

**The Effect of Culture, Gender and Self-Construal on Friendship and Intimacy in  
Face-to-Face and Computer-Mediated Environments**

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by  
Leman Pınar Tosun

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## ABSTRACT

### The Effect of Culture, Gender, and Self-Construals on Friendship and Intimacy in Face-to-Face and Computer-Mediated Environments

by

Leman Pinar Tosun

The rise of the Internet and the introduction of computers as interpersonal communication tools into our lives led to much social research on computer-mediated communication. However, the effect of cultural characteristics on individuals' perception of interpersonal relations in computer-mediated settings is still an understudied topic. In this study, computer-mediated and face-to-face friendships were compared with regard to individuals' descriptions of their friends and intimacy in their friendship. The study examined the effect of culture (Japanese and Turkish), gender, and self-construals (independent and interdependent) on individuals' intimacy levels for and descriptions of their Internet and face-to-face friends. The participants were 98 Turkish and 46 Japanese university students. The results showed that participants' intimacy level for their face-to-face friends was higher than for their Internet friends. The intimacy level of males for Internet friends was higher than that of females. In terms of culture, the Turkish participants were found to have higher overall intimacy levels than the Japanese participants. Males in the Japanese and females in the Turkish sample had a higher intimacy level. Independent and interdependent selves were not found to differ in terms of intimacy levels. With regard to friend descriptions, the Turkish participants used personal descriptions more than the Japanese, whereas the Japanese participants used relational descriptions more than the Turkish participants. In general, females used relational

descriptions more than men. In terms of face-to-face and Internet friendship, the Japanese participants used personal descriptions for face-to-face friends more than Internet friends whereas the Turkish participants used personal descriptions in face-to-face and Internet environments to the same degree.

## KISA ÖZET

### Yüz Yüze Ortamda ve Bilgisayar Ortamında Kültürün, Cinsiyetin ve Benliğin Arkadaşlık ve Yakınlık Üzerine Etkisi

Leman Pınar Tosun

İnternet kullanımının artışı ve bilgisayarların kişilerarası iletişim aracı olarak günlük hayatımıza girmesiyle birlikte, bilgisayarla iletişim üzerine pek çok sosyal araştırma yapılmaya başlandı. Ancak, kültürel özelliklerin bireylerin bilgisayar aracılığıyla yürüttükleri kişilerarası ilişkileri üzerine etkisi henüz yeterince çalışılmamış bir konudur. Bu çalışmada, İnternet arkadaşlıkları ve yüz yüze arkadaşlıklar, bireylerin arkadaş tanımları ve arkadaşlarına duydukları yakınlık açısından karşılaştırılmıştır. Kültürün (Japon ve Türk kültürleri), cinsiyetin ve benliğin (bağımsız ve karşılıklı bağımlı benlik) yüz yüze arkadaşlara ve İnternet arkadaşlarına yönelik yakınlığa ve bu arkadaşları tanımlamaya olan etkisi incelenmiştir. Katılımcılar 98 Türk, 46 Japon üniversite öğrencisidir. Sonuçlar, katılımcıların yüz yüze arkadaşlarına yönelik yakınlıklarının İnternet arkadaşlarına yönelik yakınlıklarından fazla olduğunu göstermiştir. Erkeklerin İnternet arkadaşlarına yönelik yakınlıklarının kızlarınkinden, kızların yüzyüze arkadaşlarına yönelik yakınlıklarının erkeklerinkinden yüksek olduğu bulunmuştur. Her iki tür arkadaşlarına yönelik yakınlık açısından, Türk katılımcılar Japon katılımcılara göre daha yüksek yakınlık değerlerine sahip bulunmuştur. Japon katılımcılar arasında erkekler, Türk katılımcılar arasında ise kızlar daha yüksek yakınlık puanı elde etmiştir. Japon katılımcılar arasında erkekler, Türk katılımcılar arasında ise kızlar daha yüksek yakınlık değerleri elde etmiştir.

Arkadaşlara yönelik yakınlık değerleri üzerinde benliğin etkisi bulunmamıştır. Arkadaşlık tanımları açısından, Türk katılımcılar kişisel tanımlamaları Japon katılımcılardan daha çok kullanmışlardır. Japon katılımcılar ise ilişkisel tanımlamaları Türk katılımcılardan daha çok kullanmışlardır. Genelde, kızlar erkeklerden daha çok ilişkisel tanımlama kullanmışlardır. İnternet arkadaşlığı ve yüz yüze arkadaşlık açısından, Japon katılımcılar yüz yüze arkadaşları için İnternet arkadaşları için kullandıklarından daha çok kişisel tanımlama kullanırken, Türk katılımcılar İnternet arkadaşları ve yüz yüze arkadaşları için hemen hemen eşit oranda kişisel tanımlamalar kullanmıştır.

## Table of Contents

	PAGE
INTRODUCTION .....	1
Social Psychology of Computer-Mediated Relations .....	1
Computer-Mediated Interpersonal Relations .....	2
Friendship .....	4
Culture and Perception of Friendship .....	6
Intimacy .....	8
Culture and Intimacy .....	11
The Present Study .....	11
Research Questions and Hypotheses .....	17
METHOD .....	20
Participants .....	20
Instruments .....	20
Demographic Characteristics .....	20
The Self-Construal Scale (SCS) .....	21
Description of Friends .....	22
Inclusion of Others in the Self Scale (IOS) .....	23
Procedure .....	23
RESULTS .....	25
Characteristics of the Turkish and the Japanese Sample .....	25
The Turkish Sample .....	25

The Japanese Sample .....	26
Descriptive Characteristics of Variables .....	27
The Effect of Culture and Gender on Independent and Interdependent Self Construal	30
Results Concerning the Hypotheses .....	33
The Effect of Culture, Gender, and Self Construal on Intimacy .....	33
The Comparison of Personal, Relational, and Social Friend Descriptions by Culture .....	37
The Effect of Culture, Gender, and Self Construal on Friend Descriptions .....	38
The Effect on Personal Descriptions .....	38
The Effect on Relational Descriptions .....	40
The Effect on Social Descriptions .....	41
Other Findings .....	42
DISCUSSION .....	44
REFERENCES .....	51
Appendix A: Demographic Questions .....	56
Appendix B: The Self-Construal Scale (SCS) .....	63
Appendix C: Description of Friends .....	66
Appendix D: The Inclusion of Others in the Self Scale (IOS) .....	68
Appendix E: The Turkish version of the questionnaire .....	70
Appendix F: The Japanese version of the questionnaire .....	78

## LIST OF TABLES

		PAGE
Table 1.	Characteristics of Internet and Face-to-Face Friends in the Turkish Sample .....	26
Table 2.	Characteristics of Internet and Face-to-Face Friends in the Japanese Sample .....	27
Table 3.	Descriptive Statistics of Variables .....	28
Table 4.	The Distribution of Independent and Interdependent Self Construals in the Japanese and the Turkish Samples .....	30
Table 5.	The Descriptive Statistics of Personal, Social, and Relational Descriptions for Internet and Face-to-Face Friends .....	32
Table 6.	The Descriptive Statistics of Intimacy Scores for Face-to-Face and Internet Friends by Culture and 4 Groups Based on Self Construals .....	36
Table 7.	Summary of Multiple Regression Analysis for Self-Construals on Overall Intimacy .....	37

## LIST OF FIGURES

	PAGE
Figure 1. Independent and Interdependent Self Construal by Culture and Gender .....	34
Figure 2. Overall Intimacy by Culture and Gender .....	34
Figure 3. Intimacy by Friendship Type and Gender .....	36
Figure 4. Personal, Social, and Relational Friend Descriptions by Culture .....	39
Figure 5. Personal Description Scores by Friendship Type and Culture .....	40
Figure 6. Relational Description Scores by Friendship Type and Culture .....	42

## Introduction

Since the rise of the Internet and the introduction of computers into our lives as interpersonal communication tools in the 1970s, much social research has been conducted on computer-mediated communication (CMC). Early CMC research was mostly on the task-oriented use of CMC technology. As the Internet became more widely used among lay people, especially among teenagers and college students, the social use of CMC has gained importance as a research topic. However, the effect of cultural characteristics on individuals' perception of interpersonal relations in face-to-face and computer-mediated settings is still an understudied topic.

### Social Psychology of Computer-Mediated Communication

Computer-mediated communication refers to a type of interpersonal communication which is facilitated through the use of a computer network or conferencing system. In contrast, face-to-face communication describes an interpersonal communication setting in which all individuals in the interaction share a common place and time context and can engage in communication where all five senses are used (Jettmar & Rapp, 1996).

The Internet was born in 1969 as a way of linking a few university and defense laboratories. Now it has grown into a global network connecting millions of people through e-mail and discussion groups. With the growth of the Internet, people are using computers not only as a general-purpose tool for gathering and distributing information, but also to communicate with others and to perform long-distance group work. Thus, "personal computers" are turning into "interpersonal computers" (Tesler, 1991; as cited

in Greller, 1993). The need for thinking beyond the technical effects of this new technology and considering its social and cultural effects has increased drastically. Several studies compared the effects of computer-mediated communication and face-to-face communication on conformity, aggression, helping behavior, impression formation, and decision making in groups (Kiesler & Sproull, 1992; McGuire, 1983; Mickelson & Walther, 1993; Thompsen & Ahn, 1997; Smilowitz, Compton, & Flitz, 1988; as cited in Wallace, 1999). When a difference was found, it was explained by the characteristics of computer-mediated communication such as the rapid and easy exchange of information, the lack of aural and visual feedback (eye contact, tone of voice, head nodding, distance and other nonverbal cues), the lack of social context cues (the context where the communication takes place and the physical appearance of the communicators), anonymity (the fact that real identities can be hidden in the virtual environment), and the lack of shared norms governing its use (e.g., how to begin and end a discussion or an e-mail).

### Computer-Mediated Interpersonal Relations

The interpersonal relations that are initiated and maintained through computer-mediated communication take several names in the literature such as online relationships, electronic relationships and virtual relationships. Lea and Spears (1995; as cited in Chenault, 1998) claim that while many scholars work on romance, friendship, and marriage among “young, white, middle class, heterosexual Westerners whose relationships are conducted in the open” (p. 11), other types of relationships are neglected. Computer-mediated relationships are among these understudied relationship types.

Since all personal relations take place in a social context, it is important to take the social context into account when studying personal relationships. The social presence theory assumes that the feeling of being “present” in an environment is very low in a medium in which a variety of cues are “filtered out” (Short, Williams, & Christie, 1976). The social context cues theory, derived from the social presence theory for specific use in computer-mediated communication, assumes that communicators perceive the social context of a communication through static and dynamic cues (Sproul & Kiesler, 1986). Static cues emanate from a person’s appearance and artifacts such as a personal office, a clock, or a table. Dynamic cues emanate from nonverbal behaviors such as nodding, frowning, and smiling. When social cues are strong in a medium, behaviors tend to be other-focused, differentiated and controlled. When they are weak, a person’s feeling of anonymity produces relatively self-centered and unregulated behavior.

According to both the social presence theory and the social context cues theory, the reduction of contextual, visual, and aural cues should cause communication in computer-mediated settings to be more impersonal and nonconforming than communication in face-to-face settings. There is empirical evidence showing that people in computer-mediated communication groups engage in more verbal aggression and nonconforming behavior than in face-to-face groups (Dubrovsky, Kiesler, & Sethna, 1991; as cited in Parks, 1996; Kiesler & Sproull, 1992; as cited in Wallace, 1999). Such aggressive behavior is called “flaming”. Some researchers claim that aural and visual context cues of the physical environments are replaced with “emoticons” (emotive icons, smileys, graphical symbols of emotion and meaning such as :) or :-) or :( ) and “emotings” (narrative descriptions of conversational nonverbal behaviors such as

writing “hehehe” for expressing laughing) in computer-mediated environments. Through the use of these symbols, the relationships developed online are much like the ones developed in face-to-face communities (Chenault, 1998; Metz, 1994). However, other researchers consider computer-mediated relationships as casual, temporary and lacking depth since the social context cues are eliminated in computer-mediated environments (Culnan & Markus, 1987, Lea & Spears, 1995, Sproul & Kiesler, 1986; as cited in Chenault, 1998). The debate between the two conflicting views still continues. The idea that emoticons help people to express one’s feelings and understand others’ feelings in the communication is valid only if all the individuals in the communication have sufficient Internet experience to understand and to use those symbols. It is hard to say that all the Internet users share the same ideas about the meanings of emoticons. They are not yet as easily readable as facial expressions, voice tones, and gazes that people use in face-to-face communication. It may take a long time until emoticons come up with widely shared meanings.

### Friendship

Friendship is important for various positive outcomes including emotional well-being, instrumental and informational assistance, stimulation, and feelings of acceptance (Solans, 1986; Stea, Thompson, & Blieszner, 1988; as cited in Holladay & Kerns, 1999). Friends meet our material needs (by providing help and support), cognitive needs (by providing stimulation in the form of shared experiences), and socio-emotional needs (by giving love and esteem) (Fischerk 1982a; as cited in Fehr, 1996). Although friendships have such important functions in our lives, there is no single definition of friendship that social scientists agree upon. It is difficult to define friendship because “friend” is not a

categorical label like “cousin” or “colleague”; rather, it is a relational term that tells us something about the quality of a relationship (Alan, 1989; as cited in Fehr, 1996).

Almost all of the definitions of friendship that experts give include the concept of voluntarism, interdependence, intimacy, and assistance. Hence, Fehr’s (1996) definition gives us a good summary of various conceptualizations of friendship: “It is a kind of voluntary interdependence in which two parties provide assistance and intimacy to each other” (p. 7).

“Friend” is a very frequently used word in the daily life of individuals.

Descriptions of a friend differ according to factors such as age, gender, and culture.

While it is relatively common for children to refer to the person’s physical characteristics or possessions when asked why a particular person is their friend (Furman & Bierman, 1983), adolescents’ conceptualization of friendship expands to include relational factors such as loyalty and intimacy (Berndt, 1988; as cited in Fehr, 1996). Empirical studies show that only a few changes occur in the conception of friendship after adolescence.

Features such as trust, intimacy, sociability, and enjoyment of one another’s company are found to be emphasized in adults’ conception of friendship (McCarthy, 1989; as cited in Fehr, 1996).

What is central to a friendship differs between the sexes; for men, the essence of a close friendship is doing activities, but for women it is talking together (Elbedour & Shulman, 1997). Men’s friendships are claimed to be activity-based, whereas women’s are affectively based. However, the standard depiction of men’s friendships as side-by-side and the depiction of women’s friendships as face-to-face are being challenged now. A recent analysis showed that for both men and women, the primary aim of a friendship

was talking, the second was doing tasks, and the third was relationship issues (Duck & Wright, 1983; as cited in Fehr, 1996). Another study revealed that women were both expressive and instrumental in their relations whereas men were only instrumental (Wright & Scanlon, 1991; as cited in Fehr, 1996).

### Culture and the Perception of Friendship

Behavior in a close relationship is shaped by the structural circumstances and cultural definitions of that relationship. Societal norms, roles, understandings, and customs are responsible for many of the behavioral regularities within a specific type of relationship (Blumstein & Kollock, 1988; as cited in Berscheid, 1994). The role of cultural and social context is most often ignored in the scholarly literature of friendship. Although there is much research on friendship formation, structural and interactional characteristics of a friendship, and phases of a friendship (Fehr, 1996; Holladay & Kerns, 1999), cross-cultural comparisons of friendship are rare in the social sciences literature. Berman, Murphy-Berman, and Pachauri (1988; as cited in Fehr, 1996) studied gender differences in intimacy of friendship in India and the U.S.. They found that gender differences in intimacy of friendships were not as marked in India as in the U.S. since Indian men have more intimate friendships than American men. Shweder and Bourne (1984; as cited in Markus & Kitayama, 1991) examined the descriptions of close acquaintances in Indian and the American cultures. It was found that the Indians were more situationally specific and more relational than the Americans in their descriptions of close acquaintances. It might be reasoned that the dispositional rather than the situation specific descriptions of close acquaintances require abstract thinking and since their educational level is lower, Indians have less ability for abstract thinking. However, the

study showed that Indians provided concrete descriptions of close acquaintances regardless of their social and educational levels. Miller (1984; as cited in Markus & Kitayama, 1991) also showed that Americans evaluated situations in terms of the dispositional characteristics of actors, whereas for Indians, the social roles of the actors were more important. Such effects of culture on social perception can be examined by individualistic and collectivistic tendencies. Individualistic cultures focus on dispositional characteristics of individuals in their social relations including friendship, whereas in collectivistic cultures, individuals focus on social roles of their friends (Dion, Park, & Dion, 1990; Triandis, 1994)

Social perception is also related to individual level factors such as idiocentrism and allocentrism that mediate between culture and behavior. Because it is confusing to refer to cultural-level individualism-collectivism and individual-level individualism-collectivism, Triandis, Leung, Villeral, and Clack (1985; as cited in Yamaguchi, Kuhlman, & Sugimori, 1995) proposed the term “idiocentrism” for individualism and “allocentrism” for collectivism at the individual level. In the literature, the term idiocentric is variously defined as individualist, egocentric, separate, autonomous, and self-contained, whereas the term allocentric is defined as collective, sociocentric, holistic, contextualist, connected, and relational (Markus & Kitayama, 1991). The effects of culture on the perception of friendship can be examined at the individual level. Verkuyten and Masson (1996) conducted a cross-ethnic study on the Dutch, Moroccan, Turkish, and South European adolescents in the Netherlands. Their study showed that allocentrism was related to greater sensitivity to friends, using more ascribed features in describing friends, and having fewer friends but seeing the relationship as closer.

In the friendship literature, it is argued that people need consensual validation, which is satisfied by having friends with similar characteristics. However, similarity can be defined in different ways. Collectivist in-groups are defined in terms of social or ascribed attributes such as ethnicity, religion, and race, whereas individualist in-groups are defined in terms of achieved attributes such as personal beliefs, attitudes, abilities, and values (Triandis, 1994). There is also empirical evidence showing that people in collectivist cultures pay less attention to individuating features such as physical attractiveness than do people in individualist cultures (Dion, Park, & Dion, 1990; as cited in Verkuyten & Masson, 1996).

In the context of computer-mediated friendships, individuals can evaluate each other only with their verbal behaviors since social context cues are eliminated in contrast to the face-to-face friendships. Internet friends probably inform each other about their social position (what they do, where they come from, etc.), however, if they meet only in computer-mediated environments and never come face-to-face, there may not be much possibility to learn whether the information they have about their friend's social position is true. Hence, social attributes of the other lose importance. Even when friends meet each other both in face-to-face settings and in the computer-mediated environment, if they meet in the computer-mediated environment more than they meet in the face-to-face settings, personal attributes will be more salient than their social attributes. Thus, in the present study, it is hypothesized that when individuals are asked to describe their Internet friends, they will tend to mention the personal attributes (e.g., s/he is trustworthy, kind, smart, etc.) more than the social attributes (e.g., s/he is a college student, s/he is from Izmir, s/he is a member of a dance club, etc.). However, in describing their face-to-face

friends, they may mention their friend's social attributes as well as personal characteristics since these are also salient to them.

The influence of cultural individualism/collectivism on individuals' behavior is mediated through the way individuals conceive of themselves (Gudykunst, 1997). The most widely used conceptualization of self-construal is the distinction between independent and interdependent self-construals (Markus & Kitayama, 1991). The independent self-construal involves the view that an individual's self is a unique, independent entity, whereas the interdependent self-construal involves the view that an individual's self is a part of a social relationship. People have both independent and interdependent self-construals (Singelis, 1994). However, the members of individualistic cultures are socialized to rely predominantly on their independent self-construals, whereas the members of collectivistic cultures are socialized to rely predominantly on their interdependent self-construals (Gudykunst, 1997). There is lack of research in the literature that examines the effect of self-construals on the description of a friend, which the present study attempts to document.

### Intimacy

Close relationships such as those between friends are recognized as the cornerstones of interpersonal behavior. The concept of intimacy has a central role in the literature of close relationships. The definition of intimacy depends on the perspective adopted. While Erikson (1950; as cited in Broucke, Vandereycken, & Vertommen, 1995) defined intimacy as a fusion of identities between two people who deeply care about each other, some approaches equated the term "intimacy" with the level of self-disclosure or the degree of physical proximity, yet others perceived it as a broader construct referring

to the equality of an ongoing relationship (Broucke, Vandereycken, & Vertommen, 1995). Basically, ideas about the definition of intimacy are divided into three (Okman-Fișck, 1994). According to the first view, intimacy is attributable to the individuals. The second view claims that it is the relationship that is intimate or not, rather than the individuals. The third view focuses on single interactions rather than individuals or relationships. If one accepts the first view (intimacy as an individual attribute), then measuring intimacy means measuring an individual's preference or readiness to experience closeness, warmth, and communication. If one accepts the second view (intimacy as a relational attribute), then cognitively, affectively, and behaviorally the relationship is considered to be a single unit, therefore, rather than the individual capacities of partners in the relationship, it is the quality of the relationship that should be measured.

The present study approaches intimacy as a relational attribute. Intimacy is a product of a relationship; it is something different from the sum of the individuals' abilities of being intimate. Moreover, taking a relational perspective does not ignore the individual. It is the individuals who build and sustain relationships. In the present study, it is assumed that the intimacy level of a relationship will be related to the self perception of the individuals involved in the relationship. If the individuals in the relationship view the self as interdependent with the surrounding context and it is the "self-in-relation-to-other" that is focal to them, then it is hypothesized that the intimacy level of their relationship will be higher than if they have a conception of self as autonomous and independent.

Whitbourne and Weinstock (1979; as cited in Broucke, Vandereycken, & Vertommen, 1995) argued that while committed to the relationship, partners may keep their own identity to different extents (mutual intimacy), or submissive partner may absorb the dominant partner's identity (merger), or a meaningful involvement with the other person may be lacking (isolate status). Therefore, intimacy should be considered as a continuum rather than a discrete category.

It is argued that intimacy is a process of reciprocity of self-disclosure in which each individual feels his or her innermost self validated, understood, and cared for by the other (Aron, Aron, & Smollan, 1992). Intimacy is a concept often considered as synonymous with closeness. Aron, Aron and Smollan (1992) argued that the notion of closeness as an overlap of selves has been popular among psychologists starting with James. There are many studies in the literature in which concepts such as attachment, intimacy and closeness were viewed as interconnected selves (e.g., Bakan, 1966; Jung, 1959; Maslow, 1967; and McCall, 1974; as cited in Aron et al., 1992). Based on these precedents for thinking of close relationships as including the other in the self, Aron et al. (1992) developed a single item, pictorial measure of closeness and used it as a measure of interpersonal closeness.

#### Culture and Intimacy

Cultures differ in the ways in which their members communicate with each other. This difference is expected to manifest itself in the topic of intimate relationships (Smith & Bond, 1993). Since friendship is a close relationship maintained within the context of all other realities of life, specific cultural values may be influential in the perception and the expression of friendship (Fehimoğlu-Sinan, 1998). Both the conception and the

manifestation of intimacy are shaped by culture. There are a few cross-cultural studies focusing on interpersonal intimacy in same-sex relationships. Elbedour and Shelman (1994) examined adolescents' conceptions of intimacy in Israeli Jewish and Israeli Bedouin adolescents. Israeli Jewish adolescents were found to rate their friends lower than Israeli Bedouins in closeness and respect. The differences between the two samples were attributed to the cultural characteristics of Israeli Jewish who are more individualist and Israeli Bedouins who are more relational. It is claimed that collectivists disclose more within the in-group and less toward the out-group than do individualists. Intimacy is not widely found in individualistic cultures and relationships are mostly casual. Individualists make friends more easily and quickly than collectivists but they are less intimate with their friends than collectivists (Triandis, 1994). These societal level assumptions can be carried to the personal level. Verkuyten and Masson (1996) found that the allocentrics' level of closeness with their best friend was significantly higher than that of the idiocentrics.

Allocentrism is tied to a monistic philosophical tradition, whereas idiocentrism is a product of a dualistic Western thinking in which the self is separated from the object. For that reason, the relationship between the self and the other, or between the subject and the object is assumed to be much closer among allocentrics than idiocentrics (Markus & Kitayama, 1991).

With regard to gender differences, it is well documented that intimacy is more emphasized by women than men among both adolescents (Elbedour & Shulman, 1997; Jones & Dembo, 1989) and adults (Perlman & Fehr 1988; as cited in Fehr, 1996).

Females are more other-oriented, expressive and intimate in their friendships, whereas males are more self-oriented and focused on doing things together.

### The Present Study

The aim of the present study is to contribute to the understanding of the role of computer-mediated communication in interpersonal relations. The study compares face-to-face friendships with computer-mediated friendships with regard to individuals' description of their friends and intimacy in their relationship. The study also examines the effect of culture on face-to-face and computer-mediated relations. At the cultural level, individualism-collectivism is an important distinction, but at the individual level, independent/interdependent self-construals (Markus & Kitayama, 1991) are popular conceptualizations. Hence, in the present study, the effect of self-construals, culture and gender on the descriptions of and the intimacy with face-to-face and computer-mediated friends are examined.

Based on the literature review and theoretical formulations, it is predicted that individuals will describe their Internet friends more with their personal attributes and less with their social attributes than their face-to-face friends. Idiocentrics, who rely mostly on their independent self-construals, tend to focus on personal qualities of others. The nature of the computer-mediated environment also leads people to focus on personal characteristics of others. Thus, a significant difference is not expected in the descriptions of face-to-face and Internet friends made by people endorsing mostly independent self-construals. However, people relying mostly on interdependent self-construals tend to focus on ascribed qualities of others. Since the nature of the computer-mediated environment forces them to focus on others' personal characteristics rather than on the

social characteristics, it is expected that people endorsing mostly their interdependent self-construals will describe their Internet friends more with their personal attributes, but less with their social attributes than they describe their face-to-face friends.

In the present study, another variable of interest is gender. There is empirical evidence that females are more allocentric and other-oriented than males (Major, McFarlin, & Gangnon, 1984; Yamaguchi, Kuhlman, & Sugimori, 1995). Allocentrism and other-orientedness are highly related with interdependent self-construal; hence, in the present study, it is expected that women will be higher on the interdependent self-construal than men. It was mentioned above that people endorsing mostly interdependent self-construals are expected to describe their friends more with social characteristics and less with personal characteristics than people relying mostly on their independent self-construals. Therefore, it is possible to reason that females describe their friends more with social characteristics than men do. However, Verkuyten and Masson (1996) found that women used more personal descriptions than men did. Kashima, Yamaguchi, Kim and Choi's (1995) study on self-construals also showed that there was not a great deal of parallelism between gender and culture differences. In the present study, the sex differences in self-construals will be examined. The nature of computer-mediated communication makes people focus on the personal attributes of others. If a significant difference is found between the sexes on the use of personal versus social descriptions of friends, whether the gender that uses social descriptions for face-to-face friends shows a greater difference in the way it describes the Internet friends and face-to-face friends will be examined.

Individuals from more collectivist cultures endorse mostly their interdependent self-construals than individuals from less collectivist cultures (Gudykunst, 1997). Japanese culture is a typical collectivist culture (Hofstede, 1980), whereas Turkish culture is difficult to classify as either collectivist or individualistic (Anamur, 1998; Göregenli, 1997; Haskuka, 2001; Kılıç, 2000). In the present study, it is expected that the Japanese will have higher interdependent self-construals than the Turkish participants. Hence, Japanese participants will be more likely to describe their friends with social characteristics and less with personal characteristics than the Turkish participants. As mentioned above, the nature of the computer-mediated environment is expected to lead people to focus on personal characteristics of others. Since the nature of the computer-mediated environment forces them to focus on others' personal characteristics rather than the social characteristics, it is expected that both Turkish and Japanese participants will describe their Internet friends more with their personal, but less with their social attributes than they describe their face-to-face friends. However, the difference between the Japanese descriptions of their Internet and face-to-face friends will be more than the difference between the Turkish descriptions of Internet friends and face-to-face friends because the Japanese rely on their interdependent self-construals more than the Turkish do.

Individuals in collectivistic cultures pay more attention to context (emotional expressions, touching, difference between bodies, eye contact, level of voice) when they communicate than individuals in individualistic cultures (Gudykunst 1983; as cited in Triandis, 1984). Hence, in collectivistic cultures, high context communication, a style which involves the use of implicit and indirect messages in which meanings are

embedded in the socio-cultural context, predominates. In contrast, low context communication involves the use of explicit and direct messages and is used predominantly in individualistic cultures. (Gudykunst, Matsumoto, Ting-Toomey, Nishida, Kim, & Heyman, 1996) Because of its lack of social context cues, it can be claimed that computer-mediated environment will be a less convenient communication medium for members of collectivistic cultures. Gudykunst et al. (1996) found that independent/interdependent self-construals are individual level factors that mediate the influence of cultural individualism/collectivism on high/low context communication. In the present study, it is expected that individuals will feel less intimacy towards an Internet friend than a face-to-face friend because of the nature of the computer-mediated environment. However, this difference will be higher for people relying more on their interdependent self-construal since the interdependent self-construal is related with high context communication, but the computer-mediated environment is a low context communication environment.

In the present study, the intimacy level of females in face-to-face friendships is expected to be higher than that of males. Computer-mediated communication does not carry nonverbal messages. This leads it to be inappropriate for initiating and maintaining intimate relations. Since females have more intimate relations in face-to-face environments than males do, the nature of the computer-mediated environment that leads to non-intimate relations will be more recognizable in the relations of females than that of the males.

Research Questions and Hypotheses:

**Question 1:** How do computer-mediated friendships differ from face-to-face friendships?

Hypothesis 1A: Individuals will describe their Internet friends more with their personal attributes and less with their social attributes than their face-to-face friends.

Hypothesis 1B: Individuals will report feeling more intimacy with their face-to-face friends than their Internet friends.

**Question 2:** How do self-construals affect computer-mediated and face-to-face friendships?

Hypothesis 2A: Individuals endorsing mostly an interdependent self-construal will describe their friends more with their social attributes and less with their personal attributes than individuals endorsing mostly an independent self-construal.

Hypothesis 2B: When describing their Internet friends, individuals with a higher interdependent self-construal will use fewer social attributes and more personal attributes than when describing their face-to-face friends, whereas individuals with a higher independent self-construal will use personal qualities to the same extent in their descriptions of both Internet and face-to-face friends.

Hypothesis 2C: Individuals endorsing mostly an interdependent self-construal will report more intimacy with their face-to-face friends and less intimacy with their Internet friends than individuals endorsing mostly an independent self-construal.

Hypothesis 2D: The difference between the intimacy that individuals with a higher interdependent self-construal feel towards their face-to-face and Internet friends will be

greater than the difference between the intimacy that individuals with a higher independent self-construal feel towards their face-to-face and Internet friends.

**Question 3:** How does gender affect individuals' computer-mediated and face-to-face friendships?

Hypothesis 3A: The effect of gender on the descriptions of computer-mediated and face-to-face friends will be an exploratory side of the study.

Hypothesis 3B: The gender that uses more social descriptions for face-to-face friends will show more difference in the way it describes Internet and face-to-face friends.

Hypothesis 3C: Females will likely feel more intimacy towards their friends than males.

Hypothesis 3D: The difference between the intimacy that females feel towards their face-to-face and Internet friends will be greater than the difference that males feel towards their face-to-face and Internet friends.

**Question 4:** How does national culture affect individuals' computer-mediated and face-to-face friendships?

Hypothesis 4A: The Japanese participants will use less personal and more social descriptions than the Turkish participants.

Hypothesis 4B: The difference between the Japanese descriptions of their face-to-face friends and Internet friends (both personal and social) will be greater than the difference between the Turkish descriptions of face-to-face and Internet friends.

Hypothesis 4C: The Japanese participants will feel more intimacy towards their friends than the Turkish participants.

Hypothesis 4D: The difference between the intimacy that the Japanese participants feel towards their face-to-face and Internet friends will be higher than the difference between the intimacy that the Turkish participants feel towards their face-to-face and Internet friends.

Hypothesis 4E: The Japanese participants will have higher interdependent self-construal and lower independent self-construals than the Turkish participants.

## Method

### Participants

There were two groups of participants, those who reported having Internet friendships and those who reported no such friendships.

The participants with Internet friendships were 98 Boğaziçi University students in Turkey (61 females, 37 males) and 43 Keio University students in Japan (20 females, 23 males). The age of Turkish participants ranged from 17 to 34 years with a mean of 20.38 and a standard deviation of 2.34. The age of Japanese participants ranged from 18 to 36 years with a mean of 21.35 and a standard deviation of 3.32. Overall, the age of the participants ranged from 17 to 36 years with a mean of 20.69 and a standard deviation of 2.71.

Those with no Internet friendships were 32 Japanese (22 females, 10 males) and 56 Turkish (39 females and 17 males) participants from the same universities. The age of the participants without Internet friends ranged from 17 to 25 years with a mean of 19.82 and a standard deviation of 1.37.

### Instruments

The questionnaire consisted of four sections: Demographic questions, the Self-Constraint Scale (SCS; Singelis, 1994), two sections on Internet and face-to-face friendship, each of which included a description of friends, and the Inclusion of Others in the Self Scale (IOS; Aron & Aron, 1992).

#### Demographic questions

In the first section, the participants were asked about their age, gender and how often they used Internet during a week. Some demographic questions related to the

participants' Internet friends were asked in the Internet friend section. These questions consisted of the age, gender, and nationality of Internet friends, and how often the participants communicated with them in several media (face-to-face, phone, e-mail, chatrooms, Internet discussion groups and others) within a week. Likewise, some demographic questions related to the participants' face-to-face friends were asked in the face-to-face friend section of the questionnaire. These questions consisted of the participants' age, gender, and nationality of face-to-face friends and how often the participants communicated with them in several media (face-to-face, phone, e-mail, chatrooms, Internet discussion groups and others) during a week (See Appendix A).

#### The Self-Construal Scale (SCS)

The Self-construal was measured by the Self-Construal Scale (SCS; Singelis, 1994) that measures an individual's interdependent and independent self. Its most recent version consists of 30 items that make up two subscales: 15 items tap the independent self (questions 1, 2, 5, 7, 9, 10, 13, 15, 18, 20, 22, 24, 25, 27, 29) and 15 items tap the interdependent self (questions 3, 4, 6, 8, 11, 12, 14, 16, 17, 19, 21, 23, 26, 28, 30) (See Appendix B). The participants were asked to respond on a 7-point Likert scale from "I strongly disagree" (1) to "I strongly agree" (7) with higher scores indicating a higher independent/interdependent self construal. These scales consider independent and interdependent self-construals as two separate aspects of the self. In this regard, each participant has an interdependent and an independent self score. For the 24-item version, Cronbach alpha for the independent and interdependent subscales were .70 and .74, respectively (Singelis, 1994). For a 22-item Turkish version, Cronbach's alpha for the independent and interdependent subscales were .60 and .71 for a university sample

(Ataca, 2001, personal communication). In another study, additional items of the latest version of SCS (questions 2, 5, 7, 12, 24, 30) were translated into Turkish and back-translated into English, and this 30-item version was administered on an employee sample from various business sectors (Hazar, 2002). Cronbach alpha was found to be .65 and .75 for the independent and the interdependent self-construals, respectively. In another study with university students using the latest Turkish version of the scale, Cronbach alpha was found to be .62 for the independent self-construal and .72 for the interdependent self-construal (Hesapçı, 2001). The Japanese translation and the reliability analysis of the 30 item SCS were done by Sato and Cameron (1999). The coefficient alphas for the interdependent and independent subscales of SCS were .75 and .67, respectively, for a Japanese university student sample (Sato & Cameron, 1999).

#### Description of friends

The participants were asked to describe their closest Internet friend and face-to-face friend. The instruction was: “Imagine that you have to describe your friend to a person whom you have never met before. What would you say?” (See Appendix C). After data collection, the responses were coded as personal characteristics (e.g., s/he is beautiful/intelligent/tall), social characteristics (e.g., s/he is from Istanbul/a student in Bogazici University/ member of the tennis club), or relational characteristics (e.g., we laugh a lot when we are together/ we are classmates/ s/he understands me better than other people).

### Inclusion of Others in the Self Scale (IOS)

The intimacy level of participants for their Internet and face-to-face friends was measured by Inclusion of Others in the Self (IOS) Scale developed by Aron and Aron (1992). It is a single item, pictorial measure intended to tap directly people's sense of interpersonal connectedness. In the IOS Scale, respondents select the picture that describes their relationship from a set of Venn-like diagrams each representing different degrees of overlap of two circles (See Appendix D). The degree of overlap progresses linearly and creates a seven-step, interval-level scale. It is used to measure romantic relations, friendship and family relations. The IOS Scale demonstrated alternate-form and test-retest reliability ( $r = .86$  for friendship); convergent validity with the Relationship Closeness Scale ( $r = .22$ ), The Sternberg Intimacy Scale ( $r = .45$ ), discriminant validity with Anger-Sadness Circles ( $r = -.07$ ); minimal social desirability correlations ( $r = -.4$ ); and predictive validity for whether romantic relationships were intact 3 months later (Aron & Aron, 1992).

### Procedure

The friend description item and the IOS were originally developed in English. They were translated from English into Japanese and into Turkish, and back translated by bilinguals. Before the distribution of the questionnaire, the participants were asked if they currently had an Internet friend. An Internet friend was defined as a friend with whom they interacted more often in computer-mediated settings (through e-mail, chatrooms, or discussion groups) than in face-to-face settings or by phone. The participants who had an Internet friend were given the questionnaire. The participants who had no Internet friend

were given the same questionnaire without the section on Internet friendship. The Internet friendship section began with the instruction that the participants should think about their closest friend with whom they communicated only or mostly through the Internet. It was stated that they could think of a same sex friend or an opposite sex friend, but they should not think of a friend with whom they were having a romantic relationship at the time or one that they were romantically involved with in the past. All of the participants were asked to refer to this particular friend while responding to the Internet friend section (See Appendix A). In the face-to-face friendship section, participants were asked to think of their closest face-to-face friend and respond accordingly. The face-to-face friend was defined as a friend with whom the participant interacted more often in a face-to-face environment or by phone than in computer-mediated settings (See Appendix A).

The Turkish questionnaires were conducted in classrooms in the presence of the researcher and the participants were given extra credit for their introductory psychology course. Most of the Japanese questionnaires were conducted in classrooms as well, but some of the Japanese participants were reached by e-mail. All of the Japanese students participated in the study as volunteers. The procedure took approximately 20 minutes.

## Results

### Characteristics of the Turkish and the Japanese Samples

#### The Turkish sample

The Turkish sample was composed of 99 students (61 females and 37 males, 1 gender unidentified), and they described one Internet friend and one face-to-face friend each. Their age ranged from 17 to 34, with a mean of 20.38 years. Of the 99 Internet friends, 71 were Turkish and the rest were from 17 different countries such as Saudi Arabia, United Kingdom, Romania, China, Canada, the U.S., India, Argentina, Germany, Australia, Azerbaijan, and Turkmenistan. The most common way of communication was via e-mail (81.8 %) and the second was chatting on the net (69.4 %). The nationality of face-to-face friends was much less varied (mostly Turkish and the others were from the U.S., China, Macedonia, and Mongolia). The age and sex distribution of Internet and face-to-face friends and the length of time they have been friends are reported in Table 1. Of the 96 Internet friendships, 40 were same sex (22 female-female, 18 male-male), and 56 of them were cross-sex friendships. Seventy-six of 96 Turkish face-to-face friendships were same-sex (50 female-female, 26 male-male), and 20 were cross-sex friendships. Chi square test results revealed that the frequency of same-sex friendships was significantly higher than cross-sex friendships in the face-to-face environment,  $\chi^2(1, N = 96) = 29.63, p < .001$ , whereas there was no significant difference between the frequency of same-sex friendships and cross-sex friendships in the computer-mediated environment,  $\chi^2(1, N = 96) = 1.65, p > .05$ .

Table 1.

Characteristics of Internet and Face-to-Face Friends in the Turkish sample

	Internet friend (N = 96)					Face-to-face friend (N = 96)				
	<u>N</u>	<u>M</u>	<u>SD</u>	Min	Max	<u>N</u>	<u>M</u>	<u>SD</u>	Min	Max
Age		21.51	3.79	17.00	39.00		20.47	2.29	17.00	34.00
Sex										
Male	40					36				
Female	56					60				
Unidentified	3					3				
For how long have you known each other? (in years)		3.37	3.43	.40	15.00		5.21	4.00	.08	24.00

The Japanese sample

The Japanese sample was composed of 43 students (20 females and 23 males), and they described one Internet friend and one face-to-face friend each. Their age ranged from 18 to 36, with a mean of 21.35 years. Of the 43 Internet friends, 29 were Japanese and the rest were from the U.S., Korea, China, and Mexico. The most popular way of communication was via e-mail (90.6%). Thirty eight of 43 face-to-face friends (79%) were Japanese. The age and sex distribution of Internet and face-to-face friends and the length of time they have been friends are reported in Table 2. Of the 43 Japanese Internet friendships, 20 were same-sex (9 female-female, 11 male-male), and 23 were cross-sex friendships. The age and sex distribution of Internet and face-to-face friends and the length of time they have been friends are reported in Table 2. Of the 43 Japanese face-to-face friendships, 33 were same-sex friendships (15 female-female, 18 male-male) and 9 were cross-sex relationships. Chi square test results revealed that the frequency of same

Table 2.

Table 2.

Characteristics of Internet and Face-to-Face Friends in the Japanese Sample

	Internet friend (N = 43)					Face-to-face friend (N = 43)				
	<u>N</u>	<u>M</u>	<u>SD</u>	Min	Max	<u>N</u>	<u>M</u>	<u>SD</u>	Min	Max
Age		21.37	3.22	16.00	32.00		21.27	3.36	18.00	40.00
Sex										
Male	22					23				
Female	21					19				
Unidentified	-					1				
For how long have you known each other?(in years)		3.79	3.31	0.30	15.00		3.49	3.33	.05	17.00

sex friendships was significantly higher than cross-sex friendships in the face-to-face environment,  $\chi^2(1, N = 96) = 13.65, p < .001$ , whereas there was no significant difference between the frequency of same sex friendships and cross-sex friendships in the computer-mediated environment,  $\chi^2(1, N = 96) = .22, p > .05$ .

Descriptive Characteristics of the Variables Used in the Study

The sample size, mean, standard deviation, range, and Cronbach's alpha of the variables used in the study for Japanese and Turkish females and males are given in Table 3.

Independent and interdependent self-construal scores were calculated by adding relevant items of the Self Construal Scale (SCS; Singelis, 1994). The participants were

Table 3.

Descriptive statistics of variables

	Independent self construal					Interdependent self construal					Intimacy			
	<u>N</u>	<u>M</u>	<u>SD</u>	Possible Range of Scores	Alpha	<u>N</u>	<u>M</u>	<u>SD</u>	Possible Range of Scores	Alpha	<u>N</u>	<u>M</u>	<u>SD</u>	Possible Range of scores
Japanese														
Female	20	4.73	.50	1-7	.46	20	4.58	.50	1-7	.73	20	2.98	1.28	1-7
Male	23	4.68	.74	1-7	.75	23	4.32	.74	1-7	.75	22	3.66	1.53	1-7
Total	43	4.70	.63	1-7	.66	43	4.44	.63	1-7	.74	42	3.33	1.44	1-7
Turkish														
Female	61	5.18	.57	1-7	.60	61	4.87	.75	1-7	.80	61	4.97	0.93	1-7
Male	37	4.72	.62	1-7	.63	37	4.89	.53	1-7	.58	36	4.58	1.44	1-7
Total	98	5.01	.62	1-7	.66	98	4.88	.67	1-7	.75	97	4.82	1.15	1-7
	Personal Description score				Social Description score				Relational Description score					
Japanese														
Female	19	.35	.31	0-1	19	.04	.11	0-1	19	19	.61	0-1		
Male	21	.43	.38	0-1	21	.16	.28	0-1	21	21	.41	0-1		
Total	40	.39	.35	0-1	40	.10	.22	0-1	40	40	.51	0-1		
Turkish														
Female	61	.73	.35	0-1	61	.05	.14	0-1	61	61	.22	0-1		
Male	37	.86	.26	0-1	37	.05	.10	0-1	37	37	.10	0-1		
Total	98	.78	.32	0-1	98	.05	.12	0-1	98	98	.17	0-1		

divided into four groups based on the respective medians of independent and interdependent scores for each cultural group. The Turkish participants whose independence score was lower than the median (5.03) and whose interdependence score was higher than the median (4.93) were classified as interdependent. Those participants whose independence score was higher than 5.03 and whose interdependence score was lower than 4.93 were classified as independent. Those participants whose independence score was higher than 5.03 and whose interdependence score was higher than 4.93 were classified as both independent and interdependent, whereas those whose independence score was lower than 5.03 and whose interdependence score was lower than 4.93 were classified as neither independent nor interdependent. The Japanese sample was also divided into 4 groups using the Japanese medians (4.93 for independence and 4.47 for interdependence) in the same way. The distribution of these four groups according to the samples are shown in Table 4.

In terms of friend descriptions, it was originally planned to code the open-ended descriptions of friends as personal and social descriptions. However, the nature of the data necessitated an additional category in which the descriptions were related to neither the personal nor the social characteristics of individuals, but to the characteristics of the relationship between the participant and his/her friend. Therefore, participants' descriptions of their friends were divided into three categories rather than two: personal, social, and relational descriptions. Two coders, the researcher and a graduate student who was blind to the aim of study, coded the descriptions. The coders were Turkish and

Table 4.

The Distribution of Independent and Interdependent Self Construals in the Japanese and the Turkish Samples

	<u>N</u>	Independent	interdependent	both independent and interdependent	neither independent nor interdependent
Japanese	43	10 (% 23.26)	9 (% 20.93)	12 (% 27.90)	12 (%27.90)
Turkish	98	26 (% 26.53)	28 (% 28.57)	23 (% 23.47)	21 (% 21.42)
Total	141	36 (% 25.53)	37 (% 26.24)	35 (% 24.82)	33 (% 23.40)

English speaking individuals. Therefore, Japanese participants' responses, which were in Japanese, were translated to English by an English/Japanese bilingual. The coders coded the original responses of Turkish participants, which were in Turkish language, and the English translations of Japanese responses. The graduate student was given instructions about how to code the friend descriptions. She was asked to code each description as either social, personal, or relational description depending on the following criteria:

Social description: If the respondent described the friend by the family, school, country, club, institution that s/he belongs to, his/her social status, or emphasized his/her shared characteristics with the group.

Personal description: If the respondent described the friend's physical or personality characteristics, tastes, aims, desires, personal attitudes and beliefs, the characteristics that differentiated him/her from the others, or his/her uniqueness.

Relational description: If the respondent described the characteristics of their friendship such as where and how s/he met his/her friend, what they do together and why they maintain their friendship.

The coding of the two coders was then compared. The proportion of the number of items that both coders classified as personal to the total number of items classified as personal by at least one coder was .97, the proportion of the agreement on social items was .81, and the proportion of the agreement on relational was .90. Hence, since the interrater reliability was so high, the coding of the researcher was used for the analyses. Individuals varied in terms of the number of descriptions they provided for their friends. An individual's description score was calculated by taking the proportion of the number of each kind of description (personal, social, and relational) to the number of all of the descriptions for face-to-face friend and Internet friend. For example, an individual's personal description score for Internet friends was:

$$\frac{\text{The number of personal descriptions for Internet friends}}{\text{The number of (personal + social+ relational) descriptions for Internet friends}}$$

All participants had three different description scores for Internet friends and three different description scores for face-to-face friends each ranging from 0 to 1. The mean and standard deviation of these descriptions for the combined Japanese and Turkish samples are shown in Table 5.

#### The Effect of Culture and Gender on Independent and Interdependent Self Construals

A repeated measure analysis of variance was used to examine the effects of culture (Japanese x Turkish) and gender on independent and interdependent self-

Table 5.

The Descriptive Statistics of Personal, Social, and Relational Descriptions for Internet and Face-to-Face Friends

	<u>M</u>	<u>SD</u>
Personal description scores for Internet friend	.67	.39
Social descriptions scores for Internet friend	.09	.10
Relational descriptions scores for Internet friend	.23	.35
Personal descriptions scores for face-to-face friend	.68	.39
Social descriptions scores for face-to-face friend	.05	.17
Relational descriptions scores for face-to-face friend	.27	.37

construals. The between subjects test results showed that both culture,  $F(1, 137) = 16.18$ ,  $p < .001$  and gender,  $F(1, 137) = 4.80$ ,  $p < .05$  had a main effect on self construal. Both the independent ( $M = 5.01$ ,  $SD = .62$ ) and the interdependent ( $M = 4.88$ ,  $SD = .67$ ) self construals of the Turkish sample were higher than the Japanese sample ( $M = 4.71$ ,  $SD = .66$  and  $M = 4.44$ ,  $SD = .72$ , respectively). Females ( $M = 5.07$ ,  $SD = .58$ ) had a higher independent self construal than males ( $M = 4.71$ ,  $SD = .66$ ). Within subject test results showed that there was a three-way interaction of self construal, culture, and gender,  $F(1, 137) = 4.22$ ,  $p < .05$ . Turkish female participants had a higher independent self construal ( $M = 5.18$ ,  $SD = .57$ ) than an interdependent self construal ( $M = 4.87$ ,  $SD = .75$ ). Japanese female and male participants had a higher independent self construal ( $M = 4.73$ ,  $SD = .50$ , and  $M = 4.68$ ,

$SD = .74$ , respectively) than an interdependent self construal ( $M = 4.58$ ,  $SD = .67$ , and  $M = 4.32$ ,  $SD = .75$ , respectively), Turkish males had a higher interdependent self construal ( $M = 4.89$ ,  $SD = .53$ ) compared to the independent self construal ( $M = 4.72$ ,  $SD = .62$ ). The Turkish and the Japanese participants' independent and interdependent self construals according to gender can be seen in Figure 1.

### Results Concerning the Hypotheses

#### The Effect of Culture, Gender, and Self Construals on Intimacy

A 2 X 2 (Culture x Gender) repeated measures analysis of variance was used to examine their effects on intimacy for face-to-face and Internet friends. The between subjects test analysis revealed that Turks ( $M = 4.82$ ,  $SD = 1.15$ ) had higher overall intimacy scores than the Japanese ( $M = 3.33$ ,  $SD = 1.44$ ),  $F(1, 129) = 41.40$ ,  $p < .001$ . This was the reverse of the expected effect of culture on intimacy. There was also a significant interaction effect of culture and gender,  $F(1, 129) = 5.30$ ,  $p < .05$  on overall intimacy. The Japanese males ( $M = 3.66$ ,  $SD = 1.53$ ) were found to have higher intimacy scores than the Japanese females ( $M = 2.98$ ,  $SD = 1.28$ ), whereas the Turkish females ( $M = 4.97$ ,  $SD = .93$ ) were found to have higher intimacy scores than the Turkish males ( $M = 4.58$ ,  $SD = 1.44$ ). Hence, the hypothesis concerning the effect of gender on intimacy was not supported, but an unexpected culture by gender interaction was detected. This interaction can be seen in Figure 2.

Figure 1.

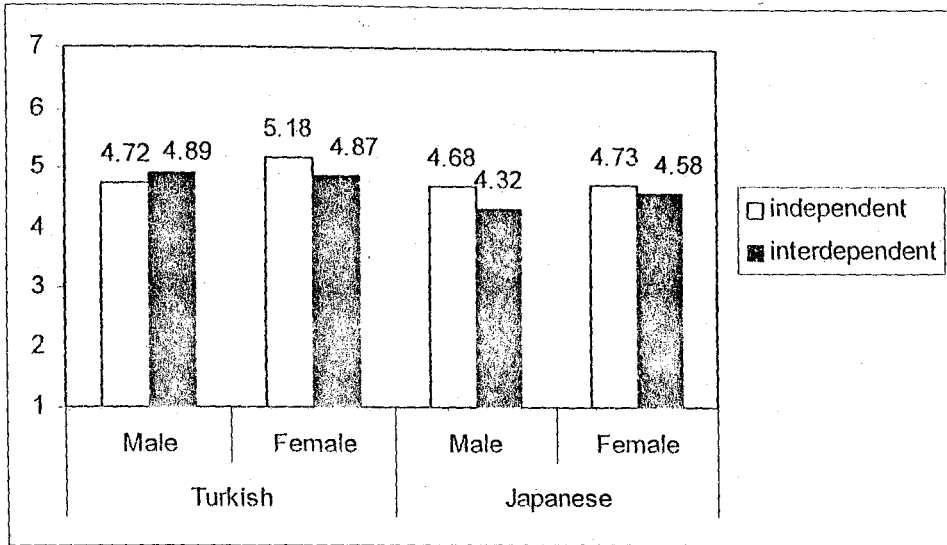
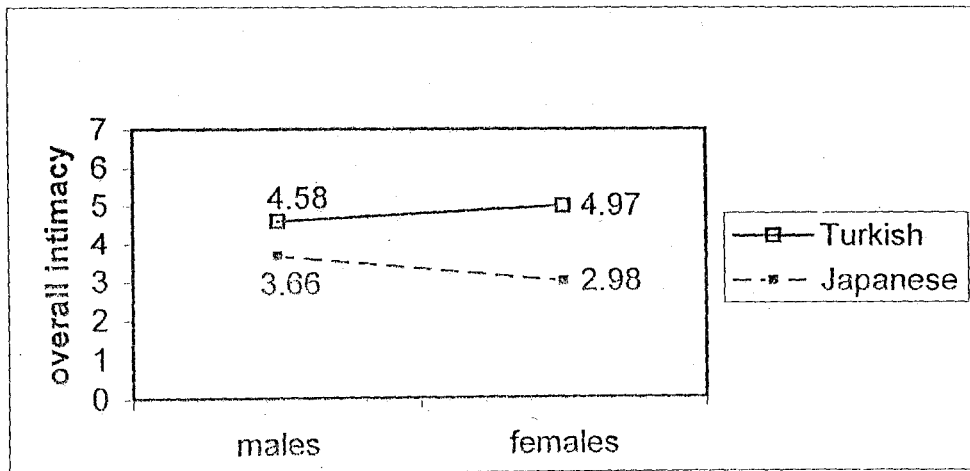
Independent and Interdependent Self Construal by Culture and Gender

Figure 2.

Overall Intimacy by Culture and Gender

Supporting the related hypothesis, the within subjects analysis showed that intimacy for face-to-face friends ( $M = 4.86$ ,  $SD = 1.58$ ) was higher than intimacy for

Internet friends ( $M = 3.98$ ,  $SD = 1.74$ ),  $F(1, 129) = 24.84$ ,  $p < .001$ . A significant effect of interaction of friendship type by gender was found,  $F(1, 129) = 6.22$ ,  $p < .05$ . Male participants' intimacy for Internet friend ( $M = 4.13$ ,  $SD = 1.76$ ) was higher than female participants' ( $M = 3.87$ ,  $SD = 1.73$ ), whereas female participants' intimacy for face-to-face friends ( $M = 5.05$ ,  $SD = 1.12$ ), was higher than male participants' ( $M = 4.19$ ,  $SD = 1.62$ ). This interaction can be seen in Figure 3. No interaction between friendship type and culture was found.

In order to test the hypothesis concerning the effect of self construal on intimacy, a repeated measures analysis of variance was used. Between and within subject analysis revealed no significant difference among the 4 groups in terms of intimacy scores. The mean and standard deviation of intimacy scores for face-to-face and Internet friends by culture and the 4 groups based on self construals can be seen in Table 6.

A simultaneous multiple regression was conducted in order to examine the effect of independent and interdependent self construals on intimacy. The analysis revealed a significant finding,  $F(2,138) = 7.38$ ,  $p < .001$ . Only the interdependent self construal made a unique significant contribution to the prediction. The direction of the regression coefficient indicated that as the interdependent self construal increased, overall intimacy also increased. The predictors accounted for a total of 8.5% of variance. The result of multiple regression analysis can be seen in Table 7.

In order to test the effects of intimacy difference scores, the difference between each participant's intimacy score for Internet and face-to-face friends was calculated and

Figure 3.

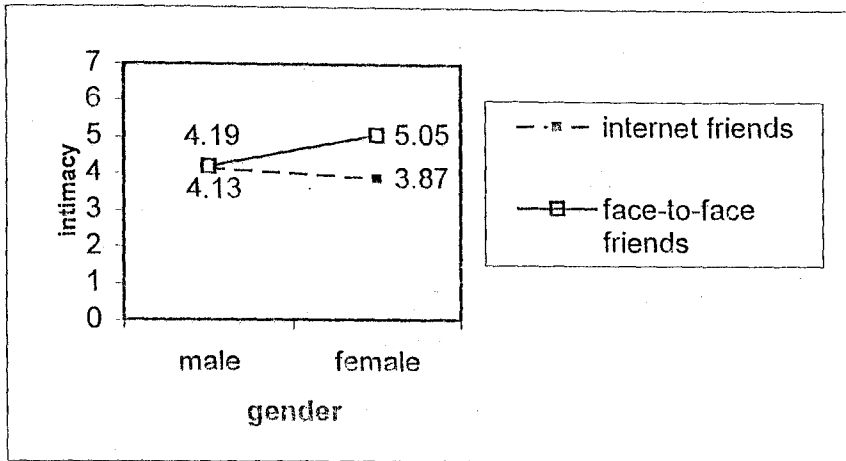
Intimacy by Friendship Type and Gender

Table 6.

The Descriptive Statistics of Intimacy Scores for Face-to-Face and Internet Friends by Culture and 4 Groups Based on Self Construals

		Independent		Interdependent		Both independent and interdependent		Neither independent nor interdependent	
		<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Japanese	Face-to-face friend	3.30	1.49	4.75	1.49	4.36	1.69	3.08	1.68
	Internet friend	3.60	2.01	4.00	1.07	2.42	1.68	2.17	1.27
Turkish	Face-to-face friend	5.21	1.35	5.27	1.31	5.52	1.20	5.29	1.31
	Internet friend	4.08	1.41	4.44	1.78	4.55	1.34	4.52	1.75

Table 7.

Summary of Multiple Regression Analysis for Self-Construals on Overall Intimacy

Variable	<u>B</u>	<u>SE B</u>	<u>β</u>
Independent self-construal	.33	.18	.15
Interdependent self-construal	.53	.16	.26*

Note.  $R^2 = .085$

\*  $p < .001$

a t-test was conducted to compare Japanese and Turkish samples in terms of these intimacy difference scores. No significant difference was found. Another t-test was conducted to compare the intimacy difference scores of males and females. Females were found to have a greater difference between their intimacy scores for Internet and face-to-face friends than males had,  $t(131) = 1.99, p < 0.5$ . Lastly, a one-way analysis of variance was conducted to compare the intimacy difference scores of 4 groups based on independent and interdependent self construals. No significant difference was found. Therefore, the hypotheses related to the effects of culture and self construals on intimacy difference scores were not supported whereas the hypothesis related to the effect of gender on intimacy difference scores was supported.

The Comparison of Personal, Relational and Social Descriptions by Culture

A 3 X 2 (Description type x Culture) repeated measures analysis of variance was used to examine the effect of culture on personal, social, and relational descriptions. The within subjects analysis showed that there was a main effect of friendship description type,  $F(1, 136) = 17.20, p < .001$ . Personal description scores ( $M = .67, SD = .37$ ) were

higher than social ( $M = .07$ ,  $SD = .16$ ) and relational ( $M = .27$ ,  $SD = .35$ ) description scores; and relational description scores were higher than social description scores. A description type by culture interaction was found,  $F(1, 136) = 36.77$ ,  $p < .001$ . Personal description score was the highest one among the three types of friendship descriptions for the Turkish sample ( $M = .78$ ,  $SD = .32$ ), whereas relational description score was the highest one for the Japanese sample ( $M = .51$ ,  $SD = .39$ ). The interaction between friend description types and culture can be seen in Figure 4.

### The Effect of Culture, Gender, and Self Construals on Friend Descriptions

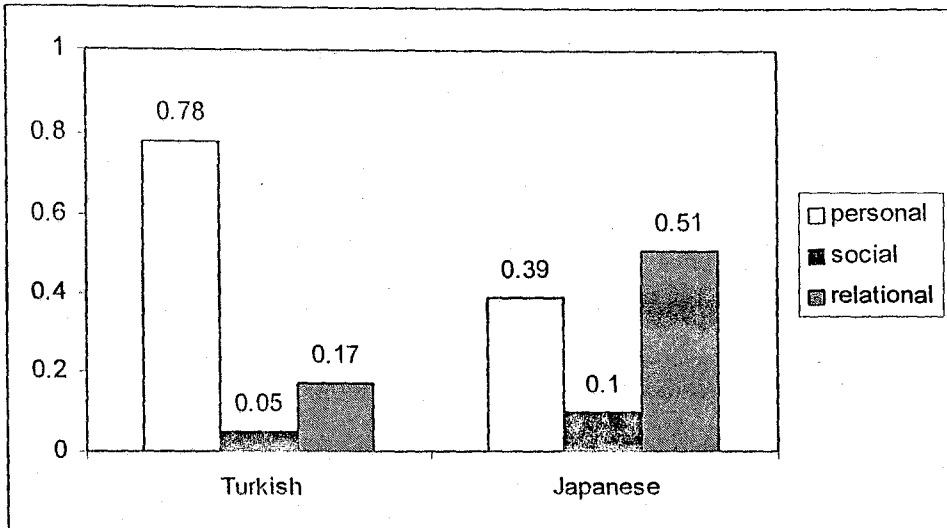
In order to test the hypotheses concerning friendship descriptions, repeated measures analysis of variance was used to examine the effect of culture, gender, and self construals on the personal, social, and relational description scores for face-to-face and Internet friends.

#### The Effect on Personal Descriptions

A 2 X 2 (Culture x Gender) repeated measures analysis of variance was used to examine their effects on personal descriptions for face-to-face and Internet friends. The test of between subjects analysis showed that there was a main effect of culture on personal description scores,  $F(1, 119) = 36.82$ ,  $p < .001$ . The Turkish participants had higher personal description scores ( $M = .78$ ,  $SD = .39$ ) than the Japanese participants ( $M = .39$ ,  $SD = .35$ ). Hence, the hypothesis concerning the effects of culture on description scores was partially supported. The test of within subjects analysis revealed that there was a significant difference between the personal descriptions of Internet and face-to-face friends,  $F(1, 189) = 5.11$ ,  $p < .05$ . Personal description scores for face-to-

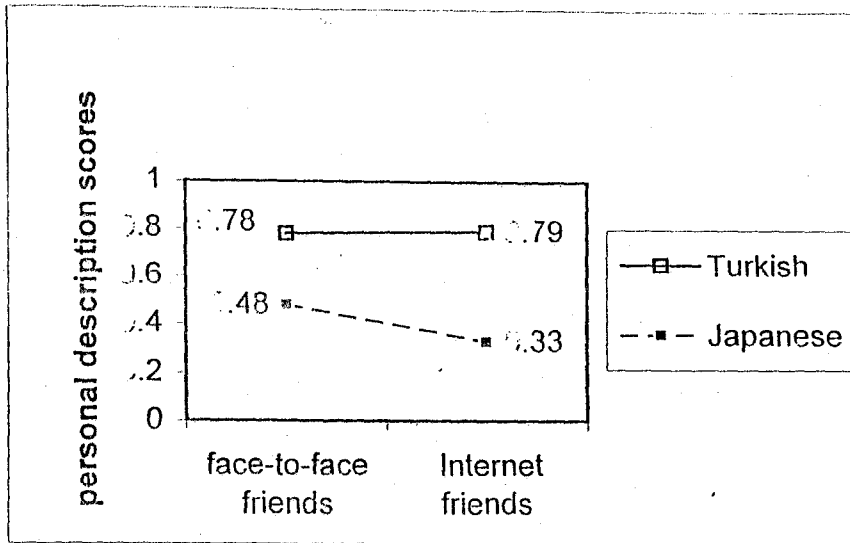
Figure 4.

Personal, Social, and Relational Friend Descriptions by Culture



face friends ( $M = .70$ ,  $SD = .37$ ) were higher than for Internet friends ( $M = .67$ ,  $SD = .39$ ). Hence, the finding did not support the related hypothesis. A friendship type by culture interaction was found,  $F(1, 246) = 6.66$ ,  $p < .05$ . The Japanese participants' personal description score for face-to-face friends ( $M = .48$ ,  $SD = .39$ ) was higher than their personal description score for Internet friends ( $M = .33$ ,  $SD = .35$ ), whereas the Turkish participants' personal description score for Internet friends ( $M = .79$ ,  $SD = .33$ ) was not significantly different from their personal description score for face-to-face friend friends, ( $M = .78$ ,  $SD = .33$ ). No friendship type by gender interaction was found. The interaction effect of friendship type and culture on the personal description can be seen in Figure 5.

Figure 5

Personal Description Score by Friendship Type and Culture

The difference between each individual's personal description scores for Internet friends and face-to-face friends was calculated and a t-test was conducted to compare the Japanese and the Turkish samples in terms of these difference scores. The difference scores of the Japanese sample was found to be greater than the difference scores of the Turkish sample,  $t(121) = 2.87$ ,  $p < .01$ . Hence, the hypothesis related to the effect of culture on the difference score of descriptions was supported.

A repeated measures analysis of variance was used to examine the effect of independent and interdependent self construals on personal descriptions. No significant difference was found among the 4 groups.

The Effect on Relational Descriptions

A 2 X 2 (Culture x Gender) repeated measures analysis of variance was used to examine their effects on relational descriptions for face-to-face and Internet friends. The test of between subjects analysis showed that there was a main effect of both culture,

$F(1, 119) = 29.03, p < .001$  and gender,  $F(1, 119) = 5.85, p = .01$  on relational description scores. Japanese participants' relational description scores ( $M = .51, SD = .39$ ) were higher than Turkish participants' ( $M = .17, SD = .29$ ). The female participants' relational description scores ( $M = .31, SD = .36$ ) were higher than males' ( $M = .21, SD = .34$ ).

The test of within subjects analysis revealed that there was a relational description score by culture interaction effect on relational descriptions,  $F(1, 119) = 11.29, p < .01$ . The Japanese participants' relational description scores for Internet friends ( $M = .53, SD = .39$ ) were higher than their relational description scores for face-to-face friend friends ( $M = .41, SD = .41$ ). However, the Turkish participants' relational descriptions for face-to-face friends ( $M = .18, SD = .30$ ) were higher than for Internet friends ( $M = .14, SD = .27$ ). The interaction effect of friendship type and culture on relational description scores can be seen in Figure 6.

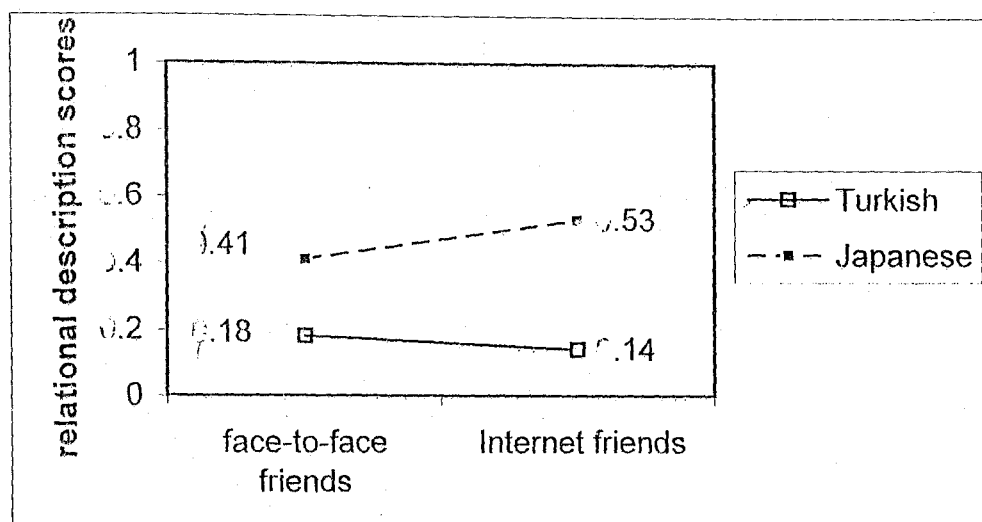
The difference between each participant's relational description scores for Internet and face-to-face friends was calculated and a t-test was conducted to compare the Japanese and the Turkish samples in terms of these difference scores. No significant difference was found.

A repeated measures analysis of variance was used to examine the effect of independent and interdependent self construals on relational description scores. No significant difference was found between the groups in terms of relational descriptions.

#### The Effects on Social Descriptions

A repeated measures analysis of variance was used to examine the effect of

Figure 6.

Relational Description Scores by Friendship Type and Culture

culture and gender on social descriptions. No significant difference was found between the groups.

The difference between each participant's relational description scores for Internet friends and face-to-face friends was calculated and a t-test was conducted to compare the Japanese and the Turkish samples in terms of these difference scores. No significant difference was found. Again, a repeated measures analysis of variance was used to examine the effect of 4 groups based on independent and interdependent self construals. No significant difference was found.

Other findings

Data were collected from a group of students who did not have any Internet friends in order to examine whether the characteristics of individuals with and without an Internet friend differed or not. It was found that participants with and without an Internet friend differed in terms of how often they used the Internet,  $t(227) = 3.81, p < .001$ . The

having an Internet friend ( $\underline{M} = 2.92$ ,  $\underline{SD} = 1.09$ ) than participants having no Internet friend ( $\underline{M} = 2.36$ ,  $\underline{SD} = 1.06$ ). No significant difference was found in terms of gender of participants with (81 female, 60 male) and without (61 female, 27 male) an Internet friend,  $\chi^2(3, N = 227) = 3.24$ ,  $p > .05$ . Participants with and without an Internet friend did not differ in terms of independent ( $\underline{M} = 4.91$ ,  $\underline{SD} = .64$ ;  $\underline{M} = 4.82$ ,  $\underline{SD} = .59$ , respectively),  $t(227) = 1.17$ ,  $p > .05$  and interdependent self construals ( $\underline{M} = 4.74$ ,  $\underline{SD} = .71$ ;  $\underline{M} = 4.73$ ,  $\underline{SD} = .59$ , respectively),  $t(227) = 1.14$ ,  $p > .05$ . The intimacy scores for their face-to-face-friends of participants with ( $\underline{M} = 4.86$ ,  $\underline{SD} = 1.57$ ) and without ( $\underline{M} = 4.48$ ,  $\underline{SD} = 1.56$ ) an Internet friend were not found to be different,  $t(217) = 1.76$ ,  $p > .05$ .

## Discussion

First, independent and interdependent self construals with regard to the effect of culture and gender were examined. The effect of culture on independent self construal was as expected: The Turkish participants had higher independence scores than the Japanese. In contrast to the expectations, Turks had higher interdependence scores as well. The effect of gender on the independent self was also found: Females had higher independence scores than males.

Göregenli (1997) claims that “Turkish culture can not be placed on one or the other side of the individualism-collectivism dichotomy” (p. 792). The high scores of the Turkish sample, on both the independent and the interdependent self construals supports this claim. On the other hand, the reason why the Japanese sample scored lower than the Turkish sample might be the moderation response style of the Japanese, in which there is a reluctance to use extreme scale values (e.g., Hui & Triandis, 1989; Kashima, Siegal, Tanaka, & Kashima, 1992). The finding about females having higher independence scores than males might seem surprising at first glance since females are usually thought to be more interdependent and less independent than males. However, there is an empirical finding that males and females differed in the predicted way in some individualistic cultures, but that there was an unpredicted and significant gender differences in some collectivistic cultures (Watkins et al., 1998). Neither the Turkish nor the Japanese culture is known to be individualistic; this might be the reason for finding girls more independent than males in contrast to the expectations.

Second, the effect of culture, gender, type of friendship and self construals on intimacy was examined. In contrast to the predictions, the Turkish participants had higher

intimacy than the Japanese participants. No gender effect was found, but an unexpected culture-gender interaction effect was detected. Males had higher intimacy than females in the Japanese sample, whereas females had higher intimacy scores than males in the Turkish sample. With regard to the comparison of Internet and face-to-face friends, the intimacy for face-to-face friends was higher than the intimacy for Internet friends as predicted. In terms of gender, males' intimacy for their Internet friends was higher than that of females, whereas females' intimacy for their face-to-face friends was higher than males.

The Japanese participants' low intimacy relative to the Turkish participants was surprising in view of the usual description of Japan as a collectivist or an interdependent society. There can be several explanations for this: First of all, the Turkish sample was found to be more interdependent than the Japanese sample. The Turkish sample was also found to be more independent than the Japanese, but perhaps interdependence is more relevant to intimate relationships than independence; hence, the higher interdependence of the Turkish sample might be an explanation of their higher intimacy. Second, Uleman, Rhee, Bardoliwalla, Semin and Toyama (2000) studied the closeness of Euro-American, Asian-American, Turkish, Japanese and Dutch college students to several kinds of in-groups by using Aron-type circles of closeness scale. The Japanese sample had the lowest closeness scores for any kind of in-group, including friends. In their study, it was concluded that closeness was not central to Japanese collectivism. Uleman et al. (2000) used Kagitcibasi's (1997; as cited in Uleman et al., 2000) distinction between the normative and the relational I-C to explain the surprising low scores of the Japanese sample and concluded that perhaps the Japanese culture was normatively collectivist

(attitudes and norms tie them through expectations and obligations) but relationally individualist (they have distant relationships). Third, a moderation response style of the Japanese participants might be the factor responsible for the finding.

In support of the prediction, the study confirmed that face-to-face friends would be liked more than Internet friends. However, the recent study of McKenna, Green and Gleason (2002) showed that people do form close relationships on the Internet and they develop intimacy at a faster rate than in face-to-face relationships. They suggested that the anonymity and lack of traditional “gating features” such as physical or social characteristics in Internet interactions are what facilitate the strong friendships on the Internet. Interestingly, the same characteristics of the Internet interaction was the source of the prediction which was exactly opposite of the McKenna, Green and Gleason’s (2002). Their sample consisted of the Usenet newsgroup members, and no information about the cultural characteristics of the users was provided. Most probably, it was an American sample and the contradictory findings of that study with the present study might be due to the cultural differences of the samples. In the American culture, verbal self-closure is a key element for intimate interpersonal relations and the Internet communication gives an opportunity for a relationship that is totally based on verbal expressions. Therefore, the lack of traditional gating features in the Internet environment can be a positive feature in terms of friendship formation and maintenance for McKenna, Green and Gleason’s (2002) sample, whereas it may have had a negative effect on the samples of Turkish and Japanese students in the present study. The weakness of the Internet environment in conversing indirect messages and non-verbal communication

might be the reason for the sample having lower intimacy for their Internet friends than their face-to-face friends.

Third, the effect of culture, gender, friendship type and self construals on friend description scores was examined. It was found that the use of social descriptions was not common, but, personal and relational descriptions were preferred more. For both relational and personal descriptions, the main effect of culture was detected. Japanese had more relational descriptions than the Turks, and the Turks had more personal descriptions than the Japanese. For relational descriptions, there was also a gender effect such that females had more relational descriptions than males. With regard to the comparison of Internet and face-to-face friends, culture had an effect as follows. First, the Japanese participants' relational descriptions for Internet friends were higher than for face-to-face friends. However, Turkish participants' relational descriptions for face-to-face friends were higher than their relational description scores for Internet friends. Second, the Japanese participants' personal descriptions for face-to-face friends was higher than for Internet friends whereas Turkish participants' personal descriptions for Internet and face-to-face friends were not different.

The way the Turkish participants responded to the question related to friend descriptions resembles the usual way that members of the cultures of independence describe themselves and others; they were mostly personal descriptions. The Japanese participants on the other hand, by using relational descriptions more frequently than personal ones, act as usual members of a culture of interdependence. The finding related to the Turkish participants' preference for personal descriptions for friends were in parallel with the result of a previous study examining the cultural effect on self

conceptions (Watkins, Adair, Akande, Gerong, McInerney, Sunar, Watson, Wen, & Habtamu, 1998). In that study which included nine cultures, idiocentric self descriptions were the most common type of descriptions in all cultures, including the Turkish culture. Watkins et al. (1998) failed to confirm their hypothesis that the participants of collectivistic cultures would use large group, small group and allocentric self descriptions more than the participants of individualistic cultures, therefore questioned the individualism-collectivism dimension as an explanation of cultural differences in self conception. With regard to Internet and face-to-face friendship, it was observed that for their Internet friends, the Japanese participants used their favourite type of description, relational description, even more than they used it for face-to-face friends. The Turkish participants used their favourite type of description, personal descriptions, equally for Internet and face-to-face friends. This result indicates that individuals' preferred type of description for friends are not qualitatively different between the Internet environment and the face-to-face environment. This might be an indication that the unique qualities of the Internet environment do not alter the person perception of the users.

The prediction about the effect of self-construals on intimacy and friend descriptions were based on the assumption that although all people carry both independent and interdependent self components, one of these components is more salient and central for each person. However, a considerable number of participants in the sample had almost equally developed independent and interdependent self construals. Since many participants carried the two sets of characteristics equally, there was a problem of how to group the individuals as "those who often endorse independent-self construal" and "those who often endorse interdependent-self construal". The sample

was classified into four groups, however, they were small and the comparison of such small groups does not produce meaningful and generalizable results. Therefore, a multiple regression analysis was conducted to examine if interdependent and independent self-construals had a valuable contribution to the dependent variables of the study. It was found that the interdependent self construal had a unique contribution to overall intimacy. This result showed that controlling for the independent self construal, only the interdependent self had an effect on an individual's intimacy. Examining the effects of independent and interdependent self-construals separately yielded a more significant finding than grouping people according to their independent and interdependent self construals and examining the effects of these groups on several variables.

This study was a very first attempt to examine the effect of culture, gender and self-construals on Internet and face-to-face friendships. Culture appeared as a factor affecting the description of and the perceived intimacy of Internet and face-to-face friendships. Self construal, on the other hand, did not produce any of the predicted effects. The effect of gender was limited. The study showed the necessity for focusing on cultural effects on the social relations conducted on the Internet.

The present study had several limitations. First, the definition of Internet friendship was very broad. Any friend that one communicates with via the Internet channels more than face-to-face or with via phone was considered to be an Internet friend. Perhaps, more restricted definitions of Internet friend (e.g., 'pure' Internet friendship that is initially established on the Internet and involving no face-to-face contact) would give results that support the predictions of the study. Internet communication consists of different channels such as e-mail, chatrooms and discussion

groups. Some channels require both parties to be connected on the Net at the same time (synchronous communication channels), whereas the others provide a flexibility for replying to the messages any time the individual wants to (asynchronous communication channels). Rather than being a single means of communication, the Internet can be considered as a collection of different communication channels. Therefore, each of these channels can be studied separately. For instance, the characteristics of e-mail friendship and chatroom friendship might be different and therefore, it might be better to examine, analyze and evaluate the effects of these different Internet communication channels separately. Second, the study compared two cultural samples, Turkish and Japanese. In order to examine the effects of culture on the issue in a more controlled way, there is a need to study a diversity of cultures varying on individualism-collectivism.

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## APPENDICES

## Appendix A: Demographic Questions

Sex: Female \_\_\_\_\_ Male \_\_\_\_\_ Age: \_\_\_\_\_

Nationality: \_\_\_\_\_

How often do you use the Internet?

0. Never
1. Less than 1 hour a week
2. 1 to 5 hours a week
3. 5 to 10 hours a week
4. 10 to 20 hours a week
5. More than 20 hours a week

## The Second Section

### The Internet Friendship

While responding to the items in this section, please think about your closest friend that you *only* or *mostly* communicate through the Internet. You can think of a same sex or an opposite sex friends, but you should *not* think of a friend with whom you are having a romantic relationship with or one that you have been romantically involved with.

Please remember that during this section you have to think about a particular friend of yours that you communicate with more frequently through the Internet (through chat programs, e-mail, the Internet discussion groups...etc.) as opposed to communicating through face-to-face interaction and /or by telephone.

1. Your friend's sex: Female ..... Male .....
2. Your friend's age: .....
3. Your friend's job: .....
4. Your friend's nationality: .....
5. For how long have you been knowing each other?.....

6. During a week, how long do you communicate with him or her through the ways below? Please choose the option that is most appropriate for you by using the scale below.

0. Never
1. Less than one hour a week
2. 1 to 5 hours a week
3. 5 to 10 hours a week
4. 10 to 20 hours a week
5. More than 20 hours a week

a. Chatting on the Net

0	1	2	3	4	5
---	---	---	---	---	---

b. Discussion groups on the Net

0	1	2	3	4	5
---	---	---	---	---	---

c. E-mail

0	1	2	3	4	5
---	---	---	---	---	---

d. Face-to-face

0	1	2	3	4	5
---	---	---	---	---	---

e. Phone

0	1	2	3	4	5
---	---	---	---	---	---

f. Other \_\_\_\_\_

0	1	2	3	4	5
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## The Third Section

### Face-to-Face Friendship

While responding to the items in this section, please think about your closest friend that you *only* or *mostly* communicate face-to-face. You can think of a same sex or an opposite sex friends, but you should *not* think of a friend with whom you are having a romantic relationship with or one that you have been romantically involved with.

Please remember that during this section you have to think about a particular friend of yours that you communicate with more frequently through face-to-face interaction and /or by telephone as opposed to communication via Internet (through chat programs, e-mail, the Internet discussion groups...etc.).

1. Your friend's sex: Female ..... Male .....
2. Your friend's age: .....
3. Your friend's job: .....
4. Your friend's nationality: .....
5. For how long have you been knowing each other?.....

6. During a week, how long do you communicate with him or her through the ways below? Please choose the option that is most appropriate for you by using the scale below.

6. Never
7. Less than one hour a week
8. 1 to 5 hours a week
9. 5 to 10 hours a week
10. 10 to 20 hours a week
11. More than 20 hours a week

a. Face-to-face

| 0 | 1 | 2 | 3 | 4 | 5 |

b. Phone

| 0 | 1 | 2 | 3 | 4 | 5 |

c. Chating on the Net

| 0 | 1 | 2 | 3 | 4 | 5 |

d. E-mail

| 0 | 1 | 2 | 3 | 4 | 5 |

e. Discussion groups on the Net

| 0 | 1 | 2 | 3 | 4 | 5 |

f. Other \_\_\_\_\_

| 0 | 1 | 2 | 3 | 4 | 5 |

## Appendix B: The Self-Construal Scale (SCS)

### INSTRUCTIONS

This is a questionnaire that measures a variety of feelings and behaviors in various situations. Listed below are a number of statements. Read each one as if it referred to you. Beside each statement write the number that best matches your agreement or disagreement. Please respond to every statement. Thank you.

1=STRONGLY DISAGREE

4=DON'T AGREE OR

5=AGREE SOMEWHAT

2=DISAGREE

DISAGREE

6=AGREE

3=SOMEWHAT DISAGREE

7=STRONGLY AGREE

- \_\_\_ 1. I enjoy being unique and different from others in many respects.
- \_\_\_ 2. I can talk openly with a person who I meet for the first time, even when this person is much older than I am.
- \_\_\_ 3. Even when I strongly disagree with group members, I avoid an argument.
- \_\_\_ 4. I have respect for the authority figures with whom I interact.
- \_\_\_ 5. I do my own thing, regardless of what others think.
- \_\_\_ 6. I respect people who are modest about themselves.
- \_\_\_ 7. I feel it is important for me to act as an independent person.
- \_\_\_ 8. I will sacrifice my self interest for the benefit of the group I am in.
- \_\_\_ 9. I'd rather say "No" directly, than risk being misunderstood.
- \_\_\_ 10. Having a lively imagination is important to me.
- \_\_\_ 11. I should take into consideration my parents' advice when making education/career plans.
- \_\_\_ 12. I feel my fate is intertwined with the fate of those around me.
- \_\_\_ 13. I prefer to be direct and forthright when dealing with people I've just met.
- \_\_\_ 14. I feel good when I cooperate with others.
- \_\_\_ 15. I am comfortable with being singled out for praise or rewards.
- \_\_\_ 16. If my brother or sister fails, I feel responsible.
- \_\_\_ 17. I often have the feeling that my relationships with others are more important than my own accomplishments.
- \_\_\_ 18. Speaking up during a class (or a meeting) is not a problem for me.
- \_\_\_ 19. I would offer my seat in a bus to my professor (or my boss).
- \_\_\_ 20. I act the same way no matter who I am with.
- \_\_\_ 21. My happiness depends on the happiness of those around me.
- \_\_\_ 22. I value being in good health above everything.
- \_\_\_ 23. I will stay in a group if they need me, even when I am not happy with the group.
- \_\_\_ 24. I try to do what is best for me, regardless of how that might affect others.
- \_\_\_ 25. Being able to take care of myself is a primary concern for me.
- \_\_\_ 26. It is important to me to respect decisions made by the group.
- \_\_\_ 27. My personal identity, independent of others, is very important to me.
- \_\_\_ 28. It is important for me to maintain harmony within my group.

- \_\_\_\_ 29. I act the same way at home that I do at school (or work).
- \_\_\_\_ 30. I usually go along with what others want to do, even when I would rather do something different.

## Appendix C: Description of Friend

Imagine that you had to describe this friend to a person whom you have never met before. What would you say?

1.

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2.

---

3.

---

4.

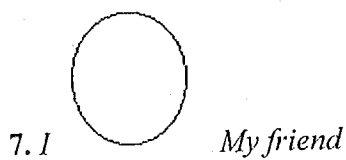
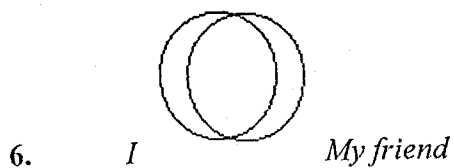
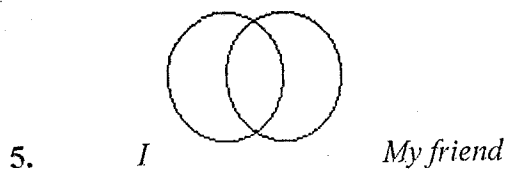
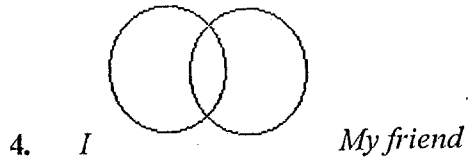
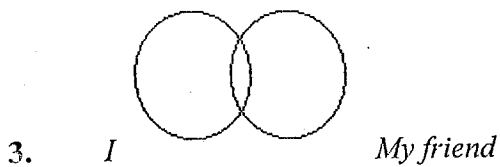
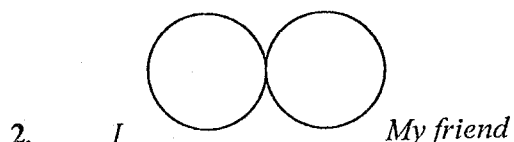
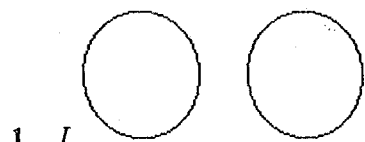
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5.

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## Appendix D: Inclusion of Others in the Self Scale(IOS)

Which of the schemas below do you think that expresses the relationship between you and your friend most appropriately?



## Appendix E: The Turkish Version of the Questionnaire

Elinizdeki anket, Boğaziçi Üniversitesi Psikoloji Bölümü yüksek lisans öğrencisinin arkadaşlık üzerine bir çalışmasıdır. 3 bölümden oluşmaktadır. Lütfen bütün bölümlerdeki soruları eksiksiz doldurunuz. Katkınız için şimdiden teşekkür ederiz.

Cinsiyet: Kadın \_\_\_\_\_ Erkek \_\_\_\_\_ Yaş: \_\_\_\_\_

Ne kadar sıklıkla Internet kullanıyorsunuz?

0. Hiç
1. Haftada bir saatten az
2. Haftada 1-5 saat arası
3. Haftada 5-10 saat arası
4. Haftada 10-20 saat arası
5. Haftada 20 saatten fazla

## I. Bölüm

### Çeşitli Durumlardaki Duygu ve Davranışlar

Bu ankette, çeşitli durumlardaki duygu ve davranışlarımız ölçülmektedir. Aşağıda çeşitli ifadeler sıralanmıştır. Sizden istediğimiz, bu ifadenin sizin için ne derece geçerli olduğunu değerlendirmenizdir. Her ifadenin yanına, ne kadar katılıp katılmadığınızı belirten numarayı yazınız. Lütfen her ifadeyi değerlendiriniz.

- 1- Kesinlikle katılmıyorum
- 2- Katılmıyorum
- 3- Pek katılmıyorum
- 4- Ne katılıyorum ne katılmıyorum
- 5- Biraz katılıyorum
- 6- Katılıyorum
- 7- Kesinlikle katılıyorum

- \_1. Birçok yönden diğerlerinden farklı ve özgün olmaktan hoşlanırım.
- \_2. İlk defa tanıştığım biriyle, bu kişi benden yaşça çok büyük olsa bile, açıkça konuşabilirim.
- \_3. Grup üyelerinin fikirlerine kesinlikle katılmadığım zamanlarda bile, münakaşadan kaçınırım.
- \_4. Temas halinde olduğum otorite sahibi kişilere saygı duyarım.
- \_5. Başkalarının ne düşündüğüne aldırmaksızın, kendi bildiğimi yaparım.
- \_6. Kendileri hakkında mütevazi olan insanlara saygı duyarım.
- \_7. Bağımsız bir kişi olarak hareket etmek benim için önemlidir.
- \_8. Gerektiğinde grubumun yararı için özveride bulunurum.
- \_9. Yanlış anlaşılmaktansa, açıkça 'Hayır' demeyi tercih ederim.
- \_10. Canlı bir hayal gücüne sahip olmak benim için önemlidir.
- \_11. Eğitim/kariyer planları yaparken, anne babamın tavsiyelerini dikkate almalıyım.
- \_12. Kendi kaderimin çevremdeki insanların kaderiyle iç içe olduğunu hissediyorum.
- \_13. Yeni tanıştığım insanlarla ilişkilerimde açıksözlü olmayı tercih ederim.
- \_14. Başkalarıyla işbirliği yaptığımda, kendimi iyi hissederim.
- \_15. Övülmek veya ödüllendirilmek için öne çıkarılmaktan rahatsızlık duymam.
- \_16. Kardeşim başarısız olursa, kendimi sorumlu hissederim.
- \_17. Çoğunlukla başkalarıyla olan ilişkilerimin kendi başarılarımdan daha önemli olduğunu hissederim.
- \_18. Derste (veya bir toplantıda) söz almaktan çekinmem.
- \_19. Otobüste yerimi hocama (veya patronuma) veririm.
- \_20. Kiminle olursam olayım aynı şekilde davranırım.
- \_21. Benim mutluluğum, çevremdekilerin mutluluğuna bağlıdır.
- \_22. Sağlıklı olmaya her şeyin üstünde değer veririm.
- \_23. Bir gruptan memnun olmadığım zaman bile, bana ihtiyaçları varsa o grupta kalırım.
- \_24. Başkalarını nasıl etkileyebileceğime aldırmaksızın kendim için en iyi olanı yapmaya çalışırım.
- \_25. Kendime bakabilmek benim için başlıca meselelerden biridir.
- \_26. Grup tarafından alınan kararlara saygı duymak benim için önemlidir.

\_27. Başkalarına ilişkin olmadan, kendi kişisel kimliğim benim için çok önemlidir.

\_28. Grubum içinde uyumu korumak benim için önemlidir.

\_29. Okulda (veya işte) nasıl davranıyorsam, evde de öyle davranırım.

\_30. Başka birşey yapmak istesem bile, genelde diğerlerinin yapmak istediği şeye uyarım.

## II. Bölüm

### İnternet arkadaşlığı

Bu bölümdeki soruları, yalnızca veya çoğunlukla İnternet ortamında görüştüğünüz arkadaşlarınızdan size en yakın hissettiğiniz, ancak şu anda veya daha önce romantik bir ilişki içinde olmadığınız bir kız veya erkek arkadaşınızı düşünerek cevaplayınız.

**Unutmayın!** Bu bölüm boyunca soruları tek bir arkadaşınızı düşünerek cevaplandırmanız. Bu arkadaşınızla her hafta İnternet ortamında (chat, e-mail, tartışma gurubu...vs. yollarıyla) birlikte geçirdiğiniz süre, yüz yüze görüşmek veya telefonlaşmak yollarıyla birlikte geçirdiğiniz süreden fazla olmalı.

- 1) Arkadaşınızın insiyeti: Kadın \_\_\_\_\_ Erkek \_\_\_\_\_
- 2) Arkadaşınızın yaşı: \_\_\_\_\_
- 3) Arkadaşınız ne işle uğraşiyor? \_\_\_\_\_
- 4) Bu arkadaşınızla ne kadar zamandır tanışıyorsunuz? \_\_\_\_\_
- 5) Bir hafta içinde ne kadar süreyle aşağıda sıralanan yöntemleri kullanarak

görüşüyorsunuz? Aşağıdaki ölçeği kullanarak size en uygun cevabı daire içine alınız.

0. Hiç  
 1. Haftada 1 saat veya daha az  
 2. Haftada 1-5 saat arası  
 3. Haftada 5-10 saat arası  
 4. Haftada 10-20 saat arası  
 5. Haftada 20 saatten fazla

a. İnternet'te chat	0	1	2	3	4	5
b. İnternet'teki tartışma forumları	0	1	2	3	4	5
c. E-mail	0	1	2	3	4	5
d. Yüz yüze görüşme	0	1	2	3	4	5
e. Telefonla görüşme	0	1	2	3	4	5
f. Diğer (belirtiniz) _____	0	1	2	3	4	5

6) Daha önce hiç tanımadığınız bir grup insana arkadaşınızı tanıtmamız gerekseydi, onu nasıl tanıttınız?

1.

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2.

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3.

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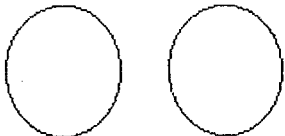
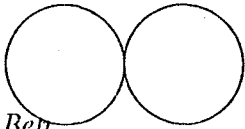
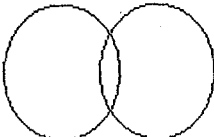
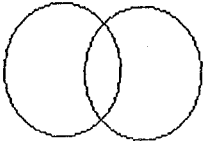
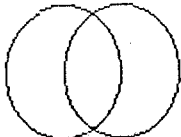
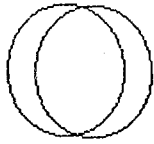
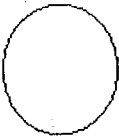
4.

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5.

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7) Aşağıdaki şemalardan hangisinin siz ve arkadaşınız arasındaki ilişkiyi en doğru ifade ettiğini düşünüyorsunuz? Size en uygun cevabı daire içine alınız.

1. Ben  Arkadaşım
2. Ben  Arkadaşım
3. Ben  Arkadaşım
4. Ben  Arkadaşım
5. Ben  Arkadaşım
6. Ben  Arkadaşım
7. Ben  Arkadaşım

### III. Bölüm

#### Yüz yüze arkadaşlık

Bu bölümdeki soruları, çoğunlukla yüz yüze veya telefonda görüştiğiniz arkadaşlarımızdan size en yakın hissettiğiniz, ancak şu anda ya da daha önce romantik bir ilişki içinde olmadığımız bir kız veya erkek arkadaşınızı düşünerek cevaplayınız.

**Unutmayın!** Bu bölüm boyunca soruları tek bir arkadaşınızı düşünerek cevaplandırmanızdır. Bu arkadaşınızla her hafta yüz yüze ve/veya telefonda görüşerek geçirdiğiniz süre, İnternet ortamında (chat, e-mail, tartışma gurubu...vs. yollarıyla) birlikte geçirdiğiniz süreden fazla olmalı.

1) Arkadaşınızın cinsiyeti: Kadın \_\_\_\_\_ Erkek \_\_\_\_\_

2) Arkadaşınızın yaşı: \_\_\_\_\_

3) Arkadaşınız ne işle uğraşiyor? \_\_\_\_\_

4) Bu arkadaşınızla ne kadar zamandır tanışıyorsunuz? \_\_\_\_\_

5) Bir hafta içinde ne kadar süreyle aşağıda sıralanan yöntemleri kullanarak görüşüyorsunuz? Aşağıdaki ölçeği kullanarak size en uygun cevabı daire içine alınız.

0. Hiç
1. Haftada 1 saat veya daha az
2. Haftada 1-5 saat arası
3. Haftada 5-10 saat arası
4. Haftada 10-20 saat arası
5. Haftada 20 saatten fazla

a. Yüz yüze görüşme 

0	1	2	3	4	5
---	---	---	---	---	---

b. Telefonla görüşme 

0	1	2	3	4	5
---	---	---	---	---	---

c. E-mail 

0	1	2	3	4	5
---	---	---	---	---	---

d. İnternet'te chat 

0	1	2	3	4	5
---	---	---	---	---	---

e. İnternet'teki tartışma forumları 

0	1	2	3	4	5
---	---	---	---	---	---


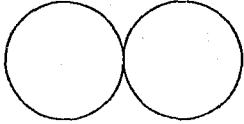
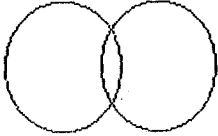
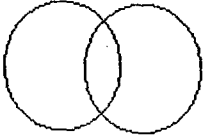
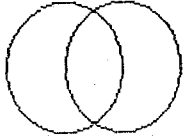
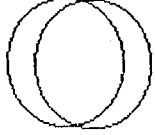
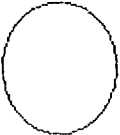
f. Diğer (belirtiniz) \_\_\_\_\_ 

0	1	2	3	4	5
---	---	---	---	---	---

6) Daha önce hiç tanımadığımız bir grup insana arkadaşınızı tanıtmamız gerekseydi, onu nasıl tanıtırduz?

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

7) Aşağıdaki şemalardan hangisinin siz ve arkadaşınız arasındaki ilişkiyi en doğru ifade ettiğini düşünüyorsunuz? Size en uygun cevabı daire içine alınız.

1. Ben Arkadaşım 
2. Ben Arkadaşım 
3. Ben Arkadaşım 
4. Ben Arkadaşım 
5. Ben Arkadaşım 
6. Ben Arkadaşım 
7. Ben Arkadaşım 

Appendix E: The Japanese Version of the Questionnaire

## I.

このセクションでは、様々な状況におけるあなたの行動や気持ちについておたずねします。下記の項目を読んで、それぞれがどの自分程度にあてはまるかを、1から7までの番号を選んで、文章の左横のスペースに記入してください。記入洩れのないようにお願いします。ご協力ありがとうございます。

1. 全くあてはまらない		5. 少しあてはまる
2. あてはまらない	4. どちらでもない	6. あてはまる
3. まあり あてはまらない		7. かなりあてはまる

- \_\_\_ 1. 私は、多くの面で地人と違いユニークであることを好む。
- \_\_\_ 2. 私は、初対面の人に対してもオープンに話ができる。
- \_\_\_ 3. 私は、仲間の意見に強く反対するできも、論争は避けるようにする。
- \_\_\_ 4. 私は、自分がつきあう目上の人を尊敬している。
- \_\_\_ 5. 私は、他人が何を思おうと自分の思いどおりにする。
- \_\_\_ 6. 私は、自分に対して謙虚な人を尊敬する。
- \_\_\_ 7. 私にとって、ひとりの独立した人間として振る舞うことは大切である。
- \_\_\_ 8. 私は、自分のグループの利益のために、自分の関心を犠牲にする。
- \_\_\_ 9. 私は、誤解を招くよりは、はっきり「no」という。
- \_\_\_ 10. 私にとって、いきいきとした想像力を持つことは大切である。
- \_\_\_ 11. 私は、進学や就職の計画をたてる時、両親の助言を考慮する。
- \_\_\_ 12. 私の運命は、私の周りの人の運命深く関わっていると思う。
- \_\_\_ 13. 私は、初対面の人に対して、単刀著直人であることを好む。
- \_\_\_ 14. 私にとって、他人と協力して、何かをすることは気持ちがいいことだ。
- \_\_\_ 15. 私は、自分だけが賞賛や報酬を得てもイヤではない。
- \_\_\_ 16. 私は、自分の兄弟や姉妹が失敗をしたら、責任を感じる。
- \_\_\_ 17. 私は、自分が何かをなすとげることよりも人とのつながりのほうが大切だとし  
ばしば感じる。
- \_\_\_ 18. 私は、授業中（または会合で）発言することに何の抵抗もない。
- \_\_\_ 19. 私は、自分の教授に（または上司に）バスの席を譲る。
- \_\_\_ 20. 私は、だれといても同じように振る舞う。
- \_\_\_ 21. 私の幸せは、私の周りの人たちの幸せ次第である。
- \_\_\_ 22. 私にとって、健康であることは何よりも大切である。
- \_\_\_ 23. 私は、自分が楽しくなくても、仲間が必要とするならグループにとどまる。
- \_\_\_ 24. 私は、他の人がどうなろうとも、自分にとって一番よいことをする。

- \_\_\_ 25. 私にとって、自己管理ができることは、何よりも大切である。
- \_\_\_ 26. 私にとって、仲間が決めたことを尊重することは、大切である。
- \_\_\_ 27. 私にとって、個性（自分らしさ）や他人からの独立は、とても大切である。
- \_\_\_ 28. 私にとって、仲間との和をたもつことは大切である。
- \_\_\_ 29. 私は、家でも学校でも同じように振る舞う。
- \_\_\_ 30. 私はふだん、別のことをしたくても、他の人たちのしたいことをする。

## II.

### インターネット上の友情

このセクションでは、インターネット上でだけ、または、主に インターネットでコミュニケーションしている、最も親しい友達のことを思い浮かべてください。

同性の友人でも異性の友人でも良いですが、恋愛関係にある友人、または恋愛感情を持ったことのある友人のことは考えないでください。

ここでは、そのある特定の友人一人だけを思い浮かべて以下の質問に答えてください。つまり、その友人は、直接会ったり、または電話でのコミュニケーションよりも、インターネット（チャット、Eメール、インターネット掲示板…e t c.）を通じてやりとりしている友人のことです。

- 1) あなたの友人の性別：女（ ） 男（ ）
- 2) あなたの友人の年齢：（ ）
- 3) あなたの友人の職業： \_\_\_\_\_
- 4) あなたの友人の国籍： \_\_\_\_\_
- 5) その友人と知り合ってどのくらい経ちますか？ \_\_\_\_\_
- 6) あなたはその人とインターネットを通じて知り合いましたか、それとも 直接知り合いましたか？
  - A. 直接 (Q.7へ)
  - B. インターネット
- 7) どこで会いましたか？
  - A. 職場
  - B. 学校
  - C. 近所
  - D. その他 \_\_\_\_\_

※Q.9へ

8) どこで知り会いましたか？

- A. チャット ルーム
- B. 掲示板
- C. E メール
- D. その他 \_\_\_\_\_

9) 一週間のうち、その人と、下に挙げたコミュニケーション手段 (a から f) を通じどの位連絡をとりますか？右横の尺度の上に、最もあてはまる数字 (0 から 5) を選び○で囲んでください。

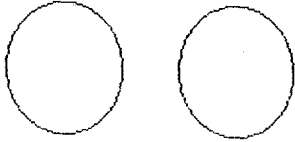
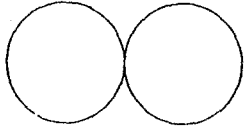
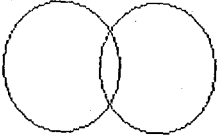
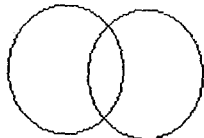
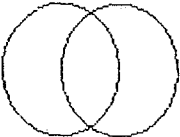
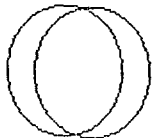
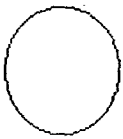
- 0. 全然連絡をとらない
- 1. 1週間で1時間未満
- 2. 1週間で1～5時間
- 3. 1週間で5～10時間
- 4. 1週間で10～20時間
- 5. 1週間で20時間以上

a. ネットでのチャット	0	1	2	3	4	5
b. ネットでの掲示板	0	1	2	3	4	5
c. Eメール	0	1	2	3	4	5
d. 直接会う	0	1	2	3	4	5
e. 電話する	0	1	2	3	4	5
f. その他	0	1	2	3	4	5

10) その友人のことを、あなたがまだあったことのない人に説明しなければならないとしたらどう言いますか？

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_

1 1) 下の7つの図のうち、あなたとその友人の関係を最も適切に表している図はどれですか？あてはまる数字を○で囲んでください。

1. 私  友人
2. 私  友人
3. 私  友人
4. 私  友人
5. 私  友人
6. 私  友人
7. 私  友人

### III.

#### 直接対面的な友情

このセクションでは、顔をあわせたしかあわない、あるいはたいていそれのようにコミュニケーションしている、最も親しい友達のことを思い浮かべてください。同性の友人でも異性の友人でも良いですが、恋愛関係にある友人、または恋愛感情を持ったことのある友人のことは考えてないでください。

ここでは、そのある特定の友人一人だけを思い浮かべて項目以下の質問答えなければならないことを忘れないでください。つまり、その友人は、インターネット（チャット、Eメール、インターネット掲示板…e t c.）を通じてよりも、直接会ったり、または電話でのコミュニケーションにより頻繁にやりとりしている友人のことです。

1) あなたの友人の性別：女（ ） 男（ ）

2) あなたの友人の年齢：（ ）

3) あなたの友人の職業： \_\_\_\_\_

4) その友人の国籍： \_\_\_\_\_

- 5) その友人と知り合ってどのくらい経ちますか? \_\_\_\_\_
- 6) あなたはその友人とインターネットを通じ知り合いましたかですか、それとも直接知り合いましたか?
- A. 直接 (Q.7 へ)
- B. インターネット (Q.8 へ)
- 7) どこで会いましたか?
- A. 職場
- B. 学校
- C. 近所
- D. その他 \_\_\_\_\_

※Q.9 へ

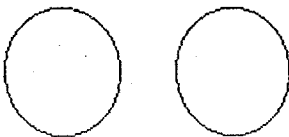
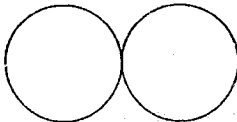
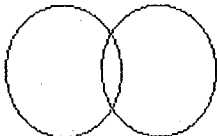
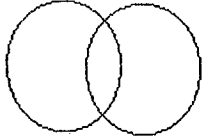
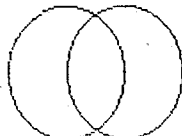
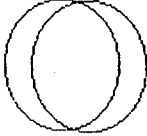
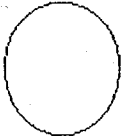
- 8) どこで知り合いましたか?
- A. チャット ルーム
- B. 掲示板
- C. E メール
- D. その他 \_\_\_\_\_
- 9) 一週間のうち、彼あるいは彼女と、下に挙げたコミュニケーション手段を通じて何回連絡をとりますか? 下の尺度を用い、最もあてはまる選択肢を○で囲んでください。
0. 全然連絡をとらない
1. 1週間で1時間足らず
2. 1週間で1~5時間
3. 1週間で5~10時間
4. 1週間で10~20時間
5. 1週間で20時間以上
- a. 直接会う | 0 | 1 | 2 | 3 | 4 | 5 |
- b. 電話する | 0 | 1 | 2 | 3 | 4 | 5 |
- c. Eメール | 0 | 1 | 2 | 3 | 4 | 5 |
- d. ネットでのチャット | 0 | 1 | 2 | 3 | 4 | 5 |
- e. ネットでの掲示板 | 0 | 1 | 2 | 3 | 4 | 5 |
- f. その他 | 0 | 1 | 2 | 3 | 4 | 5 |

1 0) 初対面の人に、あなたの友人を説明しなければならないことを想像してください。

あなたは何と言いますか？

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_

1 1) 下の図式のうちでどちらが、あなたとあなたの友人の関係をより適切に表していると思います

1. 私  友人
2. 私  友人
3. 私  友人
4. 私  友人
5. 私  友人
6. 私  友人
7. 私  友人

私たちの研究に参加して下さい、有難うございます。もし、リサーチの結果を知ったり、何か聞いたりしたいことがあったら私に連絡してください。

ピナール トスン

03-5481-9142

pinartosun@hotmail.com