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Internet Romances: The Frequency and Nature of Romantic On-Line Relationships

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Abstract

One thousand university students were e-mailed a survey about relationships they had established on the Internet. Of the 248 who returned the survey, eighty-eight (36%) indicated they had formed a friendship with another individual in an on-line setting. Nineteen (22%) described it as a close romantic relationship. These respondents were e-

mailed a second survey concerning various aspects of their romantic relationship. The frequency of romantic on-line relationships in the university population investigated was determined to be .0766, or 76 per 1,000 students. The 12 respondents who returned the second survey rated their on-line relationship as equal to or superior to those they had established off-line on measures of strength, satisfaction, and ease of communication. The findings were discussed in terms of those features of computer mediated communication which can facilitate the development of close relationships, as well as their implications for contemporary theories of relationship formation.

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"Norm" was a 35 year old married white male and recent college drop-out. He worked part-time and owned a house in the city with his wife of 8 years. Like many students, Norm had a home computer, and like millions of others, spent time on-line. Norm spent increasingly more hours on-line in "chat-rooms", which he called forums. In these forums several people could role-play fantasy lives or just chat with other users.

After several months of chat-room use, Norm met a woman, "Anita" who lived in another city 3000 miles away. Anita, like Norm, was also married and she too spent significant amounts of time on-line. The two began to e-mail daily. Soon they began using chat-rooms and telephoning each day.

After about a year of on-line communication, both Norm and Anita separated from their spouses. Norm continued to spend more and more time on-line, leaving his apartment room to either go to work part-time or read his e-mail on the deck with his morning coffee. He did not go out with family or friends. He did not socialize. He quit hunting and backpacking, two of his favorite activities.

Finally, after more than a year on-line with Anita, a divorce, and several cross-country trips, Norm moved 3000 miles to live with Anita. When we last spoke, Anita was in the middle of her divorce. Both Norm and Anita have spoken of marriage.

We read and hear about the occurrence of such on-line relationships with increasing frequency. They have been described in the media, observed on the Internet and noted in recent accounts of on-line friendships (1). However, beyond these anecdotal accounts, we have very little knowledge of the nature and extent of Internet-based social relationships.

On one account, it would seem quite unlikely that close personal relationships would ever develop on the Internet. Perhaps the single best predictor of whether or not two individuals become friends is physical proximity (5). Yet this factor is clearly not present in on-line situations, as individuals may live several thousand miles away from

each other. The same is true for cues of physical attractiveness and appearance which often play such a critical role, especially for men, in developing a close relationship (8).

However, there are several features of on-line situations which might, for other reasons, be expected to facilitate their development. The absence of regulating feedback such as smiles, eye contact, tone of voice and other non-verbal expressions, as well as the diminished impact of status and prestige cues creates a relatively safe, low risk social situation. On-line communication then becomes a tool for overcoming social anxieties and shyness. Individuals tend to feel less inhibited and find it easier to be more open and less concerned about shielding their personal feelings than they would in a face-to-face encounter. Because individuals find themselves sharing rather intimate experiences, it would not seem unnatural for close friendships to be formed in such a setting.

On-line communication is also a very private experience, with each individual composing messages in a relatively solitary, sometimes isolated setting. Under these conditions it might be supposed they are as much engaged in an internal dialogue with themselves as with the person with whom they are communicating. More often these messages consist of narratives from their own life. Individuals seem to derive great pleasure from relating narratives to those they are just beginning to know. The Internet capitalizes on the strong appeal to tell one's story to others.

Taken together, these features of on-line communication tend to facilitate the process of making friends. How common is this experience and how can it be characterized? In the following study we attempted to answer these questions with a systematic analysis of the frequency and character of on-line relationships. The participants in our initial study were a cross-section of undergraduate and graduate students who had e-mail accounts at a middle-size urban university. In addition, we sought students who reported they had established at least one close personal relationship on the Internet.

Method

<u>Participants</u>

Data was collected from two on-line surveys administered to students with Internet accounts at Portland State University in Portland, Oregon during the Fall and Winter Quarters of the academic year 1996 - 97. The first survey, e-mailed to 1,000 randomly selected account holders, inquired if they had established an on-line relationship and, if so, to rate its degree of intimacy. This initial sample constituted one seventh of all active (approximately 7,000) e-mail accounts at the university.

A total of 263 students returned the first survey. Fifteen of these could not be coded, leaving 248 cases (a 24.8% return rate) in response to Survey One. Nineteen of these students rated their on-line relationship as either a romantic physical or a romantic non-physical one. They constituted the sample which was e-mailed the second survey requesting detailed information about their on-line relationship. Twelve were returned (63% return rate) and these constituted the data base for analyzing various aspects of the on-line relationship.

The students were not compensated in any manner for participating in the study. They were informed they could end their participation at any point and that their status at the university would not be affected by whether or not they participated.

<u>Materials</u>

Two survey instruments were developed for use in this project. The first (Survey 1) asked individuals if they had established a social relationship(s) on the Internet and to rate the closeness of the relationship on a 6-point scale, from no relationship (6), acquaintance (5), casual friendship (4), close friendship (3), romantic but not physical (2), and romantic and physical relationship (1). To avoid the gender differences reported in previous studies of the interpretation of the word "romance" (3 & 9), the terms "romance" and "romantic" were not specifically defined in the current study.

The second survey (Survey 2) posed a series of questions about the nature of the on-line romantic relationship. It consisted of 30 questions, divided into 6 sections, each of

which dealt with one of the following topics: (1) Initial Contact, (2) Frequency of Contact, (3) Nature of Relationship, (4) Effect on Other Relationships, (5) Comparison with Other Relationships, and (6) Demographic Variables.

Procedure

Survey 1 was e-mailed to each of the 1,000 randomly selected students who constituted the initial sample of participants. Responses were returned to the researcher's e-mail address via the reply command of the e-mail menu. Each reply then underwent extensive security measures: (a) responses were saved to a personal, password protected, data disk; (b) both the respondents name and e-mail address were replaced with an identity (ID) number; (c) the respondents' ID number was recorded; and (d) finally, to select the final sample for Survey 2, the responses were examined to identify those who rated their on-line relationship as either a romantic or close romantic physical one. The ID number of each such respondent was then entered into the database of Survey 2 recipients.

As before, the second survey was e-mailed to these participants, who returned their responses to the researcher's e-mail address via the e-mail reply command. Each returned survey then underwent the same security procedures employed for Survey 1. After 2 weeks, a follow-up e-mail message was sent to those participants who had not yet replied which requested the return of Survey 2.

Results

Frequency

Our first goal was to determine the frequency of close on-line relationships among the sample of students who received Survey 1. Participants were asked to select the category which best describes the type of relationship they might have established on the Internet. Table 1 lists the frequency that each category was chosen by the final sample of 248 respondents. As Table 1 shows, 19 respondents indicated they had established a close romantic on-line relationship, with well over half (13) reporting that it was also a physical

one. These data reveal that 7.7% of the sample who returned Survey 1 (19/248) had formed a close romantic relationship on the Internet. This suggests that there may be as many as 77 Internet romances per every 1,000 student e-mail users. Extrapolating further to the nearly 7,000 active e-mail accounts leads us to infer that approximately 539 close on-line relationships may exist among this group of university students.

Sample Characteristics

The final sample consisted of the 12 individuals who returned Survey 2. They were evenly divided between males and females with a mean age of 22.75 years. Their ethnic background was predominantly white (10 individuals), with 1 Asian/Asia-American, and 1 who declined to answer. Eleven students were at the undergraduate level, while 1 was a graduate student. Seven reported their median yearly income was < $15,000, with 3 reporting $15,001 - $25,000 and 1 reporting $25,000 - $35,000. Nine of the respondents were single and 2 were divorced or separated.

Survey 2

On-Line Relationships. Survey 2 consisted of a number of questions about the nature of the respondents on-line relationship and how it compared it to those they had established off-line. With respect to the former, the majority (8) of respondents reported they initially met their on-line partner on the Internet, with 5 indicating this occurred in a chat-room, while the remaining 3 said this took place in either at MUD (Multi-User Dungeon) or in response to an ad they had put on the Internet for a pen-pal or singles listings on the web. In contrast, 4 of the participants reported that they did not meet initially on-line, but instead had been introduced by a friend or had met in person in another situation.

As shown in Table 2, eight of the respondents reported they were currently involved in an on-line romance, while 4 said they no longer were. Although 3 of the respondents indicated they had from 2 to 3 such on-line relationships, the majority (9) indicated that it was their first. Only 2 respondents reported they fully informed their

family and friends about their on-line relationship, while 8 indicated they "partially informed" and 2 said they did not inform anyone at all.

An alpha ( ) level of .05 was used for all statistical tests. ANOVAS were conducted to examine several differences between current and previous Internet romantics and to compare characteristics of and on- and off-line relationships.

There were several differences between participants who were currently involved in a close on-line relationship and those who had been previously, but were not at the time the survey was conducted. Compared to former participants, those who were currently involved rated their on-line relationship as significantly stronger, $F(1, 10) = 11.99$, $p = .006$ and more satisfying , $F(1, 10) = 21.33$, $p = .001$ than all their other on-or-off-line relationships. Currently involved participants were also significantly more likely to describe it as a physical relationship than those who had been formerly involved $F(1, 10) = 7.10$, $p = .024$.

The respondents varied widely in the time it took to develop the close romantic relationship. Three indicated it took less than 1 month, 4 indicated from 1 to 4 months, 3 indicated 5 to 8 months, and 2 indicated 13 or more months. We also found that it took significantly fewer months to develop into a romantic relationship for respondents who said that it was their first such relationship than it did for those who had formed more than one on-line relationship $F(1, 10) = 5.95$, $p = .035$.

There was also some variation in the number of times participants reported e-mailing their on-line partner. Three reported from 5 to 8 times a week, 1 indicated 9 to 12 times a week, and 7 indicated 13 or more time a week. Since all of the respondents indicated they also communicated by phone, we also asked about the frequency of this activity. Eight indicated that they phoned from 1 to 4 times a week, 3 indicated 5 to 8 times a week, and 1 indicated 13 or more times a week.

The last set of questions dealt with the depth and duration of their relationship. The majority (8) of Survey 2 respondents indicated it had evolved into a close physical

one, while 4 said it was close but not physical. Two of the respondents indicated they were either engaged or planning to be married, with the balance evenly split between casual and exclusive dating. Finally, only 1 of the respondents reported their relationship had lasted more than a year, 3 said it had lasted more than 5 months but not yet a year, while the remaining 6 said it had lasted less than 5 months.

      Off-Line Relationships. The participants were asked to compare their on-line and off-line relationships on several dimensions. At the time of the survey, half reported they had an off-line close relationship, yet only 1 terminated it once their on-line relationship began. We also found that participants who were involved in other romantic relationships at the time they met their on-line partner reported significantly more on-line, $F(1, 10) = 5.00$, $p = .049$, as well as off-line, $F(1, 10) = 6.64$, $p = .028$, romantic relationships than those who were not romantically involved at the time they met their on-line partner. Lastly, only one gender difference was found in the current study. Females reported significantly more on-line relationships than males, $F(1, 10) = 5.00$, $p = .049$. However, there was no gender difference in the number of off-line relationships.

      In terms of its strength, 9 of the 12 respondents indicated their on-line relationship was either equal ($N = 5$) to or stronger ($N = 4$) than those they had established off-line. They also found it to be a satisfying experience, with the majority rating it as either equal ($N = 5$) to or more satisfying ($N = 3$) than their off-line relationships. Finally, the participants said they felt thoroughly comfortable communicating in the on-line setting, with 9 of the 12 indicating they found it about the same ($N = 3$) or easier ($N = 6$) to communicate on-line than in a face-to-face setting.

Discussion

      On the basis of current theories of relationship development (2 & 4), it would seem quite unlikely that two individuals would ever form a close relationship on the Internet. Most such accounts highlight the importance of physical proximity and frequent face-to-face interaction. They also underscore the importance of social cues, especially

the role of physical attraction in the formation of romantic relationships. In spite of the absence of each of these factors, we found that a surprisingly large number of friendships were formed on the Internet.

The evidence indicated that 36% ($\underline{N}$ = 88) of our initial respondents said they had formed a relationship with another individual in an on-line setting. For the majority ($\underline{N}$ = 69) this ranged from a simple acquaintance to a close friendship. However, 22% ($\underline{N}$ = 19) of the respondents said it had become a close romantic relationship, with well over half ($\underline{N}$ = 13) indicating it had also developed into an intimate physical one. Our analysis of the frequency of this phenomenon in the university population we studied suggests that perhaps as many as 76 in every 1,000 student e-mail users may have formed a close on-line romance. Extrapolating further from these data, we estimate that approximately 539 out of nearly 7,000 students with active e-mail accounts have had or do now have an on-line romance.

Quite naturally we must be cautious in extending this finding to the more general population of adult e-mail users. However, we do know that our frequency estimate of 7.6% romantic on-line relationships is virtually identical to the one (7.9%) reported by Parks and Floyd (7) in their survey of 528 individuals who had posted messages on a randomly selected group of Internet newsgroups. Two thirds (60.7%) of their sample indicated they had formed a personal relationship with someone they had met for the first time on an Internet newsgroup. This is approximately double the percentage we observed in the university population.

Several factors might account for this difference. Compared to the sample reported herein, the Parks and Floyd (7) population was considerably older (mean = 32 years of age) and was composed of more males than females. They were also contributors to newsgroups. We speculate that both causal and romantic relationships may be more liked to develop in an environment which fosters the type of interpersonal communication which occurs in such an on-line setting. While we have no information about the

newsgroup behavior of our sample, we do know that a high percentage (42%) of them formed on-line romances in chat-rooms, an environment which also encourages informal, interpersonal communication. This suggests that frequent chat-room users, say on American Online, might be more likely to form on-line romances than either our own or the Parks and Floyd samples.

Our evidence suggests that the relationships formed on-line were also much closer and more intimate than most would have expected. In addition, they moved quite readily from cyberspace to real space. All of our final sample of respondents had exchanged phone numbers, half were either dating casually or exclusively and 2 of the 12 indicated they were either engaged or planning to be married. Moreover, there was an overwhelming consensus among the respondents that their on-line romances were just as strong, if not stronger and just as satisfying, if not more satisfying than their off-line relationships. In short, the respondents did not characterize their on-line relationships as shallow or distant. Indeed, quite to the contrary, it is clear they formed genuinely close relationships of considerable depth and breadth on the Internet.

We attribute most of these effects to the powerful influence of on-line settings in fostering highly personal and intimate patterns of communication. The majority of our respondents said they found it much easier to communicate on-line than in face-to-face settings. Their reports are consistent with many other accounts of the way in which on-line communication makes it easier to "connect." Individuals do not find the technology dehumanizing. Rather many claim it is even more authentic than much of what they experience in their ordinary day-to-day encounters. Why is this the case?

Several factors seem to be responsible for this widely reported effect of computer mediated communication. The anonymity of on-line settings creates a relatively safe situation which makes it possible to overcome interpersonal communication anxieties. So too does the reduction of normal regulating feedback, such as social status cues and non-verbal expressions. Such a situation seems to produce a rush to intimacy, self-disclosure,

and a desire to share personal experiences. In on-line settings, individuals seem far more willing to say things they would be reluctant to express in person. The immediacy of on-line communication also speeds up the friendship process. Taken together these variables seem to have created an environment which facilitates the formation of genuinely close relationships.

When viewed within this framework, the on-line setting is simply another place to meet and make friends. To be sure, it has come upon the scene quite suddenly. In a recent survey of where people met their partners for the first time, Michael, Gagnon, Lawman, and Kolata (6) found that 50 - 60 percent of the couples met at school, work, a private party or church. At that time, just three years ago, no couple said they had met in an on-line setting. That would surely not be the case in a comparable study today.

Similarly, as Floyd and Parks (7) point out, most of our theories of close relationships were formulated well before the development of electronic communication. They note that: "The emphasis placed on factors like physical appearance or proximity may reflect less a theoretic necessity than a consequence of the fact that most theories of relationship development predate the current explosion in computer-mediated communication technology" (p. 84). In light of their findings, as well as those reported in the current study, it is clear that the time is ripe for a systematic reanalysis of contemporary theories of how relationships develop.

It is also clear that this endeavor requires a much firmer empirical base than currently exists. Beyond a few exploratory studies, we have very little evidence on either the frequency or nature of the on-line friendship process. Our findings in a small group of university students should be extended to Internet users in the population-at-large. Future research also needs to address the durability and maintenance of relationships which are established on-line, as well as the differences between individuals with differing motivations for seeking friends in cyberspace. Finally, we believe this endeavor would

benefit by a systematic comparison between relationships formed in on-line settings and those formed within traditional social networks.

The rapid expansion of on-line communication provides a refreshing perspective on our current understanding of forming close relationships. It is clear that the establishment of such relationships in cyberspace is growing. At the same time, the research which has been done on this phenomenon suggests the friendship process is a good deal more complex than would be implied by contemporary accounts. The task of unraveling this complexity offers an exciting challenge to investigators of this important aspect of social life.

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Table 1

Frequency and Percent of On-Line Relationships

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Type of relationship	Number	Percent
Close romantic physical relationship	13	5.2%
Close romantic, but not physical relationship	6	2.4%
Close friendship	18	7.3%
Casual friendship	28	11.3%
Acquaintance	23	9.3%
No interpersonal relationship established	160	64.5%

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Table 2

Properties of On-Line Relationships

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Property	Yes	No
Currently involved	8	4
First on-line romance	9	3
Utilized chat-rooms	7	5
Exchanged phone numbers	12	0

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