	2	2	94	55	31	31	31	2
125	2	2	95	56	5	5	5	2
125	2	2	96	56	19	19	41	2
125	2	2	97	57	34	34	34	1
125	2	2	98	58	19	19	41	2
125	2	2	99	59	3	3	3	2
125	2	2	100	59	32	32	32	2
125	2	2	101	60	3	3	3	1
125	2	2	102	60	34	34	34	1

Id	Data Set	Topic	Rec #	Utt #	Rater 1	Codes		Speaker
						Rater 2	Final	
125	2	2	103	61	3		3	1
125	2	2	104	61	31	20	31	1
125	2	2	105	62	3	3	3	2
125	2	2	106	62	34	34	34	2
125	2	2	107	63	5	5	5	1
125	2	2	108	63	19	19	41	1
125	2	2	109	64	34	34	34	2
125	2	2	110	65	5	5	5	1
125	2	2	111	65	19	19	41	1
125	2	2	112	66	34	34	34	2
125	2	2	113	67	5	5	5	2
125	2	2	114	67	19	19	41	2
125	2	2	115	68	5	5	5	2
125	2	2	116	68	19	19	41	2
125	2	2	117	69	19	19	41	1
125	2	2	118	70	34	34	34	2
125	2	2	119	71	19	19	41	1
125	2	2	120	72	34	34	34	2
125	2	2	121	73	34	34	34	2
125	2	2	122	74	18	19	41	1
125	2	2	123	75	34	34	34	2
125	2	2	124	76	19	19	41	1
125	2	2	125	77	34	34	34	2
125	2	2	126	78	19	19	41	1
125	2	2	127	79	19	19	41	2
125	2	2	128	80	5	5	5	2
125	2	2	129	80	31	31	31	2
125	2	2	130	81	5	5	5	2
125	2	2	131	81	31	31	31	2
125	2	2	132	82	5	5	5	2
125	2	2	133	82	31	31	31	2
125	2	2	134	83	5	5	5	2
125	2	2	135	83	31	31	31	2
125	2	2	136	84	18	18	39	2
125	2	2	137	85	5	5	5	2
125	2	2	138	85	31	31	31	2
125	2	2	139	86	5	5	5	2
125	2	2	140	86	31	31	31	2
125	2	2	141	87	5	5	5	1
125	2	2	142	87	2	2	2	1
125	2	2	143	87	31	31	31	1
125	2	2	144	88	33	33	33	2
125	2	2	145	89	18	18	39	2
125	2	2	146	90	5	5	5	2
125	2	2	147	90	31	31	31	2
125	2	2	148	91	5	5	5	2
125	2	2	149	91	31	31	31	2
125	2	2	150	92	3	3	3	2
125	2	2	151	92	5	5	5	2
125	2	2	152	92	31	31	31	2
125	2	2	153	93	3	3	3	2

Id	Data Set	Topic	Rec #	Utt #	Rater 1	Codes		Final	Speaker
						Rater 2			
125	2	2	154	93	18	18	38	2	
125	2	2	155	94	3	3	3	2	
125	2	2	156	94	5	5	5	2	
125	2	2	157	94	31	31	31	2	
125	2	2	158	95	18	18	39	2	
125	2	2	159	96	18	18	39	2	
125	2	2	160	97	5	5	5	2	
125	2	2	161	97	31	31	31	2	
125	2	2	162	98	19	19	41	1	
125	2	2	163	99	19	19	41	2	
125	2	2	164	100	34	34	34	2	
125	2	2	165	101	5	5	5	2	
125	2	2	166	101	31	31	31	2	
125	2	2	167	102	34	34	34	1	
125	2	2	168	103	5	5	5	2	
125	2	2	169	103	19	19	41	2	
125	2	2	170	104	5	5	5	1	
125	2	2	171	104	19	19	41	1	
125	2	2	172	105	5	5	5	2	
125	2	2	173	105	31	31	31	2	
125	2	2	174	106	5	5	5	2	
125	2	2	175	106	31	31	31	2	
125	2	2	176	107	5	5	5	2	
125	2	2	177	107	31	31	31	2	
125	2	2	178	108	5	5	5	2	
125	2	2	179	108	31	31	31	2	
125	2	2	180	109	5	5	5	2	
125	2	2	181	109	31	31	31	2	
125	2	2	182	110	5	5	5	2	
125	2	2	183	110	31	31	31	2	
125	2	2	184	111	34	34	34	1	
125	2	2	185	112	5	5	5	2	
125	2	2	186	112	31	31	31	2	
125	2	2	187	113	5	5	5	2	
125	2	2	188	113	31	31	31	2	
125	2	2	189	114	5	5	5	2	
125	2	2	190	114	2	2	2	2	
125	2	2	191	114	34	34	34	2	
125	2	2	192	115	31	31	31	2	
125	2	2	193	116	31	31	31	2	
125	2	2	194	117	5	5	5	2	
125	2	2	195	117	31	31	31	2	
125	2	2	196	118	5	5	5	2	
125	2	2	197	118	31	31	31	2	
125	2	2	198	119	5	5	5	2	
125	2	2	199	119	31	31	31	2	
125	2	2	200	120	31	31	31	2	
125	2	2	201	121	1	1	1	1	
125	2	2	202	121	26	26	26	1	
125	2	2	203	122	31	31	31	2	
125	2	2	204	123	19	19	41	1	

Id	Data Set	Topic	Rec #	Utt #	Codes			Speaker
					Rater 1	Rater 2	Final	
125	2	2	205	124	34	34	34	2
125	2	2	206	125	5	5	5	2
125	2	2	207	125	19	19	41	2
125	2	2	208	126	31	31	31	2
125	2	2	209	127	34	34	34	1
125	2	2	210	128	31	31	31	2
125	2	2	211	129	2	2	2	2
125	2	2	212	129	18	18	39	2
125	2	2	213	130	5	5	5	1
125	2	2	214	130	2	2	2	1
125	2	2	215	130	34	34	34	1
125	2	2	216	131	34	34	34	2
125	2	2	217	132	18	18	38	1
125	2	2	218	133	19	19	41	1
125	2	2	219	134	2	2	2	1
125	2	2	220	134	19	19	41	1
125	2	2	221	135	19	19	41	2
125	2	2	222	136	31	31	31	1
125	2	2	223	137	34	34	34	2
125	2	2	224	138	3	3	3	2
125	2	2	225	138	2	2	2	2
125	2	2	226	138	34	34	34	2
125	2	2	227	139	3	3	3	1
125	2	2	228	139	31	31	31	1
125	2	2	229	140	34	34	34	2
125	2	2	230	141	34	34	34	2
125	2	2	231	142	19	19	41	2
125	2	2	232	143	19	19	41	1
125	2	2	233	144	19	19	42	1
125	2	2	234	145	19	19	42	1
125	2	2	235	146	34	34	34	2
125	2	2	236	147	19	19	41	1
125	2	2	237	148	19	19	41	1
125	2	2	238	149	34	34	34	2
125	2	2	239	150	2	2	2	1
125	2	2	240	150	34	34	34	1
125	2	2	241	151	19	19	41	2
125	2	2	242	152	19	19	41	2
125	2	2	243	153	5	5	5	2
125	2	2	244	153	19	19	41	2
125	2	2	245	154	34	34	34	1
125	2	2	246	155	5	5	5	2
125	2	2	247	155	31	31	31	2
125	2	2	248	156	5	5	5	2
125	2	2	249	156	19	31	31	2
125	2	2	250	157	5	5	5	2
125	2	2	251	157	31	31	31	2
125	2	2	252	158	5	5	5	2
125	2	2	253	158	31	31	31	2
125	2	2	254	159	5	5	5	2
125	2	2	255	159	31	31	31	2

Id	Data Set	Topic	Rec #	Utt #	Rater 1	Codes		Final	Speaker
						Rater 2			
125	2	2	256	160	34	34	34	1	
125	2	2	257	161	5	5	5	2	
125	2	2	258	161	19	19	41	2	
125	2	2	259	162	5	5	5	1	
125	2	2	260	162	31	19	31	1	
125	2	2	261	163	18	18	39	2	
125	2	2	262	164	19	19	41	2	
125	2	2	263	165	34	34	34	1	
125	2	2	264	166	5	5	5	2	
125	2	2	265	166	19	19	41	2	
125	2	2	266	167	31	31	31	2	
125	2	2	267	168	19	19	41	2	
125	2	2	268	169	19	31	41	2	
125	2	2	269	170	5	5	5	2	
125	2	2	270	170	31	31	31	2	
125	2	2	271	171	34	34	34	1	
125	2	2	272	172	5	5	5	2	
125	2	2	273	172	19	19	41	2	
125	2	2	274	173	19	19	41	1	
125	2	2	275	174	19	19	41	2	
125	2	2	276	175	34	34	34	2	
125	2	2	277	176	5	5	5	1	
125	2	2	278	176	2	2	2	1	
125	2	2	279	176	31	31	31	1	
125	2	2	280	177	31	33	33	2	
125	2	2	281	178	5	5	5	2	
125	2	2	282	178	31	31	31	2	
125	2	2	283	179	32	32	32	2	
125	2	2	284	180	5	5	5	1	
125	2	2	285	180	31	31	31	1	
125	2	2	286	181	34	34	34	2	
125	2	2	287	182	5	5	5	2	
125	2	2	288	182	31	31	31	2	
125	2	2	289	183	19	19	41	1	
125	2	2	290	184	34	34	34	2	
125	2	2	291	185	5	5	5	2	
125	2	2	292	185	19	31	31	2	
125	2	2	293	186	34	34	34	1	
125	2	2	294	187	34	34	34	2	
125	2	2	295	188	5	5	5	2	
125	2	2	296	188	19	19	41	2	
125	2	2	297	189	5	5	5	2	
125	2	2	298	189	19	19	41	2	
125	2	2	299	190	5	5	5	2	
125	2	2	300	190	31	31	31	2	
125	2	2	301	191	5	5	5	2	
125	2	2	302	191	31	31	31	2	
125	2	2	303	192	5	5	5	2	
125	2	2	304	192	31	31	31	2	
125	2	2	305	193	34	34	34	1	
125	2	2	306	194	5	5	5	2	

Id	Data Set	Topic	Rec #	Utt #	Rater 1	Codes		Final	Speaker
						Rater 2			
125	2	2	307	194	31	31	31	2	
125	2	2	308	195	5	5	5	2	
125	2	2	309	195	19	19	41	2	
125	2	2	310	196	5	5	5	2	
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125	2	2	337	213	5	5	5	1	
125	2	2	338	213	31	31	31	1	
125	2	2	339	214	34	34	34	2	
125	2	2	340	215	5	5	5	1	
125	2	2	341	215	31	31	31	1	
125	2	2	342	216	5	5	5	1	
125	2	2	343	216	31	31	31	1	
125	2	2	344	217	34	34	34	2	
125	2	2	345	218	19	19	41	1	
125	2	2	346	219	19	19	41	1	
125	2	2	347	220	5	5	5	1	
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125	2	2	350	222	31	31	31	2	
125	2	2	351	223	5	5	5	1	
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125	2	2	354	225	5	5	5	2	
125	2	2	355	225	19	19	41	2	
125	2	2	356	226	5	5	5	2	
125	2	2	357	226	19	19	41	2	

Id	Data Set	Topic	Rec #	Utt #	Codes			Speaker
					Rater 1	Rater 2	Final	
125	2	2	358	227	5	5	5	1
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125	2	2	360	227	34	34	34	1
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125	2	2	377	237	19	19	41	2
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125	2	2	379	238	19	19	41	2
125	2	2	380	239	5	5	5	2
125	2	2	381	239	19	19	41	2
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125	2	2	393	246	19	19	41	2
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125	2	2	402	252	34	34	34	2
125	2	2	403	253	19	19	41	2
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125	2	2	405	254	19	19	41	2
125	2	2	406	255	5	5	5	2
125	2	2	407	255	19	19	41	2
125	2	2	408	256	34	34	34	1

Id	Data Set	Topic	Rec #	Utt #	Rater 1	Codes		Speaker
						Rater 2	Final	
125	2	2	409	257	5	5	5	2
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125	2	2	418	262	34	34	34	1
125	2	2	419	263	5	5	5	2
125	2	2	420	263	19	19	41	2
125	2	2	421	264	5	5	5	2
125	2	2	422	264	19	19	41	2
125	2	2	423	265	19	19	41	2
125	2	2	424	266	34	34	34	1
125	2	2	425	267	5	5	5	2
125	2	2	426	267	19	19	41	2
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125	2	2	432	271	5	5	5	1
125	2	2	433	271	19	19	41	1
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125	2	2	447	281	18	18	39	1
125	2	2	448	282	34	34	34	2
125	2	2	449	283	19	19	41	1
125	2	2	450	284	5	5	5	1
125	2	2	451	284	31	31	31	1
125	2	2	452	285	34	34	34	2
125	2	2	453	286	5	5	5	1
125	2	2	454	286	31	31	31	1
125	2	2	455	287	34	34	34	2
125	2	2	456	288	5		5	1
125	2	2	457	288	31	31	31	1
125	2	2	458	289	5	5	5	1
125	2	2	459	289	31	31	31	1

Id	Data Set	Topic	Rec #	Utt #	Rater 1	Codes		Speaker
						Rater 2	Final	
125	2	2	460	290	5	5	5	2
125	2	2	461	290	2	2	2	2
125	2	2	462	290	31	31	31	2
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125	2	2	465	292	31	31	31	2
125	2	2	466	293	5	5	5	1
125	2	2	467	293	31	31	31	1
125	2	2	468	294	20	20	20	2
125	2	2	469	295	35	34	35	1
125	2	2	470	296	34	34	34	2
125	2	2	471	297	31	31	31	1
125	2	2	472	298	34	34	34	2
125	2	2	473	299	5	5	5	1
125	2	2	474	299	19	19	41	1
125	2	2	475	300	5	5	5	1
125	2	2	476	300	31	31	31	1
125	2	2	477	301	34	34	34	2
125	2	2	478	302	5	5	5	1
125	2	2	479	302	19	19	41	1
125	2	2	480	303	5	5	5	1
125	2	2	481	303	31	31	31	1
125	2	2	482	304	34	34	34	2
125	2	2	483	305	19	19	41	2
125	2	2	484	306	34	34	34	1
125	2	2	485	307	5	5	5	1
125	2	2	486	307	19	19	41	1
125	2	2	487	308	34	34	34	2
125	2	2	488	309	19	19	41	1
125	2	2	489	310	34	34	34	2
125	2	2	490	311	5	5	5	1
125	2	2	491	311	19	19	41	1

APPENDIX I
LOGLINEAR STATISTICAL MODELS

Loglinear statistical models are based on the classical chi-square statistic and are powerful techniques for unravelling the associations among variables in complex multidimensional contingency tables. To obtain a linear model, the natural logarithms of the cell frequencies, rather than the actual counts, are used. The general loglinear analysis involves fitting a loglinear model to the observed cell frequencies of a cross-classification table in order to obtain the most parsimonious yet adequate description of the distribution of the data. An example of a loglinear model involving four variables as in this study is shown below:

$$\log P_{(ijkl)} = u_{(0)} + u_{(1)} + u_{(2)} + u_{(3)} + u_{(4)} + u_{(12)} + u_{(13)} + u_{(14)} + u_{(23)} + u_{(24)} + u_{(34)} + u_{(123)} + u_{(124)} + u_{(134)} + u_{(234)} + u_{(1234)},$$

where $P_{(ijkl)}$ = expected probability of a cell; $u_{(0)}$ = grand mean; $u_{(1)}$ = main effect for variable 1; $u_{(12)}$ = two-way interaction of variables 1 and 2; $u_{(123)}$ = three-way interaction for variables 1, 2 and 3; $u_{(1234)}$ = four-way interaction of all four variables. The above model, typically referred to as the saturated model, completely describes the data because all possible terms of the four variables are included. Because of this all-inclusive nature of the model it is not a parsimonious description of

the data. In addition, in the saturated model, the expected frequencies are set to equal the observed frequencies so the saturated model is untestable. The saturated model always has a goodness-of-fit statistic (G^2) equal to 0.0000, $p = 1.000$, indicating a good fit. However, since it is untestable it serves as a starting point for exploring other models that could more parsimoniously represent the data. The reader should note the similarities between regression analysis and loglinear analysis. In regression, the change in multiple R^2 when a variable is added to the model indicates that additional information is conveyed by that variable. Similarly, in loglinear analysis the decrease in the value of G^2 when terms are added to the model signals their contribution to the model. The difference between regression and loglinear is that R^2 increases when additional variables are added to the model since large values of R^2 are associated with good models, and G^2 decreases when terms are added since small values of G^2 are associated with good models.

The modelling process begins with the saturated model. The extent to which each one of the terms in the above model is significant in contributing to adequate modelling of the data is examined in a stepwise, backward, hierarchical manner. By deleting the highest-order term, a new more parsimonious model is created, which is then compared to the

saturated model for goodness-of-fit (G^2), to see if the lower model is an adequate representation of the data. If this more parsimonious model is judged similar to the saturated model, another term is removed and the G^2 is assessed. This sequential hierarchical procedure is continued until the unrelated terms are deleted from the model. The final model obtained is thus the most parsimonious yet adequate model to describe the actual data distribution.

The second step in the modelling process is the assessment of nonhierarchical models. In hierarchical models, if a higher-order term is included, all the lower-order terms are automatically included as well. With nonhierarchical models, the standard residuals (standardized differences between the expected and the observed frequencies) are inspected to determine which terms make a significant contribution to the model. If a lower order term is not significant, it is deleted, and the G^2 is assessed relative to the previous model. This stepwise procedure continues until the most parsimonious model is determined.

Following selection of the model, the third step is to fit a model for logit-loglinear models. Logit-loglinear models are special cases of loglinear analysis in which a

distinction is made between the independent and the dependent variables. In these models, only variables that are related to the dependent measures are of concern. Since loglinear models include an assessment of all relationships among all the variables, many of the terms may be of no theoretical interest, as they are unrelated to the dependent measure. For example, in this research, the relationship between age and gender is of no interest, it is only the relationship between these two variables and the five aggregate codes that is of interest. Following selection of a parsimonious logit-loglinear model, the standard residuals are examined to determine the specific differences in the levels of the term.

The foregoing is a very simplified discussion of loglinear models. The interested reader is referred to Fienberg (1980), Bishop, Fienberg and Holland (1975), and Everitt (1977) for a more complete description of these interesting statistical models. The analyses herein were performed using SPSS for Windows Advanced Statistics Release 6.0 (Norusis, 1993).

APPENDIX J

RESULTS OF THE REPEATED MEASURES MANOVA

The results of the repeated measures MANOVA with topic as the within-subject repeated measure (a doubly multivariate design) concurred with the results of the repeated measures ANOVAS. A significant within-subject effect for topic was found, Wilks' Lambda = 0.229, multivariate $F(5,14) = 9.448$, $p < 0.0004$. Neither the between-subject main effects nor the interaction was significant. Main effects for gender were, Wilks' Lambda = 0.509, multivariate $F(5,14) = 2.700$, $p < 0.0654$. Main effects for age were, Wilks' Lambda = 0.735, multivariate $F(10,28) = 0.466$, $p < 0.4655$. The interaction between gender and age was, Wilks' Lambda = 0.432, multivariate $F(10,28) = 1.459$, $p < 0.2068$.

To determine the sources of variability for the significant within-subject effect (topic), five separate contrasts were performed on the difference due to topic for each of the five dependent variables by gender, age, and the interaction of gender and age. These specific contrasts were equivalent to the repeated measures ANOVA reported in the results and therefore, are not listed here.