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11 Proxemic and haptic interaction: the closeness continuum

Abstract: Sharing interpersonal space and touch is central to the human experience. Through proxemic and haptic behavior people communicate intimacy, warmth, immediacy, sexuality, nurturance, affection, inclusion, power, and even hostility. Fundamental to proxemic behavior is personal space, that portable, invisible barrier that surrounds a person, and territoriality, the fixed or semifixed space that people occupy. Proxemics also includes objects or material space, density, crowding, and body orientation, the angle we employ during interpersonal interaction. Haptic behavior includes instrumental behavior, used during care or servicing of other people, nurturant behaviors such as holding and cuddling, warmth or immediacy behaviors such as handshakes, hugs, and pats, and sexual behavior such as fondling, stroking, embracing, and sexual intercourse. Proxemic and haptic behavior is crucial to interpersonal influence attempts and the communication of power and control. Privacy, protection, and freedom from physical or sexual harassment necessitate boundaries that prevent inappropriate haptic or proxemic intrusions. Many aspects of tactile and spatial behavior are universals though considerable cultural and climatic differences also exist. Finally, individual differences, such as touch avoidance, resulting from both innate factors and learned experiences influence the appropriateness, utilization, and consequences of both haptic and proxemic behavior.

Keywords: haptics, influence, interpersonal space, intimacy, power, proxemics, sexuality, tactile behavior, touch, touch avoidance, nonverbal behavior

No aspect of the human experience is more central than interpersonally sharing space and touch. Relationships with infants, family members, lovers, spouses, and friends are conducted at close range with extensive touch. The more involving, affectionate, immediate, and intimate the communication, the more likely that close distances and touch are involved. But tactile and proxemic behaviors do more than communicate affection and intimacy. These behaviors communicate information about our culture, power, sexuality, personality, social influence, inclusion, and privacy.

Instead of viewing proxemics and haptics as discrete communication codes, as is often the case, this chapter treats them as a continuum ranging from distant to tactile. Scholars recognize the union of proxemics and haptics and call them "body codes" (Andersen 2008; Burgoon, Guerrero, and Floyd 2010). Touch is the most intimate human behavior (Morris 1971) and takes place within E. T. Hall's (1968)

intimate zone of interaction. From the personality perspective, studies show that touch avoidant people sit at greater distances where tactile communication is impossible (Andersen and Sull 1986). Touch is impossible beyond Hall's (1968) personal zone (1 ½ to 4 feet) and usually occurs in the intimate zone (0 to 1 ½ feet) (Andersen and Sull 1975; Sussman and Rosenfeld 1978). From a societal view "contact cultures" (Hall 1959, 1966; Watson 1970) interact at close distances (Andersen 2008, 2011, Hofstede 2001). The inherent union of proxemics and haptics has been noted: "Of course, the closest interpersonal distance is no distance or actual touch" (Andersen 2008: 48).

1 Proxemic communication

Proxemics is the study of communication via interpersonal space and distance as well as a form of nonverbal communication that utilizes space to regulate interaction and send silent relational messages (Hall 1963). Eventually, Hall (1974) reconceptualized proxemics as "the study of man's [people's] transactions as he perceives and uses intimate, personal, social and public space in various settings while following out-of-awareness dictates of cultural paradigms" (2).

Proxemics is comprised of both physical territory, studied under the term territoriality, and personal territory, examined under the rubric of personal space. Physical territories are fixed or semi-fixed areas controlled and defended by an individual or group based on physical possession (Leathers 1978; Vargas 1986). One component of physical territory includes how boundaries are established around a space and the way artifacts are arranged within that space (Amad, Sujud, and Hasan 2007).

1.1 Personal space

Personal space has been conceptualized as a pervasive portable bubble (Sommer 1969), protective sphere (Hall 1966; Hediger 1950; Katz 1937), boundary control mechanism (Evans, Allen, and Lepore 2000), or physical zone surrounding each individual (Hall 1966, 1973). People's personal space bubbles vary in size and shape due to differences in personality characteristics and preferences (Fisher 1967; Weinstein 1965), situational variables (Little 1965), relational variation (Hall 1966; Hogh-Olesen 2008), and cultural background (Hall 1959; Watson and Graves 1966).

Hall (1966, 1974) suggests that humans possess an innate distancing mechanism modified by culture that helps to regulate contact within social situations. People value personal space and typically make their boundaries apparent to others. Personal space acts as a buffer protecting people from unpleasant feelings due

to spatially negative body experiences and aggressiveness (Cavallin and Houston 1980; Duke and Nowicki 1972).

Intrusion into one's personal space generates reactions of discomfort or flight (Evans and Howard 1973; Pederson and Bryne 1975; Sommer 1969). Most interactions occur in people's personal space zone (Little 1963) that strangers may not intrude upon or violate (Hayduk 1978; Sommer 1969). Personal space is also employed as means of communicating about interpersonal feelings and attitudes (Guardo 1969; Pedersen and Shears 1973) and avoiding close distances with particular individuals. Personal space zones suggest interpersonal relationships; four divisions of personal distances include public space (ranging from 12 to 25 feet), social space (4 to 12 feet), personal space (1.5 to 4 feet), and intimate space (distance within 1.5 feet) (Hall 1968).

When personal space is invaded, individuals attempt to maintain comfortable personal space boundaries by changing body orientation, reducing eye contact and other forms of immediacy, retreating, or leave taking (Hayduk 1993: Jason, Reichler, and Rucker 1981; Russo 1976; Sommer 1969). When personal space is violated, people may deploy body buffers such as purses, briefcases, and even body parts such as folded arms to ward off these intruders. In most situations, individuals will behave in ways that seek to reestablish comfortable levels of personal space (Baron and Byrne 1981).

1.2 Territoriality

Mammals, including humans, are territorial creatures with a range, territory, or lair to protect their food supply, offspring, and life against intruders or predators. Scholars maintain that territoriality is partly an innate biological drive rooted in human nature (Ardrey 1966; Lorenz 1963) but it is also a prized value. Territorial rights are so revered that the 4th Amendment to the U.S. Constitution guarantees that "The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated..." Territoriality refers to stationary space with designated, marked boundaries (Amad, Sujud, and Hasan 2007; Sommer 1959). Altman (1975) conceptualized three types of territories: (a) primary, where people have executive rights to the space such as one's home; (b) secondary, where people interact with acquaintances in semipublic places such as a neighborhood bar; and (c) public territories, where everyone has temporary access such as the beach.

The advantages territoriality holds depends on the centrality and importance of the space and the duration an individual has occupied that area (Altman 1975). When a territory is of little significance, men and women are likely to leave when an intruder appears (Becker 1973; Becker and Mayo 1971) but passive barriers may be used (Jason, Reichler and Rucker 1981). The benefits of territoriality include

increased economic power or status (Mehrabian 1976), elevated perceptions of control over one's life (Ittelson et al. 1974), enhanced comfort (Roos 1968) and greater privacy (Brower 1965).

1.3 Material space

Material space or artifacts refer to the objects that one possesses including purses, wallets, briefcases, etc. (Goffman 1971). Such items serve as temporary or long-term "markers" that are often used as indications that the areas within and around the marker belong to the owner of that marker (Amad, Sujud, and Hasan 2007; Hickson and Self 2003). Markers limit invasions though invaders may simply move the object elsewhere to "abolish" the territory (Hickson and Self 2003: 269).

1.4 Density and crowding

The density of space, an objective measure of the number of people in a given unit of territory (Stokols 1972), constrains and guides how individuals interact. In socially dense settings, a large number of individuals creates density, whereas in a spatially dense situation, density results from the lack of physical space (Pons, Laroche, and Mourali 2006). Density is a correlate of an individual's perceived control in a particular setting (Proshansky et al. 1974) that can facilitate and obstruct desired behaviors (Hui and Bateson 1991). Perceived control is an essential intervening variable between density and crowding (Schmidt and Keating 1979) since in some situations like rock concerts and sporting events crowding is desirable (Andersen 2008).

While density refers to the physical dimension of spatial parameters, crowding can be seen as subjective, unpleasant feelings individuals may experience that reduce an individual's ability to perform a desired action (Altman, 1975; Hui and Bateson 1991; Rapport 1975). Generally, people view high density as uncomfortable and stressful (Aiello 1987; Sinha and Navyar 2000). Interpersonal or cultural contexts also determine if crowding will be perceived. Albas (1991) explains that closer distances are more appropriate for intimate interactions than for casual conversations. Hall (1966) notes that residents of contact cultures feel comfortable with closer distances than non-contact cultures; in theory, people from contact cultures may not experience much crowding. However, Evans, Allen, and Lepore (2000) explain that people from different cultures vary in their tolerance for conditions that elicit crowding; investigation of the literature reveals very little support for this. Aiello's (1987) review of the literature also concludes that the negative experience of crowding affects all people to some degree.

1.5 Body orientation

The angle of our body to other interactants is called body orientation. A direct or face to face orientation communicates greater warmth and immediacy (Andersen 1985). Similarly, actions such as leaning inward or towards the other individual signal more involvement. Powerful people are perceived to more directly position their body toward others (Carney, Hall, and Smith LeBeau 2005; Hall, Coats, and Smith LeBeau 2005; Mehrabian 1968). Burgoon and Saine (1978) suggest that when communicating in groups, the individual who is faced by the most people typically has the most influence. Jorgenson (1975) found that individuals of equal dyads assumed a more direct angle of orientation than those of discrepant pairs. (For further reading on power and influence in relation to nonverbal behavior, see Chapter 20, Schmid Mast and Cousin, this volume.)

2 Haptics

Throughout life our most intimate human contacts are tactile. From the intimacy of infancy, to the sexual involvement of adolescence, or the affectionate touch of long term relationships, haptics profoundly affects human experience.

2.1 Types of touch

Touch occurs in numerous forms. Heslin (1974) separated touch into five categories based on usage, function, and intensity. These categories are functional-professional, social-polite, friendship-warmth, love-intimacy, and sexually arousing touch. Morris (1971) identified over 450 types of body contact in one study. Hertenstein (2002) noted that touch can vary in its location, frequency, duration, action, intensity, and extent. Because there are numerous ways in which one person can touch another person it is important to note how aspects such as location can influence how touch is understood and evaluated, and what kind of relationship it implies (Floyd 1999).

2.1.1 Functional/instrumental touch

Functional-professional or instrumental touch, the least intense or personal category, occurs in institutional settings (Heslin 1974; Montagu 1978) constrained by rules of professional conduct. Doctors, chiropractors, and massage therapists touch areas rarely touched by non-intimates in everyday life, but in these situations ordinary rules of touch are inapplicable. In fundamentalist cultures this is not the case (Andersen 2011); many Muslim women would refuse an examination from a male

doctor unless their husband is present and permits the examination (Naqib al-Misri and Keller 1994).

2.1.2 Social-polite touch

Social-polite touch occurs in first-meetings, business, and formal occasions often in the form of a handshake (Andersen 2008). This function of touch signals respect and inclusion as well as conveying some degree of equality (Heslin 1974).

2.1.3 Friendship-warmth touch

The friendship-warmth function of touch is both the most important and the most relationally negotiated between partners. Touch in private bodily areas or excessive touch may convey sexual interest, whereas too little touch may suggest aloofness or indifference and may thwart friendship or the potential for relational development.

2.1.4 Love-intimacy touch

The love-intimacy touch is personal and distinctive because only people in relationships such as romantic partners, good friends, and close family members can exchange these touches. Kisses and handholding are examples of intimate and generally mutual touches that convey immediacy, affection, trust, and equality (Burgoon 1991).

2.1.5 Sexually arousing touch

The most passionate, physically intimate, and private form of touch is sexually arousing touch. Mutual consent is desired when this type of touch occurs due to its stimulating, personal, and anxiety-arousing effects. Sexual arousal can occur through many channels including words, sight, and even smell and taste, but the core of sexuality is conveyed through touch at very close interpersonal distances.

Non-sexual touch is restricted to specific body zones such as the shoulders, hands, small of the back, and arms. Men can be touched anywhere above the waist, but thighs, buttocks, and genitals are taboo areas for both sexes (Andersen 2004). In ascending order of sexuality are the ears, neck, mouth, thighs, breasts and genitals for women (Morris 1971). Women react negatively to uninvited opposite-sex genital touch from an acquaintance, whereas men often react positively (Struckman-Johnson and Struckman-Johnson 1993). Men typically initiate more sexual touch than women. In an extensive study of American couples by Blumstein and Schwartz (1983), both men and women reported that men initiated more *sexual* touch, depending on relationship status, than women. As we will see next there does not appear to be a large overall difference in touch initiation between men and women depending on relational stage.

2.2 Touch initiation

Touch initiation is an important issue in the communication of intimacy, power, immediacy, and gender. Despite the stereotype that men initiate opposite-sex touch more than women, numerous studies have shown small or nonexistent sex differences in touch initiation. Researchers have independently found that touch is highly reciprocal; in short, males touch females at about the same rate that females touch males (Guerrero and Andersen, 1994; Hall 1984; Stier and Hall 1984). When observing thousands of dyads in public places, Hall and Veccia (1990) found that at all ages and for all body parts, males and females touched with about the same frequency. Similarly, Guerrero and Andersen (1994) reported that couples' public touch is highly reciprocal. In public settings, if one partner touches the other, the recipient is likely to match the touch regardless of personality or touch-avoidance levels. The highest level of tactile matching occurs in long-term relationships, but the highest frequency of touch occurs in intermediate or escalating relational stages. Men initiate touch more often than women in casual dating relationships and married women initiate touch more than married men (Willis and Briggs 1992). Hall and Veccia (1990) also found that in dyads under age 30 males touched females significantly more, and vice versa in the over 30 group. (For further discussion of sex differences in touch, interpersonal space, and other nonverbal behaviors, see Chapter 21, Hall and Gunnery, this volume.)

3 Functions of touch and space

Humans are inherently affiliative, social creatures who interact at close distances with considerable touch. The affiliative functions of haptic and proxemic communication have been studied under many labels and constructs including affection, immediacy, intimacy, warmth, and involvement (Andersen 2008; Burgoon, Guerrero, and Floyd 2010). Although these concepts are not isomorphic, at their core are feelings of attraction, emotional closeness, liking, trust, and to some degree, love.

3.1 Nurturance

In the early stages of life, human infants live and thrive in a world of tactile interaction and close distances (Frank 1957) that constitute a basic human need (Bowlby 1969). In their absence infants fail to thrive, develop poorly, and even die. Numerous studies show that infants living in orphanages who were deprived of touch were more likely to have learning disabilities, poor development, weight loss, and pathological introversion (Frank 1957; Montagu 1971, 1978; Morris 1971; Shevrin

and Toussieng 1965). Premature babies who were assigned to a touch group gained 21 percent more weight and were discharged from the hospital significantly earlier than babies in the non-touch group (Scafidi et al. 1990). Premature babies in incubators exposed to a form of skin-to-skin contact between mother and child called "kangaroo care" showed benefits to the child and the caregiver both socially and emotionally (Feldman et al. 2003).

Lack of touch is detrimental to an infant's well-being and harsh touch is shown to be associated with behavioral problems, violence, and mental illness as the child matures (Field 2002). Interestingly, children in America are touched considerably less than children elsewhere in the world and that may correspond with America's high rate of violence and homicide (Field 2002) though the causal direction of this relationship is uncertain. Homicide rates for adolescents in the United States are the highest of industrial nations, approximately 20% higher than most nations and one of the largest risk factors for youth violence is neglect and abuse (Field 2002). Widom (1989) found that adolescents who were abused or neglected as children were 42% more likely to have a criminal record as an adult. Prescott (1990) reported that cultures exhibiting minimal physical affection toward their young children had significantly higher rates of adult violence, whereas cultures with high amounts of physical affection had virtually no adult violence.

3.2 Inclusion

Proxemics sends powerful messages of inclusion or exclusion. Inclusion occurs when people allow others into personal space or territory and use tactile greetings like handshakes or hugs (Hickson and Self 2003). Novelli, Drury, and Reicher (2010) illustrated that "people choose greater proximity to others when they regard them as members of a common in-group category" (223) or have other positive qualities. Bowlby (1969) explained bodily connection as the most basic and primitive form of inclusion.

Similarly, haptic behaviors often signal inclusion. Inclusion touches used by close friends and sexual partners create psychological closeness (Jones and Yarbrough 1985). These haptic declarations of togetherness such as arm locking or handholding create a sense of "withness," and are known as tie-signs (Goffman 1971) that actually exclude others. Jones and Yarbrough (1985) found that half of touches are mutually initiated and signal validation and inclusion. While close friends, spouses, and other intimates engage in inclusionary touches, immediate family members rarely engage in this type of touch. A display of "withness" may be unnecessary among family members because they are already a psychologically secure unit (Jones and Yarbrough 1985).

Similarly, greeting touches, which are used by both sexes and in all relationships, occur at the opening of an interaction in conjunction with a verbalized

greeting and usually involve hand to hand or hand to other body part touch (Jones and Yarbrough 1985). Formal handshakes have traditionally occurred between men, while hand to body touches or embraces occur in cross-sex and female to female greetings (Greenbaum 1980; Jones and Yarbrough 1985) but increasingly women shake hands.

3.3 Immediacy

Nonverbal immediacy is a central topic in interpersonal and instructional communication. Immediate behaviors are those actions that simultaneously perform four functions: (a) availability for interaction, (b) positive affect, (c) increased psychological closeness, and (d) positive emotions including warmth (Andersen 1985; Mehrabian 1981). Immediacy is at the core of intimacy exchange and interpersonal warmth (Andersen 1998; Andersen and Guerrero 1998). While nonverbal immediacy is a multichannel construct including more than a dozen nonverbal behaviors, several behaviors central to the concept include eye contact, smiling, touch, and closer distances (Andersen 1985; Andersen and Andersen 2005; Hickson and Self 2003). Other proxemic behaviors including forward leans, direct body orientation, and interaction on the same vertical plane decrease physical and psychological distance and increase immediacy (Andersen 1985; Andersen and Andersen 1982; Hickson and Self 2003).

Immediacy behaviors foster feelings of warmth that are also precursors of close distances in increased touch (Andersen 1998; Andersen and Guerrero 1998). Studies show that individuals are likely to interact at closer distances with those whom they like (Coker and Burgoon 1987; Mehrabian and Friar 1967; Ray and Floyd 2006).

Close interpersonal distances typically result in more attraction, warmth, immediacy, and positive attitudes (Andersen 1985; Mehrabian and Ksionsky 1970). Research indicates that touch is not only capable of conveying warmth, but can also express other positive and negative emotions (Andersen 2011; Hertenstein and Campos 2001; Jones and Yarborough 1985). Facial expressions and paralinguistic cues convey a range of emotions, but touch has also been shown to be capable of conveying specific emotions (Hertenstein et al. 2006; Hertenstein et al. 2009).

Touch is the most involving immediacy behavior and is instrumental in bonding and the development of close relationships (Field 2002; Jones 1994). Pisano, Wall, and Foster (1986) had people rate 31 descriptions of nonreciprocal touch in romantic relationships. Touch was usually interpreted as communicating warmth or love, though playfulness, sexual desire, and comfort were also common attributions, all of which are signs of increased immediacy. Similarly, Burgoon et al. (1984) had subjects watch videotaped dyadic interactions that either did or did not depict touch. Interactants in the touch group were rated as more intimate and immediate than those who did not touch.

Some immediacy behaviors have been conceptualized as positive affect touches. Jones and Yarbrough (1985) had undergraduates record all of their touch behaviors and subsequently separated them into six categories with the most prevalent being positive affect touch that is subdivided into four subcategories. Supportive touch, such as handholding and pats on the back, generally occurs in close relationships and provides nurturance, reassurance, and protection. Appreciation touches are common in opposite-sex relationships and are used as tactile messages of thanks. Sexual touches are common among sexual intimates and convey physical attraction and sexual interest. Last, the most positive form of positive-affect touch is affection touch. This occurs most often in opposite-sex relationships followed by same-sex female relationships. In short, touch functions to produce high levels of immediacy in interpersonal interaction.

Conversely, people employ decreased touch, increased distance, and less direct body orientation to decrease immediacy and to maintain personal space in public situations. Defensive maneuvers include body buffers and expanded interpersonal distance (Andersen 2008). Likewise, body orientation serves to protect individuals from threat and vulnerability in uncertain situations such as public spaces (Cavallin and Houston 1980). Changing the physical plane can also create distance from others.

3.4 Intimacy

Intimacy is a subjective feeling of relational closeness that has been variously conceptualized as a relationship type, an emotion, a feeling of warmth, a motive, a dimension of love, and a trait (Andersen, Guerrero, and Jones, 2006; Prager 1995). Like Andersen, Guerrero, and Jones (2006), this chapter conceptualizes intimacy as a feeling that occurs interactively. Touch and close distances produce and result in intimacy. The effects of these behaviors are explained by the direct effects model (Andersen 1985, 2008) that suggests a biological basis of the effect of immediacy behaviors on intimacy and influence, and by the social meaning model (Burgoon 1994) that suggests receivers attribute generally positive meanings to close distances and touch. These behaviors trigger virtually automatic feelings of closeness and affection (Floyd 1999). Intimacy, a basic and essential component of interpersonal relationships (Burgoon and Dillman 1995; Burgoon and Hale 1985), is in no small part a function of haptic and proxemic behavior. Of course, intimacy promotes more touch and closer distances as well.

Many theories have sought to explain the processes of haptic and proxemic intimacy exchange that result in positive responses and reciprocity of intimate behavior or negative responses and compensatory behavior (Andersen 1985, 1998; Argyle and Dean 1965; Burgoon and Jones 1978; Cappella and Green 1982). While explication of these models is beyond the scope of this chapter, each of these

theories posits processes whereby nonverbal behaviors such as touch and interpersonal space can foster or thwart interpersonal intimacy. Close distances and touch are at the core of these processes and facilitate behaviors such as telling secrets, whispering, embracing, comforting others, and lovemaking. Of course, intimacy can be avoided through increased distance between individuals. Patterson (1985) maintained that close, but unwelcome interpersonal approaches are met with compensatory behaviors such as gaze aversion, indirect body orientation, and increased distance which communicate resistance to what are inappropriate increases in the level of intimacy of a particular interaction. (For further discussion, see Chapter 17, Patterson, this volume.)

Tactile communication is arguably the most intimate form of nonverbal behavior, so intimate that Montagu (1978) submitted that love cannot be properly conveyed without touch. Jones and Yarbrough (1985) labeled three categories of touch that promote intimate experiences: touches that express attraction, sexual intent, and positive affection and regard. It is more than the type of touch that communicates relational intimacy and satisfaction; it is the quality and amount of touch (Beier and Sternberg 1977; Heslin and Boss 1980). While touch is central to the communication of intimacy, research suggests that it is more important in the development of intimacy than in its maintenance. Studies show that touch increases in early relational stages when people are establishing intimate and romantic relationships but declines in long term relational stages (Emmers and Dindia 1995; Guerrero and Andersen 1991; McDaniel and Andersen 1998).

3.5 Affection

Recent research has demonstrated the interpersonal and physiological benefits of interpersonal affection (Floyd, Pauley, and Hesse 2010; Guerrero and Floyd 2006; Pendell 2002). Affective exchange theory (AFT) that details the ways humans communicate affection and the outcomes of such communication (Floyd 2006) is a neo-Darwinian theory, which maintains the communication of affection is essential to the maintenance of human pair bonds and their role in human fertility and survival (Floyd 2006; Guerrero and Floyd 2006). Affection is a feeling, but communication of affection is essential for development and maintenance of interpersonal relationships (Floyd and Mormann 1998; Hesse and Floyd 2011). Affection has been shown across a number of studies to be essential for satisfaction and stability of close relationships (Gulledge, Gulledge, and Stahmann 2003; Gulledge, Stahmann, and Wilson 2004; Pendell 2002).

Touch is a central part of affection and comforting in close relationships (Dolin and Booth-Butterfield 1993) and a primary means of communicating affection including backrubs, caresses, cuddles, strokes, kisses, pats, and handholding (Gulledge et al. 2003, 2004; Jones and Yarborough 1985). Handholding, which

involves continuous, mutual physical contact, communicates affection, commitment, and exclusivity by relational partners (Brodie and Villaume 2008). Borderman, Freed, and Kinnucan (1972) had college women participate in a bogus "ESP" experiment in which researchers were actually observing effects of touch. Women in the touch group found their experimental partner to be more attractive, responsive, and likable than those in the no-touch group. Of course, close proximity is essential for affectionate touch to occur. Close interpersonal distances are often thought to be affectionate even without touch. Research shows that people exaggerate the degree of interpersonal closeness with those with whom they are most physically close (Freeman and Webster 1994). Hall (1968) suggested that it is in intimate space, within 18 inches, that close affectionate behavior most likely occurs.

The positive physiological and biochemical effects of affection are well documented (Floyd et al. 2010). Touch, in particular, has considerable physiological benefit. Hugs and kisses from one's spouse are associated with several positive physiological indicators (Floyd and Riforgiate 2010). Experiments show that when forewarned of appropriate touch, tactile contact significantly lowered subjects' heart rate (Drescher, Gantt, and Whitehead 1980; Drescher et al. 1982). Reassuring touch by dentists in controlled experiments significantly reduces children's nervousness and fidgeting (Greenbaum et al. 1992). Studies consistently show that massages are both relaxing and have positive effects on blood pressure, heart rate, anxiety, and depression (Moyer et al. 2004). Abundant research on the extensive benefits of touch for infants has been summarized by Field (2002). In sum, touch is able convey affectionate behavior in the most direct way resulting in numerous benefits to the sender and the recipient of touch.

3.6 Sexuality

While sexual interaction involves the senses of sight, sound, and even smell and taste, touch is the core behavior of sexual interaction. Similarly, although phone sex and cybersex may be increasingly common forms of sexual behavior most sexual behavior takes place in close proximity in the intimate zone of interaction.

Men frequently conflate warm, friendly, nonverbal behaviors including touch and close distances with sexuality, leading to overattribution of sexual intent (Abbey 1987; Abbey and Melby 1987; Shotland and Craig 1988). Four important consequences result: (a) men may attempt to initiate sexual interaction based on misinterpretation of tactile or proxemic cues from women; (b) women may fail to correctly interpret men's sexual intent; (c) women are more touch avoidant of men than men are of women; and (d) men are more touch avoidant of men than women are of women, which is discussed below.

Men typically find opposite-sex touch as more appropriate than same-sex touch because they tend to associate touch with sexuality (Andersen and Leibowitz

1978; Fromme et al. 1986). Moreover, women tend to equate sexual touch with commitment to a higher degree than men (Johnson and Edwards 1991). As a result, as touch becomes increasingly intimate the probability of miscommunication increases in opposite-sex relationships. For example, in studies by Nguyen, Heslin, and Nguyen (1975, 1976) college-aged males and females were asked what it meant for them to be touched by a person of the opposite sex on eleven body zones. The findings show that the more that women perceive touch as sexual, the less they perceived it as friendly, playful, or warm. The more men perceived a touch as sexual, the more they rated it as pleasant, warm, or playful. Though proxemics and haptics are the sine qua non of sexual relations, gender differences may cause disparate attributions and potential for miscommunication.

4 Interpersonal control and influence

One of the most fundamental dimensions of human communication is control, power or influence (Burgoon and Hale 1984; Ruesch and Bateson 1951; Schutz 1966; White 1958). Power and influence often occur nonverbally, particularly via space and to a lesser degree via touch (Andersen 2008). From international relations to interpersonal relations, control of territory is the prerogative of the powerful. Control is a basic drive, defined as the need to demonstrate one's competence, superiority, and mastery over the environment (White 1959). Proshansky, Ittelson, and Rivlin (1974) believe individuals feel and behave more positively when they perceive that there is more control in the environment in which they are interacting, including their interpersonal environment.

4.1 Power

Power is the ability to influence and control others (Andersen 2008). Research on power suggests that high-status individuals are afforded more personal space, provided with larger territories, and can invade other people's space (Argyle 1975; Henley 1977; Remland 1981). Power distance refers to the extent to which less powerful individuals accept inequality of power in their society and consider it normal (Hofstede 2001; Stohl 1993). As power distance increases among interactants, physical distance increases as well (Dean, Willis, and Hewitt 1975). High regard for subordinates may reduce spatial discrepancies through the behavior that each individual communicates (Remland 1981). Superiors touch subordinates more than their subordinates touch them (Remland 1981) though touch is more associated with affection than power (Hall and Veccia 1985). (For further discussion, see Chapter 20, Schmid Mast and Cousin, this volume.)

4.2 Protection and privacy

Privacy management is an important theoretical issue in communication. People regulate their proxemic and haptic acts to maintain privacy boundaries. Communication privacy management theory (Petronio 1991, 2002) maintains that people set up boundaries to control the risks intrinsic to privacy violations. Changnon (1983) explains that privacy is one of our culture's most satisfying achievements, yet people do not think about it until they suddenly do not have that privacy anymore.

Personal space serves as a privacy mechanism (Hall 1966; Sommer 1969) and protects people against unwanted intrusions (Herzeld 2009) though privacy needs vary from one person and culture to another. Spatial violations are generally violations of cultural rules (Goffman 1971) and sometimes legal rules (Hickson and Self 2003). However, privacy is not the same for all bodily areas or relationships. Heslin et al. (1983) found that touch by strangers was a greater invasion of privacy than touch from friends.

4.2.1 Negative violations

Studies on interpersonal space violations have consistently found that invasion of space increases arousal, stress, and discomfort (Banziger and Simmons 1984). Personal space can be used for protection against these unpleasant feelings (Dosey and Meisels 1969). Greater amounts of space can be viewed as a way of fending off aggressive individuals and minimizing feelings of anxiety and increasing security (Knight 1942).

4.2.2 Positive violations

There are specific situations in which invasions are wanted or at least tolerated. When an attractive individual violates one's personal space, people experience favorable feelings and respond positively, but if the intruder is unattractive, negative emotions and avoidance may result (Banziger and Simmons 1984; Burgoon and Jones 1976). Reaction to personal space is influenced by many characteristics: race (Hendrick and Bootzin 1976), eye contact (Argyle and Dean 1965; Buchanan, Goldman, and Juhnke 1977), physical disability (Comer and Piliavin 1972), attractiveness (Dabbs and Stokes 1975), and sex (Buchanan, Goldman, and Juhnke 1977; Buchanan, Juhnke, and Goldman 1976). Men ranked sexual touches from a female stranger as most pleasant, but women ranked non-sexual touches from an opposite-sex friend to be most pleasant (Heslin et al. 1983).

In situations in which individuals have limited control over their personal space, they are more accepting of these violations. Invasions of personal space are tolerated in certain situations such as on crowded subways (Jason, Reichler, and Rucker 1981), but in these circumstances defensive behaviors such as avoiding eye contact and ignoring others in that space are deployed (Fried and DeFazio 1974).

4.3 Persuasion

Traditionally persuasion has emphasized verbal messages such as language intensity, gain/loss frames, evidence, message sidedness, and others. However, nonverbal variables including touch and interpersonal distance have been recognized as important variables in the persuasion process (Segrin 1993). Jones and Yarborough (1985) found that "compliance touches" are commonly reported in interactions.

4.3.1 Tactile persuasion

Abundant research shows touch is a potent persuasive tool in interactions with strangers in many settings. When touched appropriately, people are more willing to sign petitions (Willis and Hamm 1980), fill out questionnaires (Guéguen 2002; Nannberg and Hansen 1994), positively assess service encounters (Fisher, Rytting, and Heslin 1976), return change left in a phone booth (Kleinke 1977), buy a used car (Erceau and Guéguen 2007), watch a large dog while its owner shops (Guéguen and Fischer-Lokou 2002), purchase more goods while shopping (Hornik 1991, 1992; Hornik and Ellis 1988; Smith, Gier, and Willis 1982), comply with requests to score experimental tests (Patterson, Powell, and Lenihan 1986), drink more alcohol in bars (Kaufman and Mahoney 1999), and give away a cigarette (Joule and Guéguen 2007). Waitresses who touch receive larger tips with an enhanced effect for cross-sex touch (Crusco and Wetzel 1984; Ebesu-Hubbard et al. 2003; Hornik 1992; Stephen and Zweigenhaft 1985). Levav and Argo (2010) found that when a woman gave a light, comforting pat on the shoulder, both men and women took greater financial risks. Guéguen and Fischer-Lokou (2003) found that women who touched male bus drivers were allowed to board despite not having enough money for bus fare more often than women who did not touch. This is a culturally robust phenomenon since studies of persuasion from France show similar results (Erceau and Guéguen 2007; Guéguen 2002, 2004; Guéguen and Fischer-Lokou 2002, 2003; Joule and Guéguen 2007; Vaidis and Halimi-Falkowitz 2008). Touch has positive effects on compliance whether or not recipients were consciously aware they were touched (Guéguen 2002; Fisher, Rytting, and Heslin 1976). Studies have consistently shown that when a small verbal request is followed by a large request, compliance is increased, a technique called foot-in-the door strategy (Dillard 1991). This effect is augmented when touch accompanies the request (Goldman, Kiyohara, and Pfannensteil 1985).

Rose (1990) argued that interpersonal touch produces more compliance because recipients of touch view the toucher as likeable and genuine, and they trust them. This suggests the effects of touch are due to cognitive, interpretational factors (Gallace and Spence 2010). Reite (1990) believed that positive reactions to touch are formed because touch relieves stress in early childhood. Andersen's (2008) direct effects model suggests that immediacy behaviors, including touch,

produce increased compliance through increased attention, perceptions of power, the positive effects of warm affect, and greater liking for the source. This research suggests that positive persuasive effects associated with interpersonal touch may be automatic and inherent (Gallace and Spence 2010).

4.3.2 Proxemics and persuasion

Burgoon and Jones' (1976) expectancy violations theory suggests proxemic behavior is governed by cultural norms. Close or far distances, that violate cultural norms makes interpersonal distance and communicator characteristics more salient. Across several experiments rewarding communicators who, as judged by the receiver, possessed desirable traits such as beauty, wealth, or prestige, were more persuasive when violating norms (Burgoon, Guerrero, and Floyd 2010). Unattractive or unrewarding communicators are more persuasive at culturally normative interpersonal distances.

4.4 Harassment through proxemic and haptic behavior

The dark side of communication including violations, transgressions, and harassment is a popular topic in communication (Cupach and Spitzberg 1994). Violations of personal space and territory can constitute both sexual and physical harassment. Sexual harassment has been defined as "the unwanted imposition of sexual requirements in the context of a relationship of unequal power" (MacKinnon 1979: 1). These unwanted sexual acts are often perpetrated through unwarranted invasion of one's space. This type of harassment has also been described as "repetitive, unwelcomed, and inherently coercive acts" (Katz et al. 1996: 35). Women compared to men are the most frequent targets of sexual harassment through unwanted touching and the invasion of personal space (Uggen and Blackstone 2004), though verbal behavior can be harassing as well.

While touch is usually viewed as an immediacy behavior, it can be threatening because it can cause actual physical harm and has sexual implications. Indeed, cognitive valence theory (Andersen 1998, 2008) suggests that when interpersonal distance or touch is perceived as inappropriate, compensation and relational distancing occurs. This is true for cultural, interpersonal, personal, situational, and relational inappropriateness (Andersen 1998). Jones (1994) suggests several forms of touch are inappropriate: unrequested touch between strangers and touch that is hurtful, aggressive, startling, intrusive, frightening, or irritating. Touch that moves another person out of the way is viewed as rude or pushy and if it must be done, individuals should touch the back while verbalizing an apology such as "pardon me." Last, negative verbalizations and negative touch is perceived as unsupportive and aggressive. Lee and Guerrero (2001) reported that being touched by a co-

worker on the face and waist were seen as most harassing and inappropriate while tapping the shoulder was seen as the least harassing. In intimate relationships face touching is received positively suggesting that the affective and emotional valence that interpersonal touch carries is influenced by factors such as context, gender, relational stage, and culture.

Physically abused or battered children need more personal space and have more negative attitudes toward touch (Fromme et al. 1989; Vranic 2003). Research shows that callous touch from mothers is associated with emotional as well as behavioral problems in children (Weiss et al. 2001). Infants who receive nurturing as opposed to harsh touch were less depressed, anxious, aggressive, and destructive (Weiss et al. 2001).

5 Factors associated with touch and space

Proxemic and haptic behavior does not occur in a vacuum. Relational, physical, and psychological factors affect the way these behaviors function and are perceived.

5.1 Relational factors

The use of touch and space is affected by and affects interpersonal relationships. From the first day of life, infants share close space and touch with their mothers and other caregivers. This close space keeps mother and child attached and bolsters their relationship (Bar-Haim et al. 2002; Bowlby 1969). This is a mutually causal relationship; research shows that securely attached infants and children permit touch and enjoy larger permeability of personal space than less secure infants. In romantic relationships space is reduced and touch is increased as intimacy increases (Argyle and Dean 1965; Hall 1966). Once a comfortable level of intimacy has been achieved, pressure to maintain that level of intimacy exists (Emmers and Dindia 1995; Guerrero and Andersen 1991; Patterson 1977). Although the amount of spatial and tactile interaction wanes in long term intimate relationships (Guerrero and Andersen 1991) relational maintenance requires that proxemic and tactile intimacy be displayed across all relationship stages.

5.2 Physical factors

Interpersonal space and touch provide physical satisfaction in close relationships (Floyd 2006). Biochemically, affection is physically beneficial (Floyd, Pauley, and

Hesse 2010). Accordingly, moods, gender, age, health status, and personality are benefitted by interpersonal distance and touch behavior (Altman 1975).

5.3 Psychological factors

When space is limited between people, it can affect them psychologically. Research on crowding shows that increasing population density has pathological effects on individuals' physiological functioning and behavior (Aiello 1987; Calhoun 1962; Christian 1961). As people typically prefer greater distances from strangers, crowding of individuals specifically creates arousal, stress and discomfort.

6 Human universals in haptics and proxemics

Regardless of culture or ethnicity, humans are members of the same species, so substantial similarities exist in human behavior. In all cultures people stand, sit, and sleep near loved ones. Across the world people's tactile and proxemic behavior shows considerable consistency. Research has shown that universal human rituals include hugs, play, massage, sport, fighting, medical interventions, grooming, affectionate kissing, and sexual behavior, all of which involve substantial human tactile contact and close proximity. In most countries mothers or other caregivers spend considerable time feeding, cuddling, changing, and holding infants (Andersen 2011). Breastfeeding is a nearly universal tactile behavior that bonds mother and infant, provides security and delivers nutrients that are difficult to obtain in other ways. In some technologically advanced societies mothers may bottle feed since it is perceived as more efficient or convenient. About two-thirds of women breastfeed, even in highly developed countries like the United States (Healthy People 2010). During much of the history of Europe and the United States, and in less-developed countries today, mothers wear little clothing while nursing, though most American mothers nurse babies fully dressed, reducing mother–infant tactile contact to the area around the nipple (Montagu 1978). Infants receive considerable touch; they are in contact with adults about two-thirds of the time (Muir 2002). Though ethnic, latitudinal, cultural, and class differences affect haptic behavior, universally infants and their adult caregivers engage in substantial touch.

Tactile expression differs across culture, but immediacy and intimacy everywhere are expressed through touch (Andersen 2008, 2011; Andersen, Guerrero, and Jones 2006; Andersen et al., 2002; Prager 1995). Even in the most touch-avoidant cultures, intimacy and affection are expressed tactilely in romances, friendships, and families. Recent research shows a biochemical basis for cross-cultural similarities in touch. Touch releases oxytocin, a chemical that produces feelings of

warmth, closeness, and love (Floyd 2006; Floyd, Mikkleson, and Hesse 2007; Morhenn et al. 2008).

Human sexual activity does display some variability based on relationship status (marital vs. premarital), religious values, cultural customs, though sexual contact among humans typically occurs in private (Andersen 2011). Likewise, incest is a universal human taboo and is relatively uncommon in virtually every culture (Brown 1991).

7 Cultural differences in touch and space

Despite these extensive universal similarities, abundant research shows that proxemic and haptic behavior differs widely among cultures (Andersen 2011; Andersen and Leibowitz 1978; Andersen, Lustig, and Andersen 1987; Field 1999; Hall 1959, 1966; Miller, Commons, and Gutheil 2006; Prosser 1978; Samovar, Porter, and Jain 1981). People's proxemic values and behaviors are deeply embedded, learned at an early age (Evans and Howard 1973), and approximate adult norms by the early teenage years (Jones and Aiello 1971) so they contribute to numerous misunderstandings between people from different places (Hall 1964, 1966). Touch varies across culture in the location, form, amount, and setting in which it takes place (Albert and Ah-Ha 2004; Andersen 2011; Jones 1994; McDaniel and Andersen 1998). Hall (1959, 1966) coined the term contact cultures for ones that engage in more touch and closer distances than noncontact cultures (Andersen et al., 2002; Andersen 2011; Watson 1970).

Andersen and his associates argue that the immediacy dimension of intercultural behavior systematically explains differences in haptic and proxemic behavior (Andersen 2011; Andersen et al. 2002; Andersen and Wang 2006). Cultures that display large amounts of these immediacy behaviors are known as contact cultures. Individuals in these cultures touch more, are more expressive, and stand closer together (Hall 1966). Countries in the Mediterranean region, the Middle East, Arab countries, Eastern Europe, Latin America, and countries near the equator are all immediate or contact cultures (Andersen et al. 2002; Andersen and Wang 2006; Condon and Yousef 1983; Jones 1994, Jones and Remland 1982; Mehrabian, 1971; Patterson 1983; Samovar, Porter, and Jain 1981; Scheflen 1972). Studies suggest that the United States, Great Britain, and Canada (previously identified as noncontact cultures) may be considered contact cultures due to their relatively high levels of touch and close interpersonal distances (McDaniel and Andersen 1998; Remland, Jones, and Brickman 1991). Noncontact cultures include the majority of Northern Europe, Hong Kong, Japan, South Korea, the Philippines, Taiwan, Thailand, and Vietnam, with Asia being the most touch avoidant region of the globe (Andersen, Andersen, and Lustig 1987; Heslin and Alper 1983; Jones 1994; Jones and Remland

1982; McDaniel and Andersen 1995; Mehrabian 1971; Patterson 1983; Samovar, Porter, and Jain 1981; Scheflen 1972; Watson 1970).

Though numerous studies have been conducted on cultural differences in space and touch, little effort has been attempted to unite the two and even less has examined the origins of these cultural differences. The research has been mostly descriptive with few efforts to explain why Brazilians touch more than Koreans or why Italians have smaller personal space zones than Norwegians. The use of space and touch differs widely across the globe, but these differences are not random; instead they lie along latitudinal, longitudinal, and urban/rural dimensions. The largest difference is latitudinal; contact cultures tend to live near the equator and noncontact cultures tend to occupy higher latitudes (Anderson 2011; Andersen, Lustig, and Andersen 1987; Andersen et al. 2002). In the northern hemisphere people touch less and interact at greater distances than southern people. A second dimension is longitudinal; Asian people touch far less than "western people" (McDaniel and Andersen 1998). The third dimension is urban/rural; urban people touch more and maintain closer distances due to restricted space and the inevitable consequences of living in an urban area. (See Chapter 23, Matsumoto and Hwang, this volume, for additional discussion of culture and nonverbal behavior.)

7.1 Changes in latitude: Climatic differences in haptics and proxemics

Research shows that the largest difference in touch and space across the globe is latitudinal. Why is this the case? Four explanations may account for these differences (Andersen 2011). In the northern hemisphere: 1) northerners are more task oriented and less sociable; 2) increased sunlight and neuroendocrine processes make southerners more tactile and sociable; 3) cold weather decreases skin sensitivity, making touch and close distances less important than in warm weather; 4) cold weather decreases social and haptic interaction.

7.1.1 Latitude differences in seriousness and sociability

In the northern hemisphere, people are more task oriented and less sociable than those from the south. Andersen et al. (1990: 307) maintained:

> In *Northern* latitudes societies must be more structured, more ordered, more constrained, and more organized if the individuals are to survive harsh weather forces ... In contrast, Southern latitudes may attract or produce a culture characterized by social extravagance and flamboyance that has no strong inclination to constrain or order their world.

Similarly Pennebaker et al. (1996) suggested that in colder climates people spend more time preparing for winter, dressing, and storing food whereas in warmer

climates people have more time for social interaction. The result is that northerners are more serious, organized, prepared, and technological but less warm, affiliative, and gregarious than southern people. Northerners perceive southerners as frivolous, disorganized, and lazy. Southerners' extensive touch and closer distances seem invasive and inappropriate. Conversely, southerners may perceive northerners as aloof, uptight, and overly organized. Likewise, Hofstede (2001) reported that residents' latitude produces a chain of events that begins with more planning and technology to survive cold climates. Indeed, Hofstede's global studies show a 0.68 correlation between latitude and gross national product. Cultures at higher latitudes value planning and labor more than sociability or interpersonal interaction, but the reverse is true at low latitudes. A worldwide mapping also reported a negative 0.83 correlation between latitude and population growth, suggesting that people in warmer climates, with less technology and less clothing, are more inclined to engage in reproductive sexual activity. Likely, other factors also contribute to this relationship such as hormonal differences in sunnier regions, which are discussed next.

7.1.2 Sunlight and neuroendocrine processes

Sunlight's effects on neuroendocrine processes, the hypothalamus, and the pineal gland have been suggested as an additional source of the relationship between sunlight and social or sexual behavior (Andersen, Lustig, and Andersen 1990). Considerable research has shown that abundant sunlight is positively associated with happiness and negatively associated with depression, marital conflict, suicide, and aggression (Benedetti et al. 2001; Low and Fiessner 1998; Thorson and Kasworm 1984). The neuroendocrine system is light sensitive and it regulates melatonin, oxytocin, and other hormones that affect the entire body (Andersen et al. 1990; Sampson 1975). Sexual behavior and desire are deregulated in the presence of sunshine via the pineal gland, a neuroendocrine transducer and through the production of more sex hormones (Axelrod 1975; Myerson and Neustadt 2011; Reiter 1980; Wurtman, Axelrod, and Kelly 1968). Depression, social withdrawal, and reduced human tactile contact are characteristics of seasonal affective disorder, a social and psychological problem in climates with less seasonal light (Lurie et al. 2006; Rosenthal et al. 1986). In short, decreased sunlight at high latitudes increases inhibition and decreases social interaction, including greater interpersonal distances and less touch, the opposite of what is found at low latitudes.

7.1.3 Climatic differences in skin sensitivity

Montesquieu ([1748]1989) reported centuries ago that people in warmer climates are conscious of tactile sensations and are more sensual than northerners who are less sensitive to feelings, less passionate, and less tactile. He suggested that in

warm countries skin is more relaxed and nerve endings are more responsive to sensation. A recent review could locate no studies that showed reduced sensitivity is a habitual reaction to chronic cold (Andersen 2011). Recent research on haptic memory shows that people recall various types of haptic sensations and experiences (Kaas, Stoeckel, and Goebel 2008) that may be habituated by climate over time.

7.1.4 Climate as a facilitator or inhibitor of social and tactile interaction

Warmer, sunnier weather generates increased social interaction; in colder climates at high latitudes outdoor travel to friends may be thwarted and outdoor social activity inhibited. This was an even greater issue for ancestors of cold climate peoples who traveled on foot rather than by train, airplane, or car, severely limiting social interaction.

Paradoxically, greater social interaction, closer distances and more touch may not facilitate closer relationships. People in warmer, sunnier climates are more socially isolated than people in colder, cloudy environments (Andersen, Lustig, and Andersen 1990). Cold weather keeps people inside with loved ones actually facilitating high levels of social intimacy. Conversely, the opportunity to interact with many more people in a warm climate may produce more relationships but not necessarily closer relationships.

7.2 East versus west: The longitudinal dimension of space and touch

A second great dividing line in the use of touch and space lies between the east and west. Asian cultures are the least touch-oriented of any in the world, at least for public touch (Barnland 1978; Jones 1994; McDaniel and Andersen 1998). In a study of public touch during departures at an international airport, McDaniel and Andersen report that the largest difference is between Asians and all other cultures. Among 26 nations observed in the study, residents of all 10 Asian countries showed less touch than residents of any of the other 16 nations. Consistent with the latitudinal effect discussed above, Northeast Asians displayed even less touch than Southeast Asians.

Generally, Asians are social individuals who prefer to do activities with others and are often found in groups (Mateo-Babiano and Ieda 2007), reflecting their collectivist cultural value. Despite Asians' aversion to touch, Hall (1966) considered them a contact culture that prefers closer interpersonal space and distance. More recent research has shown that Asians maintain somewhat closer distances than those from the United Kingdom or the United States (Beaulieu 2004). Whether this is due to their collectivistic tendencies, smaller physical stature, or the high density of Asia is unclear. The tactile restraint among Asians may be an adaptive mecha-

nism to the spatial density of their cultures. Asians or people of Asian descent (Aiello 1987; Aiello and Thompson 1980; Altman and Vinsel 1977; Evans, Lepore, and Allen 2000) can better tolerate closer distances and more crowding, but like people everywhere, do not appreciate excess crowding. Of course people from rural areas in contact cultures may require considerable space and urbanites in noncontact cultures may tolerate less space (Andersen 2008). Aiello (1972) explains that crowding is a cultural phenomenon in which the social behaviors in groups rely on the individual's cultural values toward space.

The difference between Asia and the rest of the world may be attributed to collectivism (Andersen 2011; Hofstede 2001; Nisbett et al. 2001). Asian collectivist cultures are among the oldest and most homogeneous in the world and have developed norms and codes of conduct that prescribe harmony as a major value. By contrast the most individualistic countries, Australia, England, and the United States (Hofstede 2001), are multicultural societies that have accommodated many disparate cultural traditions over the millennia. Across Asia, Confucianism and Buddhism, which emphasize civility, decorum, and group harmony (Joe 1972; McDaniel and Andersen 1998), discourage public touch which may be perceived as uncouth, impolite, and even sexual. Likewise Asians afford each other considerable personal space and tend to move in more organized patterns in crowds than other cultural groups. The exception, of course, is in the dense urban areas of Asia where public touch on trains and sidewalks is inevitable.

8 Individual differences in touch and space

8.1 Touch avoidance

Individuals vary considerably in the degree to which they like or dislike touch. Jourard and Rubin (1968) first studied "touchability," the inverse of touch avoidance. Considerable research has examined touch avoidance, which indicates people's liking and approach or dislike and avoidance of same-sex or opposite-sex touch (Andersen, Lusting, and Andersen 1987; Andersen and Leibowitz 1978). Although touch avoidance is an attitudinal measure, Sorensen (1979) found that people's self-reports of touch avoidance or touch comfort correlate with actual behavior. Similarly, Guerrero and Andersen (1991) conducted a study in which experimenters discreetly observed and recorded the tactile behaviors of people waiting in lines at the zoo and theatre. Afterward, participants completed a questionnaire about their relationship and touch-avoidance attitudes. Touch avoidance correlated with their actual touch behavior.

Touch avoiders are less open and expressive, lower in self-esteem, but more religious than touch approachers (Andersen 2008). Touch avoiders have more negative perceptions of people who touch them than do touch approachers (Soren-

sen 1979) and stay "out of touch" by utilizing larger personal distances and touching less, leading to less intimacy overall (Andersen et al. 1987; Andersen and Leibowitz 1978; Andersen and Sull 1995; Guerrero and Andersen 1991). Andersen and Sull (1985) interviewed students concerning their television-viewing preferences. Upon arriving at the interview, students were asked to pick up a chair and set it up near the interviewer. Consistent with sex of the interviewer and interviewee, students scoring high on one of the previously administered touch-avoidance measures set up their chairs twice as far away from the interviewer as students scoring low on the measure

As mentioned previously, touch avoidance and touch comfort may actually be an index of a person's general intimacy or immediacy level. As Andersen and Leibowitz (1978: 90) originally argued, "The failure to utilize touch is indicative of interpersonal avoidance and lack of interpersonal closeness." Touch comfort is positively correlated with life satisfaction, self-satisfaction, self-confidence, assertiveness, social success and happiness, problem solving, and social acceptance (Fromme et al. 1989).

8.1.1 Same-sex touch avoidance

As indicated above, males are more touch avoidant of same-sex individuals than are females, regardless of age, religion, or marital status (Andersen and Leibowitz 1978; Silverman, Pressman, and Bartell 1973). Derlega and colleagues (1989) report that in friendships males exhibit less tactile intimacy with males than females, and less tactile intimacy than females display with other females. Because men are more likely to link touch with sexuality than women, men find opposite-sex touch to be socially acceptable but not same-sex touch (Fromme et al. 1986). Many men avoid gentle or nurturing touch with men as these actions are not viewed as masculine. Men's avoidance of men may be due to homophobia or appearing to be homosexual (Andersen and Leibowitz 1978; Derlega et al. 1989; Floyd 2000). When men touch other men it often takes the form of roughhousing or contact sports. Not surprisingly, if parents are comfortable with same-sex touch, their children report more comfort with same-sex touch (Fromme et al. 1986).

Men and women with specific personalities are more likely to be same-sex touch avoiders. Authoritarian and rigid individuals are more likely to be same-sex touch avoiders (Larsen and LaRoux 1984). Similarly, same-sex touch avoiders of both sexes have more negative conceptions of femininity.

8.1.2 Opposite-sex touch avoidance

Men are more comfortable than women with opposite-sex touch regardless of where they are touched or how well they are acquainted (Andersen and Leibowitz 1978; Fromme et al. 1986). Men initiate sexual touches regardless of marital status

(Blumstein and Schwartz 1983). Traditionally, women have been enculturated to believe "forward" tactile acts are unfeminine and excessively aggressive, an explanation for women's higher opposite sex touch-avoidance than men (Andersen, Andersen, and Lustig 1987).

8.2 Gender/sex

Sex and gender differences in the use of touch and space are numerous. Sex differences are biological and reproductive and have evolved over many millennia whereas gender differences are culturally based on differences in socialization and sex roles of men and women. Sex and gender differences are difficult to disentangle and may reinforce one another. Despite these differences, there are considerable similarities in the tactile and spatial behavior of men and women that should be recognized (see also Chapter 21, Hall and Gunnery, this volume).

Research has failed to find sex differences in tactile sensitivity at birth (Jacklin, Snow, and Maccoby 1981; Yang and Douthitt 1974), but gender differences start early in life; female babies are the recipients of more touch than boys (Field 2002). Indeed, adults believe that touching boys, but not girls, is increasingly inappropriate as infants grow into children (Harrison-Speake and Willis 1995).

Some studies (Blumstein and Schwartz 1983; Major, Schmidlin, and Williams 1990) find that overall, women are the recipients of more touch from both sexes than men, but most studies find little or no difference in the amount of touch men and women initiate or send (Guerrero and Andersen 1994; Hall 1984, 1996; Hall and Veccia 1992; Knapp and Hall 2010; Stier and Hall 1984). In early relational stages men touch women more than the reverse, but in long term relationships, particularly marital relationships, women touch their male partners more than the reverse (Guerrero and Andersen 1994; Willis and Briggs 1992). This gender asymmetry, with men as touch initiators, is more likely to occur between strangers and acquaintances than with close friends or family and is attributed to gender-based status differences (Major, Schmidlin, and Williams 1990). Likewise, males have traditionally used their higher status to appropriate and violate space (Madden 1999). Status organizing theory suggests that males are afforded more space than lower "status" females (Leffler, Gillespie, and Conaty 1982). According to this view, gender rules for proxemics and haptics established male dominance and female submission (Henley 1977).

Henley (1977) also proposed that men use touch to dominate women but the research to support Henley's position is equivocal at best. First, as indicated above most touch between men and women is reciprocal. Second, considerable research has shown that touch is primarily an affiliative cue that indicates interpersonal closeness, not a cue of power and dominance (Andersen 2008; Hall, Coats, and Smith LeBeau 2005). People seldom report that appropriate touch is associated with negative affect (Jones and Yarborough 1985) even among strangers.

Women occupy less space and are less obtrusive than men (Exline 1963; Exline et al. 1965). Henley (1977) believed that women's femininity is gauged by how little space they take up, while men's masculinity is judged by their expansiveness. The unequal power in interpersonal distance between men and women can be seen in that people will more closely approach females than males (Knapp and Hall 2010; Madden 2008). Early socialization teaches females to stay closer to a defined space while males are encouraged to find their own space (Harper and Sander 1975; Lewis 1972).

9 Conclusion

Sharing space and touch are fundamental components of human experience. In all societies interactions with infants, family members, romantic partners, close friends, and acquaintances occur at close distances with frequent touch. As communication becomes more affectionate, immediate, and intimate, people employ closer distances and more touch. Proxemic and haptic behaviors communicate messages about one's culture, power, sexuality, personal qualities, inclusion and privacy and are central nonverbal communication codes that are indispensible to the development of relational closeness, intimacy, and self-disclosure. Touch occurs in close interpersonal space suggesting that the two elements of nonverbal communication are inherently interrelated and should be studied in tandem. Haptic and proxemic behaviors display many cultural variations but communication scholars should always be mindful of the many universal aspects of these and other nonverbal behaviors.

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