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**A QUALITATIVE ANALYSIS OF REPORTS ABOUT
INTERPERSONAL RELATIONSHIP DEVELOPMENT DURING
COMPUTER-MEDIATED COMMUNICATION**

A Thesis

**Submitted to the Graduate Faculty of the
University of South Alabama
in partial fulfillment of the
requirements for the degree of**

Master of Arts

in

The Department of Communication

by

Laura P. Rogers

B.A., University of South Alabama, 1994

December, 1998

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THE UNIVERSITY OF SOUTH ALABAMA

COLLEGE OF ARTS AND SCIENCE

A QUALITATIVE ANALYSIS OF REPORTS ABOUT
INTERPERSONAL RELATIONSHIP DEVELOPMENT
IN COMPUTER-MEDIATED COMMUNICATION


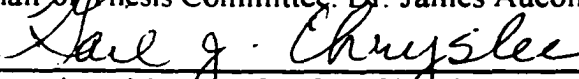
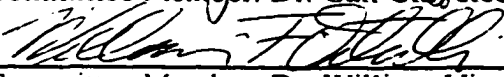
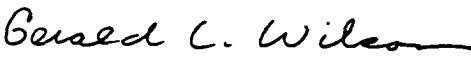
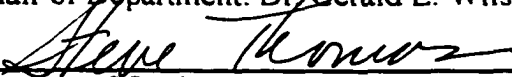
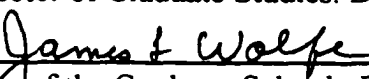
BY
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ACKNOWLEDGMENTS

Dr. James Aucoin and Dr. Gail Chrysee gave their time, support and guidance in preparation of this thesis and throughout my term in graduate school. Dr. William Vitulli gave his time, suggestions, and support during this project and throughout my undergraduate career. Thank you, Dr. Aucoin, Dr. Chrysee, and Dr. Vitulli, for teaching me and for helping to make this accomplishment possible.

Laura Williamson and Aric Poole are classmates who encouraged and supported me during graduate school. Laura listened with interest and understanding while I discussed my thesis topic which truly helped in going through the process of planning and executing my research. Thank you, Laura and Aric.

My husband, Dr. David Rogers, supported me (in more ways than one), giving me the opportunity to go to school. My children, Katie, Beth, Maryanna, and David Rogers listened with interest when I discussed my thesis project. Thank you, David, Katie, Beth, Maryanna, and David for your patience and support.

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ABSTRACT

Rogers, Laura P. M.A., University of South Alabama, December, 1998.
A Qualitative Analysis of Reports about Interpersonal Relationship Development in
Computer-Mediated Communication. Chair of Committee: Dr. James Aucoin, PhD.

The purpose of this study was to add to existing knowledge about interpersonal relationships that began and developed through computer-mediated communication. The research question was, "What are some patterns that can be identified by studying reports of those who have developed interpersonal relationships that began via the computer?" To answer the question, grounded theory was used in analyzing stories written and questions answered by people who had begun and developed on-line interpersonal relationships. The results of the analyses showed how people were attracted, which channels of communication were used that contributed to the progression of the relationships, and the sequence in which some relationships developed. Comparisons indicated a parallel in the stages of development of relationships in face-to-face communication to stages in computer-mediated communication. The study found that there are patterns that can be identified and categorized that contribute to understanding of communication in on-line interpersonal relationships.

CHAPTER I INTRODUCTION

In order to gain knowledge about interpersonal relationships which began via the computer, stories and answers to questionnaires written by participants in relationships that started on line were analyzed. The stories were written by participants about their on-line relationships and sent to a site on the Internet called LOVE@AOL.COM. Stories of one or both partners of 37 couples were studied. The stories were analyzed inductively using grounded theory. After the analysis of the stories, questionnaires were e-mailed to each individual of the 37 couples whose stories had been analyzed. The answers to the questionnaires were then analyzed to see which concepts or patterns of behavior were evident. Comparisons were made between categories that emerged in stories and questionnaires to existing communication theories. This research was done to answer the question, “What are some patterns that can be identified by studying reports of individuals who have developed interpersonal relationships that began via the computer?”

In order to study interpersonal relationships that have started via the computer, it was necessary to understand research concerning face-to-face (FtF) interpersonal relationship development and to understand research concerning the computer as an environment for communication. Knowledge gained from archival research concerning FtF relationship development and research concerning the computer as a medium for communication was used as background information in order to understand aspects of relationships that developed via the computer. Some claims that have been made in FtF interpersonal research about relationships are:

- there are stages in the development of interpersonal relationships
- attraction is a factor in the beginning stage of relationships and

- *cues* are important in the development of relationships in FtF communication and in computer-mediated communication (CMC). *Cues* are defined as signals that communicators send through channels of communication (Walther & Burgoon, 1992).

Some examples of the research concerning relationship development in FtF encounters are: Knapp's and Calabrese and Berger's descriptions of stages in face-to-face relationships, Duck's study about initial attraction in FtF relationships, and Zuckerman and Driver's study about the importance of cues in FtF interaction. Knapp (1978) identified five stages of development in FtF relationships. According to Knapp the five stages are: initiating, experimenting, intensifying, integrating, and bonding. Berger and Calabrese (1975) identified three stages of development in FtF relationships. They are: entry phase, personal phase, and exit phase. Knapp (1978) said that individuals decide whether to engage in conversation based on attraction. Therefore, attraction is a factor in his first stage of relationship development. In FtF communication, visual and verbal cues are used to decide whether there is a physical attraction (Zuckerman & Driver, 1989). In *Theory and Practice of Interpersonal Attraction*, Duck (1977) explained that there are other factors that influence attraction such as direct rewards and punishment, enjoyment behaviors (reinforcement), and similarity. According to Duck (1977), there is a need to understand the point of origin of relationships in different circumstances. Cues are one factor that contribute to the point of origin and development of relationships. The *social presence theory*, the *social context cues theory*, and the *media richness theory* predict that the reduction in physical cues in CMC make it more impersonal and nonconforming than FtF communication (Parks & Floyd, 1996).

In this thesis, knowledge gained from archival research about attraction, stages of development in relationships and cues in FtF encounters were combined with information gathered in the analyses of stories and questionnaires. Information compiled led to a description of patterns which enabled the researcher to answer the question, "What are some patterns that can be identified by studying reports of individuals who have developed interpersonal relationships that began via the computer?"

CHAPTER II

REVIEW OF THE LITERATURE

In order to answer the research question, “What are some patterns that can be identified by studying reports by individuals who have developed relationships that began via the computer?”, research that pertains to relationships that have developed in face-to-face situations and research that examines the computer as a medium for relationship growth were examined. Research examined included studies concerning needs of people in beginning acquaintances, studies concerning cues (cues are signals sent through channels of communication), studies concerning attraction, and studies about stages of development in interpersonal relationships.

Ross and Ross (1982), Duck (1991), and Berger and Calabrese (1991) explained needs of people in initial interactions. Ross and Ross (1982) said in communication the need to make sense of the social world leads people to speculate about other people’s traits and attributes. Duck (1991) said that gathering information about each other is the main need of persons who are beginning an acquaintance in face-to-face (FtF) interpersonal relationships. Berger and Calabrese (1975) said that the main need of people in initial interactions is to reduce uncertainty. Duck’s explanation of the need to gather information, Berger and Calabrese’s need to reduce uncertainty, and Ross and Ross’s need to make sense of the world are not contradictory to each other. Berger and Calabrese’s (1975) *uncertainty reduction theory* (URT) explained how the need to gather information, the need to make sense of the world, and the need to reduce uncertainty are interrelated. In defining uncertainty, Berger and Calabrese explained that there are prediction and explanation components when people interact (1975). The predictive component involves the attempt of the interactants to predict how the other will behave from the information they have compiled about the other person. The explanation

component involves the attempt to make sense or explain the behavior of the other after an action. Understanding the behavior of another in a relationship results in a reduction of uncertainty, which lessens tension (Berger & Calabrese, 1975). By combining conclusions of Ross and Ross, Duck, and Berger and Calabrese, it can be said that people reduce uncertainty by gathering and organizing information about others which enables them to make sense of the world.

Research about cues helped explain how people synthesize information about others in order to make sense of the world. Vargas (1986) stated that people make judgments of others by combining verbal and non-verbal behaviors. The non-verbal and verbal behaviors that are combined are called cues of communication. Cues are signals that communicators send through channels of communication. Channels send signals through facial expression, posture, and body orientation, the use of distance and space, touch, nonverbal characteristics of voice such as tone of voice and personal appearance (Marsh, 1988). A person's vocal attractiveness and physical attractiveness also influence interpersonal impressions (Zuckerman & Driver, 1989).

There are studies about cues in FtF communication and in CMC. Ross and Ross (1982) developed a FtF communication theory called the *implicit theory of personality* which states that in order to try to make sense of the world there is a tendency to organize and synthesize cues. Ross and Ross (1982) said that the tendency to organize and synthesize cues is an oversimplification of understanding, which can lead to "unhappy" communication. Zuckerman and Driver (1989) stated that with very little information, perceivers label characteristics of another person based on a stereotype held by the perceiver. Berger and Calabrese's uncertainty reduction theory contributes to the understanding of stereotyping. Stereotyping and the *implicit theory of personality* are attempts to make sense of the world. Stereotyping and the implicit personality theory can be seen as unconscious ways that people use to reduce uncertainty about others. Berger and Calabrese, Zuckerman and Driver, Ross and Ross, and Vargas contributed to the understanding of how and why people form judgments of others in FtF encounters.

In computer-mediated communication (CMC), physical social cues such as mode of dress, codes of etiquette, posture, accent, tone of voice, and hundreds of other cues are

missing. CMC changes relational patterns because of the reduced number of cues between people (Walther & Burgoon, 1992). In her honors thesis, at the University of Melbourne, Elizabeth Reid (as cited in Rheingold, 1993, p.181), pointed out that “until the era of electric communications media, almost all cues people used to ascertain social context in communications were more physical than verbal.” In addition, Reid stated in her thesis that in CMC, participants recreate context that is lost by using written words to describe how they would act and how the environment would appear.

Theories that predict that the reduction in physical cues in CMC make it more impersonal and nonconforming than face-to-face communication are: *the social presence theory*, *the social context cues theory*, and *the media richness theory*. CMC is said to be low in “social presence” because of the lack of nonverbal and feedback cues (Walther & Burgoon, 1992). “Social presence” is the idea that each person is equally involved in the communication process (Walther, 1992). It assumes that having fewer channels or cues available in a medium means less attention is paid to the presence of the other person (Walther & Burgoon, 1992).

The *social context cues theory* also focuses on the absence of cues and channels in CMC compared to FtF communication. According to this theory, the absence of cues and channels makes the participants less inhibited (Walther, 1992). The *media richness theory* rates medium according to the number of channels used. Videoconferencing and telephone are described as moderately rich. CMC is seen as “lean” because of the lack of cues available (Walther, 1992). CMC is becoming “richer” because it is now possible to see and hear the other person. For example, some Internet servers now have e-mail in which communicators speak instead of keying in a message.

When rating richness in CMC, some research focused on richness in *medium* and some focused on richness of *information exchange*. The *media richness theory* rates richness by focusing on the computer as a *medium*; other studies rate richness according to the richness of the *information* exchanged via the computer. When focusing on information exchange, some researchers believe that CMC is less rich than FtF communication because of the lack of channels and cues. Parks and Floyd (1996) suggested that CMC is thought to have less information richness because “relational cues

emanating from the physical context are missing, as are nonverbal cues regarding vocal qualities, bodily movement, facial expressions and physical appearance” (p. 81).

Rheingold (1993) stated that many people who communicate well in spontaneous situations, communicate better in CMC. Some people find written communication on the computer more authentic and a more genuine human interaction than FtF communication (Rheingold, 1993). This could be attributed to the fact that people cannot see one another in cyberspace. Therefore, age, gender, national origin, and physical appearance are not apparent unless a person makes these characteristics known by describing them. Rheingold (1993) said that people who find it difficult to form friendships in FtF communication because of some handicap feel that virtual communities treat them as they want to be treated “as thinkers and transmitters of ideas and feeling beings, not carnal vessels with a certain appearance and way of walking and talking (or not walking and talking)” (p. 26).

In *Life on the Screen*, Turkle (1995) said that many people present themselves differently on line than they do in FtF situations. Turkle reported that some think that presenting a different personae is part of on-line communication. She found that some deceive others when communicating online and think it is a part of on-line communication. Therefore, there are negative aspects of communicating online.

To summarize, according to scholars, the lack of physical cues have both positive and negative effects on communication. The lack of cues in CMC can be a hindrance to communication in some situations. On the other hand, the lack of cues in CMC can be a help to some communicators under certain circumstances. CMC can be seen as lean in “richness” because of the lack of cues, but meaningful relationships can develop on line. Relationships in CMC may develop in different ways than in FtF situations.

Knapp (1978) and Berger and Calabrese (1975) described stages of relationship development in FtF situations. When describing FtF relationship development, Knapp (1978) said that individuals decide whether to engage in conversation based on attraction. According to Clore and McGuire (1974), attractiveness is influenced by direct rewards (positive responses, compliments) and punishments (negative responses, disagreements, insults). Attraction is an element in Knapp’s first stage of FtF

relationship development. The five stages that Knapp (1978) identified are: initiating, experimenting, intensifying, integrating, and bonding. In the initiating stage, the situation, attraction, and inviting communication are important. According to Knapp, people try to relay the fact that they are pleasant in the initial stage of communication. After the initial stage of attraction, information is gathered in the experimenting stage of Knapp's stages of relationships. People try to discover the unknown (Knapp, 1978). Name, rank, and demographics are important in the experimenting stage. Strangers are searching for common interests or experiences. Knapp stated that most relationships do not progress beyond this stage.

After becoming acquainted in the experimenting stage, Knapp (1978) explained movement from acquaintance to friendship taking place in the intensifying stage. Self disclosure increases in the intensifying stage. First name, nicknames, or some term of endearment may be used. The use of "we" becomes more common. Private symbols begin to develop. Expressions of commitment begin to appear (Knapp, 1978). In the integrating stage of Knapp's development stages, personalities seem to fuse. Knapp's model at this stage seems to focus on romantic relationships. Intimacy symbols like rings or pins may be exchanged. A song may be designated as "our song" (Knapp, 1978). A commitment is made in the bonding stage (Knapp, 1978). The individuals involved announce that they are a couple. Each of Knapp's stages involve gathering information about the other person and making decisions about whether or not to continue the relationship.

Berger and Calabrese (1975) described three stages of development in communication. The stages are identified as the entry phase, the personal phase, and the exit phase. In the entry phase, communication is governed by rules. However, the communicators may not be aware of the rules. Communication is somewhat structured in the entry phase and tends to focus on demographic information such as home towns, hobbies, occupations, courses of study, and interests. The beginning of Berger and Calabrese's entry phase is similar to Knapp's experimenting stage. At the end of the entry phase, communicators decide whether they will develop the relationship to a more intimate level (Berger & Calabrese, 1975).

Berger and Calabrese (1975) call the second stage the personal phase. In this phase, communicators begin to engage in discussing attitudinal issues, personal problems, and basic values. This phase usually does not appear until the people involved have interacted several times. Interactants might talk about undesirable aspects of their personalities and social relations (Berger & Calabrese, 1975). The personal phase is similar to a combination of Knapp's intensifying and integrating stages.

The final stage is called the exit phase. During this phase, people decide whether to continue their relationship. According to Berger and Calabrese (1978) these stages are not exhaustive or exclusive, but are a guide to what has been observed to happen in FtF communication over and over. Knapp and Berger and Calabrese studied behavior in relationships to describe the stages of development.

In conclusion, in initial contact people try to make sense of their world by synthesizing cues and gathering information about others. By gathering information, they reduce uncertainty. They use the information gathered to decide if they are attracted to others. If they are attracted, a relationship may progress through stages of development. Knowledge gathered from studying theories about needs, theories about cues in FtF communication and CMC, theories about attraction, and theories about stages of development in FtF communication was used when studying information gathered from stories and answers to questionnaires of people who have formed relationships on line. The knowledge gained from the review of the literature helped to answer the question, "What are some patterns that can be identified by studying reports by individuals who have developed interpersonal relationships that began via the computer?"

CHAPTER III METHODOLOGY

Grounded theory was used as the methodology to study stories and answers to questionnaires written by people who described how they had met someone and begun interpersonal relationships online. Grounded theory is used to explore a phenomenon in depth (Strauss & Corbin, 1990). It was used to study computer-mediated interpersonal relationship development in depth. This was done by grouping similar incidents in stories and answers to questionnaires as reported by people who had begun and developed on-line relationships.

Theoretical Explanation of Methodology

Strauss, Glaser, and Corbin define grounded theory and explain its use in inductive research. In *Basics of Qualitative Research*, Strauss and Corbin (1990) stated:

“**grounded theory** is one that is inductively derived from the study of the phenomenon it represents. That is, it is discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon. Therefore, data collection, analysis, and theory stand in a reciprocal relationship with each other. One does not begin with theory, then prove it. Rather, one begins with an area of study and what is relevant to that area is allowed to emerge” (p.23).

This study began by collecting data from subjects whose relationships began via the computer. The data were analyzed after collection. The data analyzed were accumulated from stories written by individuals who wrote to LOVE@AOL.COM. After the stories were analyzed, a questionnaire was sent to the couples involved in the stories that were studied. The answers to the questionnaires were also analyzed using inductive grounded

theory. According to Toulmin and Goodfield (1995), the accumulation and summation of a variety of inquiries to build theory is a definition of induction (p. 70). This study involved an accumulation and summation of a variety of inquiries. The accumulation and summation of information resulted in an interpretation of the inquiries.

Strauss and Corbin (1990) explained that in building theory the researcher interprets and conceptualizes data to form a “theoretical rendition of reality” (p. 22). They said that “the **grounded theory** approach is a qualitative research **method** that uses a **systematic** set of **procedures** to develop an inductively derived **grounded theory** about a **phenomenon**” (p.24) Strauss and Corbin (1990) explained that in asking research questions when using grounded theory, one needs to start with a broad question which may become narrowed and focused during the research. Strauss and Corbin said that “we need a research question or questions that will give us the flexibility and freedom to explore a phenomenon in depth” (p. 37). The broad research question used in this study was, “What are some patterns of behavior that can be identified by studying reports by individuals who have developed interpersonal relationships that began via the computer?”

Strauss and Corbin (1990) explained that the first step of analysis of data in grounded theory is conceptualizing the collected data. Grouping the concepts is the second step to take in the analysis. According to Strauss and Corbin, grouping the concepts is called categorizing. After categorization, the categories are named. Grouping similar incidents and events will cause the emergence of some meaning to the phenomenon being studied. In this case, the phenomenon being studied was relationship development via the computer.

To analyze data using grounded theory, Glaser explained that the focus of the research emerges out of open coding, collection by theoretical sample, and analyzing by constant comparison (1992, p. 25). In *The Basics of Grounded Theory Analysis*, Glaser (1992) defined terms that are necessary in order to accomplish open coding in grounded theory as follows:

“Definitions:

Concepts: The underlying meaning, uniformity and/or pattern within a set of descriptive incidents.

Category: A type of concept usually used for a higher level of abstraction.

Coding: Conceptualizing data by constant comparison of incident with incident, and incident with concept to emerge more categories and their properties.

Open Coding: The initial stage of constant comparative analysis, before delimiting the coding to a core category and its properties—or selecting coding. The analyst starts with no preconceived codes—he remains entirely open.

Theoretical Coding: A property of coding and constant comparative analysis that yields the conceptual relationship between categories and their properties as they emerge. Theoretical codes are conceptual connectors to be used implicitly and explicitly in the way and style in which the analyst writes.

Constant Comparative Coding: Fundamental operation in the constant comparative method of analysis. The analyst codes incidents for categories and their properties and the theoretical codes that connect them” (Glaser, 1992. p. 38).

Glaser (1992) explained that two analytic procedures are basic to the constant comparative method of coding. The first is making comparisons of incident to incident and comparisons of incident to concept. In comparing incident to incident, concepts emerge. In comparing incident to concept, categories emerge. The second procedure is asking the neutral coding question, “What category or property of a category does this incident indicate?” (Glaser, 1992, p. 39). By grouping similar incidents meaning will emerge.

Design and Procedures

Glaser’s steps of analysis were used for this study. More specifically, the procedure of analysis used to study the stories was as follows:

- Stories available at LOVE@AOL.COM on June 30, 1998 were analyzed by grouping information gathered in the stories (open coding).

- A comparison of incident to incident was made yielding concepts (coding).
- A comparison of incident to concept was made which yielded categories (coding).
- Decisions were made about which properties of categories each incident indicated.
- Groupings were made of similar incidents which yielded meaning (theoretical coding).
- Coding of incidents for categories and their properties and the theoretical codes that connect them (constant comparative coding).

In order to understand the analyses of the stories, it is necessary to explain how the stories that were studied were acquired. Subjects met while using an on-line service. The on-line service used was America On-line which is abbreviated AOL. AOL asked people who had met on line to write their stories about their meetings and developing relationships and to e-mail them to LOVE@AOL. The story judged to be the best in that month entitled the writer and partner to become LOVE@AOL's Couple of the Month. The monthly contest winner received a free CyberVows ceremony, two CyberVows certificates, and two CyberVows t-shirts. The exchange of CyberVows is an on-line commitment to another person. CyberVows is an exclusive creation of AOL. A CyberVow ceremony is not a substitute for a civil or religious wedding off line and is in no way legally binding. The charge for the CyberVows ceremony is \$9.95. The charge for the ceremony and two certificates is \$19.95. Therefore, the desire to exchange CyberVows and the chance to receive other prizes may have encouraged people to share their stories.

On June 30, 1998, there were 47 stories available at the LOVE@AOL CyberVows Couples' Stories site. The stories were printed by the researcher to be analyzed. Twenty four males and 23 females wrote stories. The 47 stories represented 37 different couples. In 20 cases, each person of the couple wrote a story. In 27 cases, only one person of the couple wrote a story. Therefore, the number of stories available to be analyzed on June 30 was 47. The stories were analyzed using grounded theory. Through comparisons of similarities of incidences in the stories, meaningful categories began to emerge.

People who submitted their stories to LOVE@AOL.COM agreed to allow AOL to

post their stories and screen names on line. Therefore, the researcher had access to the screen names and e-mail addresses of both people who made up the couples that had developed the relationships. The stories represented 37 couples. Questionnaires (Appendix A) were sent by e-mail to each of the 74 people who made up the couples. Eleven of the e-mail addresses were no longer in existence, so the questionnaire reached 63 people. Of the 63 questionnaires sent, 12 were answered and returned to the researcher for analysis. Ten females and two males completed the questionnaire. This was a 17% response rate. The 12 responses represented 10 couples because both parties in two couples answered the questionnaire and only one person of each of the other 8 couples answered. In other words, at least one person in 10 of the 37 couples responded. Twenty seven percent of the couples were represented by one person in the answers to the questionnaires.

The questionnaire was developed before the stories were analyzed to prevent forcing of emergence of concepts. After the stories were analyzed, the questionnaire was sent. The responses were then analyzed using grounded theory following steps that were used when analyzing the stories. By open coding, answers to questions were grouped systematically to enable grouping of similar incidences. In some cases concepts were found in the questions. By comparing similarities or incidences and concepts (coding), categories were identified.

By comparing similar incidents, categories emerged concerning what instigated the initial contact, what attracted the individuals to each other, and what motivated the continuation of the relationship. By comparing information gathered from the stories and answers to the questionnaires with existing communication theory, meaning emerged. The comparison of information gained in this study with existing theories about FtF relationship development yielded meaning about stages of relational development in computer-mediated communication (CMC).

CHAPTER IV

RESULTS

Stories and questionnaires were analyzed by open coding. In other words, in the initial stages of analyzing the stories which were sent to LOVE@AOL.COM, the analyst had no preconceived codes in mind. By coding, there was a constant comparison of incident to incident. From the grouping of similar incidents during comparisons, concepts and categories emerged. After the stories were analyzed grounded theory was also used to analyze the information obtained in the questionnaires (Appendix A). The first analysis of the questionnaires was completed separately from the stories. During the analysis, it became evident that information gathered in the questionnaires was forming concepts that resulted in the same categories that emerged during analysis of stories. The results of the findings are a combination of information gathered from the stories and information gathered from the questionnaires. The combination of information adds clarity and strength to the findings by supplying more incidents and concepts to define categories. In order to define categories pertaining to on-line relationships, it was necessary to try to understand the description of the relationships being studied.

Before the study began there was an attempt to define the kinds of interpersonal relationships that would be studied. It was decided that computer-mediated relationships being analyzed could best be defined by people involved in the relationships. By analyzing answers to questions describing their relationships and by analyzing their stories, descriptions were found. When asked, in question #5 on the questionnaire (Appendix A), what kind of relationship they had, the respondents were given the choices of “friendship”, “romantic”, and “other”. They were also asked to explain how they would describe their answer. In other words, they were asked how they

would define their *romantic* relationships and/or *friendships* and/or *other*. Three categories emerged from the analysis of answers. The three categories that described the relationships were: friendships, romantic relationships, and relationships that were both friendships and romantic. Two people described the relationship as friendships, 7 people described the relationship as romantic, and 2 described the relationship as romantic and a friendship. One person that answered “other” stated that the relationship had ended. Some definitions that respondents gave to describe a romantic relationship included: “two people being bonded by their hearts and souls,” “being deeply in love and wanting a lifetime commitment,” “falling in love,” “sharing mutual feelings and dreams,” “sharing common interests,” “doing and saying things because you really care and love one another,” and “sharing a home and planning to be married.” Some definitions of friendship given were: “being close and sharing a lot but not being sexually involved,” “being able to talk about anything,” and “loving to be together.” In stories, relationships were described by participants as they progressed from first contact to the time of commitment.

In the stories studied, many people mentioned what first caught their attention on line that resulted in meeting the other person in the relationship. Five said the screen name of the other person grasped their attention. Five noticed the profile of the other person. A profile is a list of information which is submitted by a person which can include, but does not necessarily include, name, age, place of residence, and interests. It is available to be read by others on line. Two people mentioned interesting instant messages (IMs) as being what caused them to notice. An instant message is a text message sent to another person who is on line by clicking on his or her screen name and typing a message. An instant message is seen only by the person whose screen name is clicked. Two people were attracted to on-line photographs of the other person. Screen names, instant messages, on-line profiles, and photographs became incidents that formed the concept, *means of initial attention*, in the analysis of the stories. Screen names, IM's, on-line profiles, and photographs were means of initial attention that were attractive to the other person. Therefore, from grouping them the category of *attraction* emerged. The answers to the questionnaires also contained incidents and concepts which resulted

in the emergence of an attraction category.

When asked , “What first attracted you to the other person?”, answers included positive attributes such as “kindness,” “understanding,” “sense of humor,” “happy,” “pleasant,” “nice,” “funny,” “persistent,” “charming,” “upbeat,” and “romantic.” These positive attributes were grouped to form a concept which was named *positive attributes*. This became another concept in the *attraction* category. By grouping answers to the question that asked what the other person did or said that caused the respondent to want to know him or her better, a concept named *inviting communication* emerged. Answers that indicated incidents that were grouped to form the concept of *inviting communication* included, “willingness to listen and not criticize my opinions,” “long, friendly talks,” “her playfulness” (as indicated by on-line symbols), “good listener,” and “everything he said and the way he said them.” The incidents that formed *inviting communication* were identified as reasons that people were attracted to others. Therefore, *inviting communication* also formed the category of *attraction*. As a result of theoretical coding, the category of *attraction* emerged by grouping similar incidents and concepts. Incidents and concepts that formed the *attraction* category are summarized in Table 1.

Gathering information, described in Table 2, became a category in the analyses of the stories and of the answers to the questions in the questionnaire. Concepts emerged from the mention of information that had been exchanged between participants in the relationships regarding

- distance apart at first meeting,
- things that they had in common, and
- marital and family status.

In the stories, 15 people mentioned distance between the two when they first met on line. Some described distance by giving the mileage between their cities of residence. Others named the towns and states or areas of the country to signify distance. One person described distance by telling the time it would take to drive to the other person’s residence and one said the other person lived “across town”. One person referred to their long-distance relationship by saying, “Just like love doesn’t know age or sex, it doesn’t know distance either.”

TABLE 1
 ATTRACTION CATEGORY

Incidents:	Concept:	Category:
“kindness”	Positive Attributes that indicated pleasantness	Attraction
“understanding”		
“sense of humor”		
“charming”		
“happy”		
“pleasant”		

	Inviting Communication	Attraction
LOL(laughing out loud)		
“willingness to listen and not criticize my opinions”		
“long, friendly talks”		
“talked about numerous things”		
“good listener”		
“everything he said and the way he said them”		
“her playfulness”(signified by on-line symbols)		

Table 1 cont. Incidents:	Concepts:	Category:
Internet relay chats	Means of initial attention	Attraction
Instant Message (IM)		
e-mail		
on-line game		
screen name		

TABLE 2

GATHERING INFORMATION CATEGORY

Incidents:	Concept:	Category:
500 miles, 1200 miles, 20 miles, 1100 miles,	Distance apart at first meeting	Gathering Information
10 minutes, "across USA,"		
2000 miles, 1200 miles,		
North Carolina / Detroit		
North Carolina / Florida		
Virginia / Los Angeles		
"town next door"		
Hawaii / Michigan		
Wisconsin / Florida		

"both enjoy line dancing"	Common interests	Gathering Information
"both love the Lord"		
"both had the same problems and feelings"		
"Both of us were too shy to tell the other that we were in love"		
"both less than 5 feet tall"		
"both the quiet and shy type"		
"both love country music"		

Table 2 cont. Incidents:	Concepts:	Category:
formerly married	Marital/Family status	Gathering Information
single		
single with children		

Questions #12 and #13 involved distance on the questionnaire. Number 12 asked, "How far from where you live did the other person live when you first met on line?" All twelve respondents answered the question. The answers in mileage ranged from 20 miles to 2200 miles. One person answered "all the way across the country." Another answered "I live in California and he's in New Hampshire." Number 13 asked if they had moved or had plans to move nearer to each other. Eight people answered "yes" and four people answered "no".

Like *distance apart at first meeting*, *common interests* was a concept that fit in the category, *gathering information*. Many writers indicated that they found that they had interests in common with the other person. Similar interests that people mentioned were beliefs, problems, feelings, physical stature, personality traits, and likes. Things that people had in common such as physical stature or personality traits were said to be common interests so they were included in the *common interests* concept.

Marital and family status was another concept which emerged. In the stories, thirteen people mentioned being married before. Eight mentioned having children. The people who said they had been married before said that they are now single. Not all people stated that they are single, but all are making a commitment by exchanging CyberVows to their on-line partners. From information regarding love and commitment, there is an indication that all people involved in the on-line relationships are single or profess to be. From answers to question #4 on the questionnaire, there was an indication that there were some concerns about honesty in regard to marital status and other information shared on line.

Question #4 asked respondents if, when communicating on line, they were concerned with whether the other person was genuine/honest with regard to his or her professed gender, name, interests, personality, occupation, marital status, and/or age. People could choose multiple items. Ten of the 12 respondents indicated that they were concerned about honesty. Two said that they were concerned about honesty in regard to gender, two in regard to name, four in regard to interests, six in regard to personality, two in regard to occupation, six in regard to marital status, and four had concerns about honesty in regard to age. It is not known at which point in the progression of the

relationship that the concerns were present. There is an indication from reading about relationships in the stories and answers that the concerns have been resolved because all have made a commitment and all profess to love the other person.

During the development of the relationships from meeting on line to making a commitment, channels of communication other than the computer were used by participants. Number 10 on the questionnaire asked which other channels of communication had been used. All twelve respondents had communicated using other channels of communication. Ten had exchanged photographs, all 12 had talked on the phone, seven had met face to face, one had communicated via fax, and eight had communicated via mail. Responses from stories concerning communication via mail and telephone are indicated in Table 3. Question #10 indicates that there were other channels of communication used. Question #14 indicates the channels used and the sequence of other channels of communication in the relationships.

Question #14 on the questionnaire, dealt with the order of occurrences in the on-line relationships that were being analyzed (Table 4). Number 14 asked subjects to number events that applied to their relationships in order of occurrence. They were instructed to place numbers next to listed events that had occurred in their relationships indicating the order of occurrences. Blanks were left next to events that had not occurred. In Table 4, answers of each respondent were coded using symbols representing occurrences. Letters were used to represent each respondent at the top of Table 4. The fewest number of occurrences chosen was eleven. The highest number of occurrences was 15. By coding the answers given in this survey, similar incidences were grouped forming categories of occurrences in the relationships. As a result of grouping similar answers, there is an indication that there were stages of relationship development in the respondents' on-line relationships. Eleven people answered question #14. Every person stated that they asked the other person's city of residence as one of the first three occurrences. Eight of the respondents asked for a real name as one of the first three occurrences. Eight asked about the other person's interests in event three, four or five in the relationship. All respondents had asked for real name, city of residence, and interests as one of their first five occurrences. Seven people gave a picture and nine people received a picture in

TABLE 3

CHANNELS OF COMMUNICATION OTHER THAN THE COMPUTER CATEGORY

Incidents:	Concept:	Category:
"Two weeks after meeting, we exchanged phone numbers and talked on the phone"	Communication via telephone	Channels of Communication other than the computer
"We talk daily online and on the phone"		
"We talk on the phone some times 3 or 4 times a day. Spending hours at a time on the phone."		
"We wrote (on line) to each other for a few months and exchanged our phone numbers and addresses."		
"and yes we do spend A LOT of time on the phone"		
"Our phone bills skyrocketed and we talked via e-mails and IM's every day."		
"With an 800 dollar phone bill and countless hours on the computer we became extremely close and dependent on each other."		
"I took a risk and gave him my unlisted phone number."		
"We talk on the phone 8 hours a day."		

Table 3 cont. Incidents:	Concept:	Category:
“We have gotten to know so much about each other and ourselves through talking daily on line and on the phone.”	Communication via telephone	Channels of Communication other than the computer
“We spend endless hours, every moment that we can, on line and on the phone daily.”		

“I noticed I was really missing our conversations and I wrote her a letter.”	Communication via mail	Channels of Communication other than the computer
“I wrote her a letter every day that I was gone.”		
“She sent me a birthday card through the mail”		

TABLE 4
CODED ANSWERS TO QUESTION #14

Question #14: Please, number the following events that apply to your relationship in the order of occurrence starting with number one for the first occurrence. Leave blank the events which have not occurred in your relationship. Respondents numbered occurrences in parentheses. The researcher coded occurrences with symbols that were inserted in parentheses and then plotted the answers of respondents on a chart below.

- (★) You asked for a real name.
- (△) You asked the other person's city of residence
- (#) You asked about the other person's interests.
- (❖) Used a nickname or pet name for the other person.
- (▲) Referred to the two of you as "we".
- (☎) Talked on the telephone.
- (%) Saw a picture of the other person online or otherwise.
- (&) Gave a picture of yourself to the other person online or otherwise.
- (✉) Communicated via mail.
- (ⓧ) Communicated via fax.
- (☺) Met face to face.
- (?) Received a gift from the other person.
- (*) Gave a gift to the other person.
- (>) Met family member(s) or friend(s) of the other person.
- (♥) Made a commitment to the other person.

Respondents	A	B	C	D	E	F	G	H	I	J	K	L
First five relationship occurrences	#	△	△		△	★	%	#	★	%	△	★
	★	★	★		★	△	&	△	△	★	&	△
	△	#	&		&	%	△	★	#	△	❖	&
	☎	%	%		%	#	★	❖	%	#	★	>
	%	&	#		#	✉	#	%	&	☎	#	#
Middle occurrences	&	☎	☎		☎	▲	✉	&	☺	✉		☎
	✉	☺	▲			❖	☎		❖	&		✉
	*					☎	?			❖		ⓧ
												♥
												%
Last five relationship occurrences	?	▲	*		▲	&	*	☎	*	▲	☎	?
	☺	>	?		?	*	☺	?	?	*	%	*
	>	*	♥		*	?	♥	*	▲	?	>	❖
	▲	?	☺		♥	♥	▲	>	>	>	▲	▲
	♥	♥	❖		☺	☺	>	♥	♥	♥	♥	☺

Respondent D did not answer question #14.
Not every respondent included every occurrence in the answer. Therefore, some steps are missing in some answers.

occurrence one through five. Seven people talked on the phone as one of their fifth through seventh occurrence. Eight referred to the two as “we” in occurrence seven to 11. Ten people gave a gift in their occurrence seven through nine. Eight people made a commitment to the other as one of the last two occurrences chosen. Six met face-to-face in the last four occurrences. Some respondents had not yet met FtF at the time of the questionnaire. Information pertaining to when people met in the progression of their relationships, indicates that the time of FtF meetings varied widely. Some reported meeting near the beginning of the relationship which varied widely with those who reported making CyberVows commitments before meeting FtF.

At the time the stories were written, 21 of the 47 people reported to have met face to face. Fourteen reported that they had not met. Not all writers of stories wrote about whether they had met face-to-face. Some related when they fell in love to when they met face-to-face. Twenty two people said that they were in love with the other person before their face-to-face meeting. Five people said that they fell in love after meeting in person. Two others mentioned an off-line meeting, but didn’t indicate the order of meeting and falling in love in the stories. Whether they fell in love before or after the meeting, all claimed to be in love when the stories and questionnaires were written. In the answer to question #7.a. on the questionnaire, “Would you say that you are in love with the other person?”, all 12 said “yes”. Question #7.b. asked if they had fallen in love before meeting face-to-face. Eight people said “yes” they had fallen in love before meeting FtF. Four said “no”.

Eighteen people who wrote stories to AOL made a proclamation of love in their story. People who wrote stories knew they would have a large audience, the AOL audience, because they had agreed to have their stories posted to AOL. Ten people made a proclamation of love directly to the other person even though their story was addressed to a large AOL audience. For example, one person said, “I love you, baby, and only want you.” Eight people made the proclamation but addressed it to the public, AOL audience. For example, one person said, “He is my best friend, my lover, my love, my heart and my soul.” Other examples of proclaiming love can be found on Table 5. The individual incidents of proclaiming love were combined to form the concept,

proclamation of love. The concept was placed in the category named *expressions of love*. *Terms of endearment* also became a concept of *expressions of love*. Some of the terms of endearment used in stories and in answers to questionnaires were: "Angel Face," "Darling," "Baby," and "Wonderful Prince". *Gifts* also became a concept of *expressions of love* (see Table 5).

Some people went beyond proclamations of love and added intentions of commitment. The proclamations that indicated a life-long commitment were called *public announcements*. Table 6 shows examples of *public announcements*. Nine people made public announcements of life long commitments. For example, one person said, "My heart belongs to her forever". Eleven people proclaimed their marriage plans in their stories. For example, one person said, "We are planning on getting married for real soon". By grouping incidents, *public announcements* and *marriage plans*, a category named *commitment* emerged. All of the subjects represented in the stories and the answers to questionnaires have made commitments to each other. This is known because only people who wanted to exchange CyberVows wrote stories to LOVE@AOL.COM. The exchange of CyberVows is an on-line commitment.

According to findings in this study, romantic relationships and friendships have developed as results of on-line meetings. In all the reports, information gathered indicated that the relationships have progressed from on-line meeting to making a commitment. Channels of communication other than the computer were used during the progression. Patterns were identified that led to categories of *attraction*, *gathering information*, *common interests*, *expressions of love*, and *commitment*. Knowledge was gained about the phenomenon of on-line relationship development by comparing information in questionnaires and stories to each other and to existing communication theory.

TABLE 5
EXPRESSIONS OF LOVE CATEGORY

Incidents:	Concepts:	Categories:
"I love you ____ with all my heart, mind, and soul."	Proclamation of love	Expressions of Love
"You are my heart, my baby, and I'll love you until the Lord tells me not to"		
"I love you now and forever."		
"I love you, baby, and want only you."		
"I love you darling, _____"		
"I want to spend the rest of my life with this beautiful, amazing woman. I have truly found my soul mate, my happiness, my life."		
"I love her with everything that I am."		
"He is my best friend, my lover, my love, my heart and my soul."		
"I love her with everything that I am."		
"It's for real and it's a great feeling being in LOVE with the one meant to be."		
"He is a gift from Heaven and I love him very much."		

Table 5 cont. Incidents:	Concepts:	Category:
Angel Face	Terms of endearment	Expressions of Love
Darling		
Baby		
Wonderful prince		

"She gave me a ring."	Gifts	Expressions of Love
"I unwrapped it and it was an engagement ring."		
"He handed me a teddy bear."		
"I was showered with gifts."		
"A ring was enclosed."		

TABLE 6

COMMITMENT CATEGORY

Incidents:	Concepts:	Category:
"I love her with all my heart, and if it's the Lord's will we will exchange vows, the marriage vows."	Marriage plans	Commitment
"When _____ and I get married, it will be the legal aspect of it because we have already given each other the pledge of devotion, love, and commitment."		
"We are planning on getting married for real soon."		
"Now he will be my husband."		
"Our real wedding will be taking place in Michigan some time."		
"He asked me to marry him."		
"We are getting married on line because that is how we met."		
"We are getting married in real life next year."		
"We plan on meeting in a couple of weeks in real life and we plan on getting married."		

Table 6 cont. Incidents:	Concept:	Category:
“You made me the happiest woman on earth the day you asked me to be your virtual wife.”	Marriage	Commitment
“We have planned on having a real wedding in the future		

“For you I’ll give a life time of fidelity now and for eternity.”	Public announcements	Commitment
“My love ~ I want the whole world to know ~ I will love you with all my Heart and Soul forever and always ~ You are my life ~ Today is the beginning of the rest of our lives.”		
“My heart belongs to her forever.”		
“I will love her with all my heart forever. She is the most wonderful thing that has happened to me in my life.”		

CHAPTER V

DISCUSSION

By using grounded theory, the researcher was able to allow concepts to emerge without bias. The inductive method allowed conceptualization of data by grouping similar incidents. After conceptualization, categories were allowed to emerge which resulted in finding meaning in the reports about the phenomenon of interpersonal relationship development in computer-mediated communication (CMC). There were no preconceived categories or patterns before the analyses of the reports (stories and questionnaires). Rather, the analyses led to patterns derived from grouping incidents, concepts, and categories. The categories of *attraction*, *gathering information*, *expressions of love*, and *commitment* emerged. Through further theoretical coding, it was found that the categories that emerged contained elements that showed a relationship to existing communication theory.

The category of *attraction* resulted from the emergence of concepts which were labeled: *positive attributes*, *inviting communication*, and *means of initial contact*. The means of initial contact were mentioned in the stories as things that attracted people to others. They were attracted by screen names or interesting messages in games, chat rooms, instant messages or on-line games. When asked in the questionnaire what first attracted the respondent to the other person, answers consisted of positive attributes that respondents had assigned to the other person at the beginning of the relationship. This assignment of attributes led to the label, *positive attributes*. The positive attributes represented an interpretation of what the respondent thought of the other person when first attracted. Therefore, these attributes were assigned before couples met face-to-face. What happened that caused subjects to label people with positive attributes? What did

people say or do that caused the attributes to be given to them? In other words, what variable caused the assignment of positive attributes to people whom the respondents had not met face-to-face (FtF)?

Ross and Ross (1982) said that the need to make sense of the social world leads people to speculate about other people's traits and attributes. This tendency to organize and synthesize information and cues is called the *implicit theory of personality*.

Zuckerman and Driver (1989) stated that people label characteristics of another person according to a stereotype held by the perceiver. Whether subjects in this study used stereotyping or the implicit theory of personality to organize information and to make positive attributes is not known. However, information was synthesized in some way that caused participants to make positive attributions and to want the relationship to progress.

In face-to-face communication, people have more physical cues to use to synthesize information than the subjects in this study had when they were first attracted and made the assignment of attributes. In face-to-face encounters, cues are sent through facial expression, posture, body orientation, the use of distance and space, touch, nonverbal characteristics such as tone of voice, and personal appearance (Marsh, 1988). The cues that were available in this study *at the point of initial attraction* were ones available through written, verbal communication. In some cases, on-line pictures were seen at the beginning of the relationships, but even so, the cues from facial expression, posture, body orientation, distance, space, touch, and tone of voice were missing. Reid (as cited in Rheingold, 1993, p.181) reiterated by saying that until the electronic age of communication, almost all cues people used to form opinions were more physical than verbal. Since physical cues were missing in this research when subjects met, what did people do or say that caused the attraction to the other person in this study?

Computer-mediated communication is said to be low in "social presence" because of the lack of nonverbal and feedback cues (Walther & Burgoon, 1992). "Social presence" is the idea that because there are fewer cues in CMC than in face-to-face communication, less attention is paid to the other person in CMC. From the results of this research, it is not known whether less or more attention is paid in CMC than FtF communication, but this research showed that people feel that they are receiving

attention and respect in communication on line. When subjects were asked what the other person did or said that caused him or her to want to know the other person better, their answers indicated that they liked the attention they got from the other person. One person answered, "He kept e-mailing me and IM'ing me—even when he was blocked, he'd find me—he kept wanting to get to know me better." Other answers included, "he was a good listener," and "willingness to listen and not criticize my opinions" (see Table 1). Another answer was, "It wasn't just one thing that he said, it was everything he said and the way he said them." Therefore, people were attracted because attention was being paid to them, to what they said, and to how it was said. This attention was evidence that dialogical, two-way communication was used. Dialogical communication means that each person listens to the other person and values the opinions of the other person. In *Ethics in Human Communication*, Johannesen (1996) said that dialogical perspectives focus on attitudes about each other during communication. The views of the sender and the receiver are considered important (Johannesen, 1996).

How people said things and what they said resulted in positive attributions being assigned to them. An example of how things were said that resulted in a positive attribution was the use of on-line symbols. One person made the attribution of "playfulness" because the use of on-line symbols made her appear playful. She had used the raspberry (phhaaaatttt) as one of the symbols in her writing. Others used on-line symbols and acronyms in their on-line communication. For example, :) was used to mean "I am happy." LOL was an acronym used to mean "laughing out loud." Chesebro and Bonsall (1989) concluded that written signs (symbols and acronyms) intended to represent facial reactions, emotions, and vocalistic patterns were being used in computer-mediated communication (CMC). In the reports in this study, written, verbal communication that projected positive communication was used to send cues in CMC that resulted in positive attributions that caused attraction.

After initial attraction people began to gather information about the other person. Subjects referred to information gathered about *distance* between the partners, *common interests*, and *family marital status* (see Table 2). Duck (1991) said that gathering information is the main need of people who are beginning an acquaintance. Berger and

Calabrese (1975) developed a theory called the *uncertainty reduction theory* that claims that people attempt to predict how others will behave and to explain the actions of others by gathering information. People began to gather information after attraction in the relationships in this study. It seemed in this study that as information was gathered, uncertainty was reduced. This conclusion was made because responses to a question on the questionnaire that asked if there was a concern about whether the other person was honest/genuine in regard to his or her professed gender, age, name, interests, personality, or occupation, indicated that they were concerned. Ten of the 12 respondents were concerned. As the relationship progressed, the concerns receded. The fact that they had made or were planning to make an on-line commitment was an indication that uncertainty about honesty had diminished.

While gathering information, interest was shown in the other person when it was learned that the two had common interests or things in common (see Table 2). Some examples of common interests that were discovered were line dancing and country music. Several people wrote about things that they discovered that they had in common with the other person. Both being quiet and shy and both being less than five feet tall were two examples of having things in common. Information that people discovered regarding things in common was obviously important to the participants in the relationships studied because they wrote about them. Could this be evidence that “people are attracted to people like them” (common interests) or that “misery loves company”(mentioned things in common)? Being under 5 feet tall and being shy could be seen as a handicap in American society at this time. Rheingold said that people who find it difficult to form friendships in FtF communication because of some handicap feel that on-line communication allows them to be treated the way that they want to be treated, “as thinkers and transmitters of ideas and feelings, not as carnal vessels with a certain appearance and way of walking and talking (or not walking and talking)” (p. 26). Rheingold said that people find written communication on the computer “more authentic” and “a more human interaction” than FtF communication. He said this feeling of authenticity could be attributed to the fact that people cannot see one another in cyberspace (1993).

There was evidence in the reports studied that supports Rheingold's idea that people like to get to know others on-line before seeing each other. People in this study referred to on-line communication as an opportunity to get to know others on the inside before judging them by outside appearance. One person wrote, "It is not the outside but the INSIDE that really counts!! And that is the way most people should feel and not just go for the looks physically, but also emotionally, mentally and spiritually". In referring to how this relationship was different than past relationships, one person said, "We were both appearance oriented, rather than looking at the person's personality. Our relationship was based on friendship and now we are sure that we have found our soul mates." One person expressed the novelty of knowing someone well before meeting person to person in a poem that follows:

“Although you are a friend of mine
And e-mails we exchange,
I would not know you on the street
And doesn't that seem strange?
You hold a place within my life
Unusual and unique
We share ideals and special dreams
Through IM's as we speak.
I picture what I think you are,
Perhaps you picture me,
An intriguing game for both of us
For someone we can't see.
So for this friendship we possess
We owe AOL a debt.
Perhaps the charm lies in the fact
That we have never met.”

The poem mentions the novelty of getting to know someone before seeing them, but it also implies that the intrigue of the novelty may be one cause of the interest shown to the other person. Many people, as evidenced by their stories and written communication

view the relationships as genuine. For example, one person wrote, "We will be together soon and we will be having a wedding between two people who are in love with each other for who and what we are, not a physical attraction. We were in love before we even knew what each other looked like."

Distance was one reason that people gave for not meeting FtF sooner. People perceived distance as an obstacle that could be overcome and/or an opportunity to get to know others on-line before seeing each other FtF. Examples of obstacles include, "from here grew a friendship that 800 miles couldn't stop," "the distance between us will not keep us apart," and "Just like love doesn't know age or sex, we have proven, love doesn't know distance either." One person who indicated that distance could be seen as an opportunity to get to know someone said, "In a way it was good we had to wait before meeting. It allowed us the opportunity to get to know each other from the inside first."

Before and after meeting FtF, people began to communicate through channels of communication other than the computer. They communicated by exchanging photographs on line, by telephone, and by mail (see Table 3). Some exchanged gifts. Through the use of several channels of communication friendships and romances progressed. In some stories, the order in which other channels of communication were used was described. The best indication of the order of occurrences including the use of channels of communication in relationship development was in the answer to #14 on the questionnaire (see Table 4). When the answers to this question were analyzed and plotted on the chart, a pattern was noticed. Through further conceptualization and categorization there was an indication that the relationships had developed in a sequence of occurrences similar to how Knapp described stages of relationship development in FtF situations. This pattern was identified by comparison coding; comparing answers to question #14, categories identified in this study, and Knapp's theory of stages of development in FtF interpersonal relationships. Some differences were evident because of the nature of the computer as a medium for communication. The differences because of the medium are: *an indication of pleasantness through written communication on line, exchanging photographs, communicating via telephone and mail, and exchanging CyberVows*. This is not to say that written communication, exchanging photographs and

Knapp's Stages of Development in Face-to-Face Interpersonal Relationships (1978)
 Compared to Observed Stages of Interpersonal Relationships in
 Computer-Mediated Communication
 TABLE 7 – Knapp's Theory

Stage 1: Initiating	The situation, attraction, and inviting communication are important. People try to relay the fact that they are pleasant.
Stage 2: Experimenting	Information about name, rank, demographics, common interests are important.
Stage 3: Intensifying	Disclosures about the development of relationships are important. First names or nicknames may be used. "We" is used to refer to themselves as a couple.
Stage 4: Integrating	There is a focus on romantic relationships. Intimate gifts may be exchanged.
Stage 5: Bonding	A commitment is made. Individuals announce that they are a couple.

TABLE 8
 Observed Stages in Reports about Interpersonal Relationship Development in
 Computer-Mediated Communication

Stage 1: Initiating	Attraction based on inviting communication, a projection of pleasantness, and <i>appealing written communication</i>
Stage 2: Experimenting	Learning common interests, real names, places of residence, and <i>exchanging photographs</i> .
Stage 3: Intensifying	<i>Communicating via telephone and mail</i>
Stage 4: Integrating	Exchanging gifts and referring to the two as "we".
Stage 5: Bonding	Making a commitment by announcing that they are a couple. <i>Exchanging CyberVows</i> .

using the telephone and mail are not occurrences in FtF communication. It is to say, these were steps that indicated the order of progression of these on-line relationships.

Many of the occurrences are supported by the categories that were identified in this study. Answers to questions about attraction and answers to #14 allowed the occurrences to be put in a sequence which lead to more understanding of how relationships progress on line (see Table 4). Tables 7 and 8 show a synopsis of stages of relationship development by comparing Knapp's face-to-face theory to information that was gathered from analyses in this study. Attraction is a part of the first stage of relationship development according to Knapp and to this study. The cause of attraction in Knapp's *initiating stage* is not described, but attraction, inviting communication and the situation are a part of his first stage. It was found in this study that inviting communication is seen as a variable in the cause of attraction in on-line communication. More specifically, written inviting communication resulted in assignment of positive attributes which indicated attraction. Attraction was not indicated in answers to question #14, but it was established in answers to other questions on the questionnaire (Appendix A, questions 3.a. and 3.b.) Attraction was reported to happen at the beginning of the relationship, because the question referred to *initial* attraction.

In Knapp's *experimenting stage*, people try to discover the unknown by learning information about name, rank, demographics, occupations, and common interests. In the adaptation of the experimenting stage in this study, exchanging photographs was noticed as one of the occurrences that happened. Knapp concluded that self-disclosure is found in the *intensifying stage*. People begin referring to the two as "we". People indicated that after the experimenting stage in their on-line relationships, they referred to the two as "we" and they communicated via mail and telephone. Communicating by telephone and mail were concepts that caused the emergence of the category, *channels of communication other than the computer* (see Table 3), in this study.

Knapp referred to the stage when people begin to focus on romantic relationships as the *intensifying stage*. Intimate gifts may be exchanged and songs may be designated as "our song". In the stage that was identified as the intensifying stage in the on-line relationships people exchanged gifts. Exchanging gifts was identified as a concept in

the *expressions of love* (Table 5) category. Answers to question #14 identified at what point in the relationship the gifts were given according to the 11 people who answered the question.

Knapp claimed that a commitment is made in the last of the stages that he identified in FtF relationship development. He said that commitments are made by the announcement that the two are a couple. He named this stage the *bonding stage*. In the *bonding stage* for this on-line study, commitments were made by announcing that they were a couple. Exchanging CyberVows was added to the bonding stage. In the on-line relationships that were studied, announcements were made about being in love in the *expressions of love* category (Table 5) and announcements of intended life-long commitments were made in the category that was labeled *commitment* (Table 6). Answers to question #14 identified where in the progression of the relationship a commitment was made. All subjects represented in the stories and all represented in the questionnaires intended to exchange CyberVows. This is known because one of the reasons that the subjects wrote to LOVE@AOL.COM was to win a free CyberVows ceremony. Some people intended to make a commitment of marriage off line as evidenced in Table 6. Because the occurrences in on-line relationships could be identified in the analyses of stories and answers to questionnaires *in this study* and because the sequence of occurrences could be identified in answers to question #14 in this study, Knapp's theory of interpersonal relationship development is supported.

Because this study did discover elements of on-line relationship development that can be studied further, this study has *heuristic value*. Some suggested future research questions are: "What variables can be found in screen names, e-mail messages, instant messages, and profiles that cause someone to be attracted in *initial* contact in on-line communication?," "What do people identify as the cause of attraction to others on-line?," "How do people project a positive image on-line?," "Are there on-line cues that are used that imitate face-to-face cues?," "What, in written communication on-line, is seen as attractive to others?," "Is on-line communication a means to get to know someone because a perceived or real handicap is seen as a weakness that prevents meaningful communication off line?," "Do people involved in on-line relationships consider them

real?," "Do people claim to be in love before meeting face-to-face?," "What kinds of relationships do people identify in on-line communication?," "Do relationships that have developed through on-line communication last when they migrate to face-to-face situations?," "Why do the relationships that began on line end or last after the migration to face-to-face situations?," "Is there an identifiable occurrence in the development of relationships that began via the computer?," and "Are there stages in the development of on-line interpersonal relationships?" Some of these questions were answered in this limited study, but further research to answer these questions in other studies is suggested. The purpose of this research was to add to existing knowledge about on-line interpersonal relationship development by providing an answer to the research question, "What are some patterns that can be identified by studying reports of those who have developed interpersonal relationships that began via the computer?" Some patterns that emerged are patterns that resulted in the categories of *attraction*, *gathering information*, *channels of communication other than the computer*, *expressions of love*, and *commitment*. Other patterns were identified by combining the information in the categories with answers to question #14 and combining the information with known information about Knapp's theory of relationship development. This combination of information resulted in identifiable patterns of relationship development that could be grouped into stages of relationship development in computer-mediated communication.

Strengths and Weaknesses

It is stressed that the patterns of communication were identified in *this study* which was an inductive study. This study reported what was identified in the specific social artifacts examined: the stories written to LOVE@AOL.COM and the answers to questionnaires. In other words, the findings in this study are not meant to be generalized to all on-line relationships. *Generalizability* is a weakness of this study. This study was not intended to be generalized, but to add knowledge to on-line relationship development. *Parsimony*, *scope*, *utility*, and *heuristic value* are identified as the strengths of this research project. The study is *parsimonious* because information was

organized in as few categories and as simply as the researcher thought possible. It has *scope* because it allowed for as much variation in behavior of the action as possible. The research is strong in *utility* because it found some common threads between findings in this research and knowledge from existing communication theories. By using information from this study, other research can be developed that may result in knowledge that can be generalized to other on-line interpersonal relationships.

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REFERENCE LIST

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APPENDIX

APPENDIX A

Hello,

I am sending this message to couples who sent stories about their relationships to LOVE@AOL.COM. All of the stories are very interesting. Congratulations to all of you on your CyberVows.

I am Laura Rogers, a graduate student, studying online relationships. If you are willing to fill out a questionnaire for my study, it is included below. To be able to mark boxes, simply press Ctrl C, then hit Reply, then press Ctrl V. Now you can mark the boxes and fill in text where needed. When you have finished, press Send.
Thank you for participating.

Internet Relationship Questionnaire

Place a star or asterisk in the box next to the answer that you choose.

1. I was seeking an on-line relationship:

- a. Strongly agree
- b. Agree
- c. Uncertain
- d. Disagree
- e. Strongly disagree

2. What brought you into contact with this person?

- a. IRC (Internet Relay Chat)
- b. E-mail
- c. Usenet Newsgroups
- d. MUD (Multi-User Domain or Multi-User Dungeon)
- e. Other please, explain

3.a. What first attracted you to the person?

3.b. What did the other person "do" or "say" during computer communication that caused you to want to know him/or her better?

4. When communicating on-line, were you concerned with whether the other person was genuine/honest with regard to his or her professed.....

- a. Gender
- b. Name
- c. Interests
- d. Personality
- e. Occupation
- f. Marital Status
- g. Age

multiple items may be chosen

5. How would you describe the kind of relationship that you have?

- a. Friendship Please, explain what makes the relationship a friendship
- b. Romantic Please, explain what "romantic" means to you
- c. Other Please, explain

6.a. If the relationship is romantic, how long did it take for the relationship to become romantic?

- a. Immediately
- b. Hours
- c. Days
- d. Weeks
- e. Months
- f. Years

6.b. How did you know this person was interested romantically in you?

6.c. How did you signal your romantic interest?

7.a. Would you say that you are in love with the other person?

- Yes No

7.b. If your answer is "yes" to 7.a., did you fall in love before you met face to face?

- Yes No Unsure

8. What were some turning points (positive or negative) in your relationship?

9. How long ago did you first communicate on-line?

- a. 1 day to 30 days
- b. 31 days to 3 months
- c. 3 months to 6 months
- d. 6 months to 1 year
- e. 1 year to 3 years
- f. over 3 years ago

10. Which channels other than the computer have the two of you used to communicate?

- a. No other channels
- b. Exchanged photos
- c. Talked on the telephone
- d. Met face to face
- e. Communicated via fax
- f. Communicated via mail
- g. Other please, explain

11. If you have met face to face, how long after you met on-line did you meet face to face?

12. How far from where you live did the other person live when you first met online?

13. Have you moved or do you have plans to move nearer each other?

- Yes No

14. Please number the following events that apply to your relationship in the order of occurrence starting with number one for the first occurrence. Leave blank the events which have not occurred in your relationship.

- You asked for a real name
- You asked the other person's city of residence
- You asked about the other person's interests
- Used a nickname or pet name for the other person
- Referred to the two of you as "we"
- Talked on the telephone
- Saw a picture of other person on-line or otherwise
- Gave picture of yourself to the other person on-line or otherwise
- Communicated via mail
- Communicated via fax
- Met face to face
- Received a gift from the other person
- Gave a gift to the other person
- Met family member(s) or friend(s) of the other person
- Made a commitment to the other person

15. What has become of your relationship?

- a. Marriage
 - b. Friendship
 - c. Sexual Relationship
 - d. Engagement
 - e. CyberVows
 - f. None of the above
 - g. Other Please, explain
- Multiple items may be chosen

16. What is your age?

- a. < 17
- b. 18-20
- c. 21-30
- d. 31-40
- e. 41-50
- f. 51-60
- g. 61-70
- h. > 70

17. Would you like the results of the study sent to you via e-mail? Study should be complete before Dec., 1998.

Some of the questions for this survey were derivatives or exact questions taken from a questionnaire developed by students at Northwestern University in 1996. Dr. Joseph Walther was the professor who supplied the questionnaire. Questions #2, 4, 6.a., 6.b., 8, were taken directly from the Northwestern survey. Questions # 1, 3.a., and 15 were adaptations from that same questionnaire.

VITA

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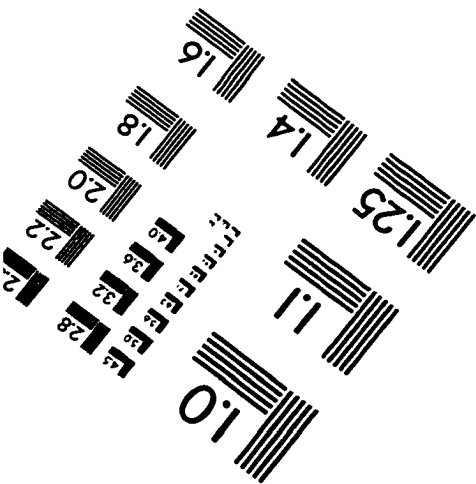
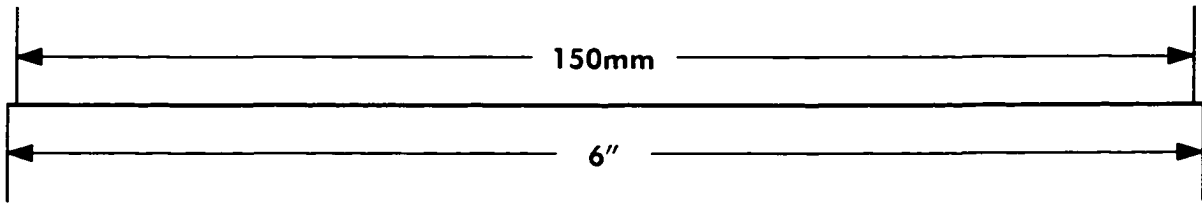
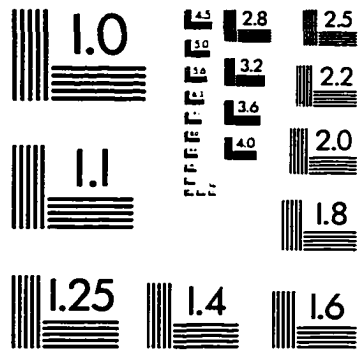
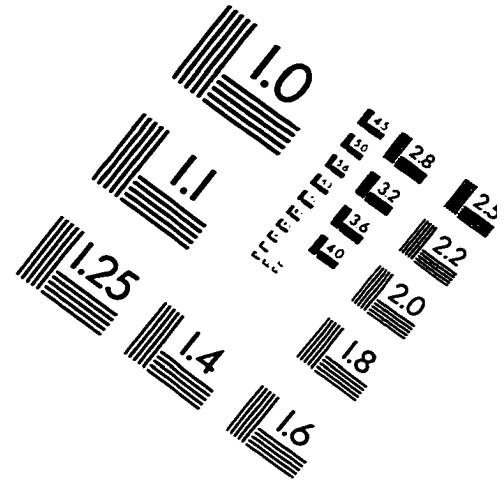
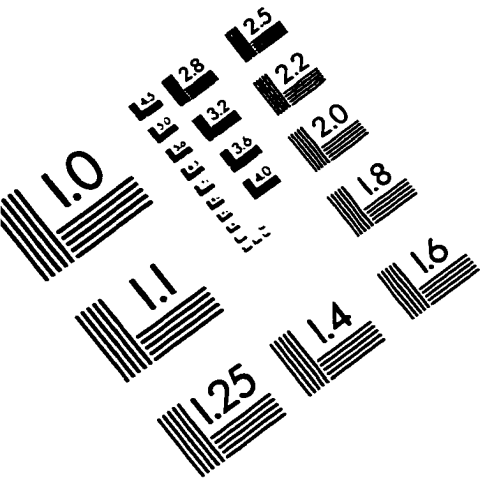
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IMAGE EVALUATION TEST TARGET (QA-3)



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