Investigating Cross-Cultural Differences in the Privacy Regulation and Perception of Crowding: Northern and Yazdi Women in Iran

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Abstract

This study investigated cross-cultural differences in the privacy regulation and perception of crowding among two Iranian sub-cultures (Yazdi and Northern women). The research methodology was designed on interview and questionnaire. A random size of 100 Yazdi and Northern women was selected in Yazd and Sari cities. Moreover, to examine the survey Chi-Square Test, Independent Sample Test and Analysis of variance (ANOVA) were conducted. The results show that Yazdi women desired more privacy in public spaces than Northern women. Regardless of culture, women's desired and achieved privacy levels have associations with the level of perceived crowding in public spaces. These findings assist environmental designers to present strategies for achieving privacy in relation to Iranian sub-cultures.

1.0 Introduction

The desire for privacy is a public deed but it related to variables such as culture, age, gender, personality, and situated factors (Hall 1966, Altman and Chemers 1980). Edward Hall's theory (1966) is the basis of research conducted on the cultural effects of how people interpret space and utilize it. According to this research, cultural differences make a significant distinction between the spatial behaviour of Mediterranean and European cultures. He subsequently divided cultures into *contact* and *noncontact* cultures. Hall also states that differences in inter-personal distances are not limited to cultural groupings, but actually encompass subcultures.

Some other researchers are accomplished in the sequel to Hall's studies, which are done in the area of comparing the privacy regulation among and within different cultures and subcultures (Watson and Graves, 1966; Forston and Larson, 1968; Little, 1968; Sommer, 1968; Ziller et al., 1968; Engerbretson and Fullmer, 1970; Evans and Howard, 1973; Altman, 1975; Hayduk, 1983; Sanders et al., 1985; Remland, 1995). Despite all these studies, there are lots of other cultures and subcultures globally whose spatial behaviour and utilization of space yet remain unstudied. Evans et al. (2000) results showed that most of cross-cultural studies on crowding and privacy have been conducted within Hall's classification; hence it would be necessary to examine the generalization of findings across a broad range of cultural groups.

On the other hand, this study is based on Altman's privacy regulation model (1975). Altman (1975) discriminates between the desired, achieved, and optimum level of privacy. Based on his privacy regulation model (1975), the degree of desired privacy may vary across individual and cultural factors. Besides, Evans et al. (2000) indicate that contact cultural groups perceive their environment as less crowded than noncontact groups.

Iran has many subcultures with different manners of responding to the privacy, but there haven't been any researches that imply on the effect of culture on privacy. In order to compensate for this gap in knowledge, this study covers two groups of women (Yazdi and Northern), assessing their differences in privacy regulation and perception of crowding, in city parks. Specific research question were examined:

1- Do Northern and Yazdi women differ in their desired and achieved privacy levels?

2- Is there a relationship between the desired and the achieved levels of privacy and the experience of crowding of Northern and Yazdi women?

3- Do Northern and Yazdi women differ in the experience of crowding?

In order to be more accurate for comparison purposes, economic and personality indicators were also utilized in the study.

2.0 Literature Review

2.1 The Concept of privacy

Privacy is a conventional process by that a person or a group of people exposes themselves to others. Altman (1975) defines it as follow: Privacy is a process to justify the borders among people by that a person supervises his/her relationship. According to Altman's opinion,

privacy is a dialectic process which is built on the basis of two different powers: "being with others" and "avoidance of being with others". According to Gifford (2002) definition, privacy means selective control of access to self, either in person or in terms of information about oneself. It may be considered as a preference, expectation, value, need, and behavior.

Differences in privacy behavior originate with differences in personal characteristics, social situations, physical settings, and culture. Some people, because of their culture, personality, or other characteristics, require more privacy or express privacy needs differently from others. Certain social situations or physical settings, regardless of who is in them, engender different privacy needs (Gifford, 2002; Altman, 1975; Hall, 1960). In other words, the person or the group chooses some mechanisms on the basis of age, gender, personality, cultural – social background and situated factors in order to achieve desired privacy (Altman and Chemers, 1980; Lang, 1987).

2.2 Cultural Influences on Privacy

The desire for privacy varies from one culture to another. Some cultures need more privacy in comparison with others (Altman and Chemers, 1980). According to this fact, Hall (1966) classifies the cultures into two different classes; contact and non-contact. Based on his studies, the spatial behavior of Mediterranean (contact groups) and northern European people (noncontact groups) are significantly distinguishable: Mediterranean societies prefer proximate interactive distances while northern European societies prefer more extensive interactive distances. Hall's studies became the basis of subsequent research in the field of cultural effects on special behavior and the personal space of citizenry. Researchers, working on the basis of Hall's classification, indicating Mediterranean (contact groups) and northern European (non-contact groups) characteristics, supported his results and ideas through surveys they had undertaken (Watson and Graves 1966, Forston and Larson 1968, Little 1968, Sommer 1968, Ziller, Engerbretson and Fullmer 1970, Evans and Howard 1973, Hayduk 1983, Sandor, Hakky and Brizzolara 1985, Remland 1995). Consistent with these studies, it was assumed that Northern and Yazdi women would differ in their privacy regulation. According to participants' cultural background, Yazdi women would have higher needs for privacy in city parks than Northern women.

2.3 Dimensions of Privacy

Westin (1970) established four basic states of privacy, each with its related function: solitude, intimacy, anonymity, and reserve. Solitude, or the condition of being alone, is the most commonly used term for the definition of privacy. In solitude, an individual is separated from others. In state of intimacy, the boundary is around two or more people, allowing them to interact unobserved by others. In anonymity, an individual is in the presence of others in public places, but he/she is unidentified and/or is not under surveillance. In the state of reserve, an individual communicates with others, but is able to select the information that he/she receives (Westin, 1970). Several studies employed factor analysis to identify types of privacy and to develop subscales (Marshall, 1972, 1974; Pedersen, 1979; Rustemli & Kokdemir, 1993). Marshall (1972, 1974) identified six types of privacy. The first four are known as a intimacy, solitude, anonymity, reserve, seclusion and neighboring. Seclusion is

a preference to be unacquainted with neighbors and separation from others by visual and auditory means, while not neighboring is the dislike for friends or neighbors to drop in without warning and preference for noninvolvement with neighbors. Moreover, Pedersen (1979) identified six states of privacy: reserve, solitude, isolation (which involves a greater degree of physical separation than solitude), intimacy with family, intimacy with friends, and anonymity.

2.4 The Dynamic Model of Privacy

This research is based on Altman's privacy regulation model. Altman (1975) discriminates between the desired, achieved, and optimum level of privacy. Desired privacy is an ideal level of privacy at any specific time which an individual looks for it, while the achieved privacy refers to the actual level of contact experienced by an individual at a particular point in time. If the achieved privacy level equals the desired level, an optimum state exists, and when it exceeds it, the individual will cut his/her relation with others. In other words, in this condition, the person feels isolation, social solitude and boredom. But if the achieved level is lower than desired level, it can be concluded that the person's surveillance in social behavior is not proper and the individual suffers from "crowding". Consistent with Altman's studies, it was assumed that women's desired and achieved privacy levels would have associations with the level of perceived crowding in city parks. Women whose achieved privacy level is less than what they desire would feel more crowded than either women whose level of achieved privacy is greater than what they desire or for those whose privacy is optimized.

2.5 Privacy and Human Behavior

Privacy is influenced by personal and situational factors. It is also inextricably linked with other important behavior processes (Gifford, 2002). Westin's (1970) four functions of privacy provide a good framework for research on the relation between privacy and other human behavior.

- Privacy is clearly related to communication. One reason an individual seek privacy is for protected communication. Both the informational and interpersonal themes of privacy are deeply involved with communication.
- Privacy is intimately connected to an individual sense of control, or autonomy. The ability to choose solitude or company of others endows him\her with a sense of self-determination; not having that choice makes him/her feel helpless.
- Privacy is important to an individual sense of identity, solitude and intimacy, in particular, can be used to evaluate him/her progress in life, who he/she is, what his/her relationship to others is, and what it ought to be. Sometimes, it is not easy to make sense of all the things that happen to an individual while he/she is still on the public stage. Privacy allows him/her the time and space to reflect on the meaning of events, to fit them into his/her understanding of the world, and to formulate a response to them that is consistent with his/her self images.
- Privacy allows for emotional release. Society discourages public emotional displays except under exceptional circumstances such as weddings and funerals. People often feel more emotion than they are able to display, so privacy services as a

vehicle for emotional release. In private, an individual can weep, make faces at himself/herself in the mirror, sing loud crazy songs, and talk to himself/herself.

2.6 The Concept of Crowding

Crowding is a social situation which appears after the inapplicability in the privacy regulation. Crowding is a complicated concept which happens in different circumstances. It can be claimed that crowding takes place when people are asking for more physical space, or their way toward a specific goal is blocked, or when their territory has been invaded. Crowding is an intrapersonal process that happens even in small groups in which people possess mutual relations (Altman, 1975).

On the basis of Stockols's findings, Altman (1975) claims that crowding is a subjective and psychological experience that is associated with a feeling of lack of control over the physical environment. Actually, crowding is the consequence of space shortcoming. He believes that crowding occurs when a level of social contact exceeds what is desired (Altman, 1975).

Environmental psychologists find that many factors led some individuals to feel crowded and others to feel uncrowded, even in the same objective setting. For example, certain personal characteristics are associated with a lower tolerance for proximity to others. In addition, for any given individual, certain physical and social situations lead to the experience of crowding but others do not (Gifford, 2002). A major task of researchers is to identify the personal (e.g. personality and attitudes, psychiatric status; preferences, expectation, and norms; gender; mood; culture and community size), social (e.g. interpersonal similarity; provision of information and behavior of others) and physical variables (e.g. scale; architectural variations; place variations and weather) that lead individuals to label and experience crowded. According to Gifford (2002), figure1 is a basic model of crowding.

In present research, it was assumed that Yazdi and Northern women would differ in their perception of crowding that Yazdi women need more privacy and therefore may feel more crowded in city parks than Northern women.
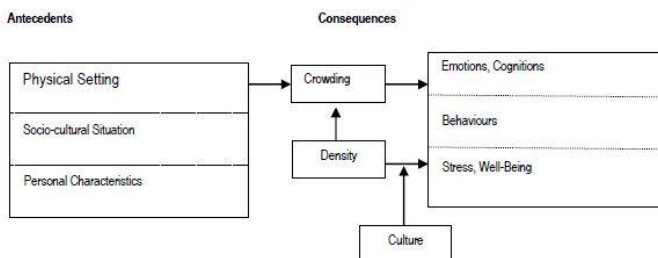

Fig 1. An overview of crowding and density. Crowding depends not only on density but also on a person's characteristics, the physical setting, and social and cultural factors. Once crowding occurs, it affects –mostly- emotion, cognition, behavior, and well-being (Gifford, 2002).

2.7 The Difference Between Crowding and Density

The terms crowding and density were used more or less interchangeably until Daniel Stokols made a distinction that is now generally accepted (Gifford, 2002). Stockols (1972) applies "density" in a physical meaning only, and defines it as the number of people in a unit of space. On the other hand, he defines the "crowding" as a psychological concept which possesses an experimental and motivational foundation. According to his opinion, density is a necessary condition for crowding, but it is not sufficient for it. In other words, all accumulated environments do not possess the crowding for people. And vice versa; i.e. every less accumulated environment cannot be considered without crowding, because crowding may be felt even between two persons. There is a conception, called "understood density" in this equation; it means a sort of density that the person feels it on the basis of his/her own perception. This approach is related to the crowding concept (Gifford, 2002).

Crowding is divided into two different groups; social and spatial. Physical factor leads to the feeling of space shortcoming in spatial crowding. Social crowding is the consequence of exceeding presence of personal space. Increasing the number of people leads to the social crowding in the condition that the amount of space remains constant and changing the amount of space leads to the spatial crowding in the condition that the number of people remains constant (Gifford, 2002).

3.0 Methodology

3.1 Site selection

Iran is divided to 10 cultural zones: Khuzestan; Lorestan; Azarbayejan; Kordestan and Kermanshahan; Mazandaran; Central Plateau; Big Khorasan and Golestan; Sistan and Baluchestan; Kerman and Fars, Yasuj, Persian Gulf (Amerian et al., 2011). Amerian et al. (2011) state that differences amongst these cultural zones has led to differences in inhabitants' needs and spatial behavior. However, this study covers two cultural zones: the Mazandaran zone and the Central Plateau. Due to distinctive differences among these cultural zones (Mazandaran and Central Plateau), this paper examines the privacy regulation between Yazdi and Northern women. The research was done in Haftetir Park (Yazd) and Shahr Park (Sari). Yazd is the capital of Yazd province and Sari is the capital of Mazandaran province. Their population is almost the same. Yazd has 432,194 and Sari has 398,994 inhabitants. The culture of most inhabitants in Yazd is Yazdi and that of Mazandarani's is Mazani (Northern). Both parks were selected in urban areas, have an urban scale and similar plan. Women go to these parks to do sport and for leisure activities. External visitors go to these parks in addition to the local population.

3.2 Sample survey

In this study, 100 women who were using parks (specifically Haftetir and Shahr parks) in Yazd and Sari were selected on a random basis: 50 of which were Yazdi and 50 were Northern. The samples indicated healthy, extrovert, normal to high income average level type

individuals. The age range of Yazdi women was from 18 up to 65 (M=34.78, S.D=12.50) and the age range of Northern women was from 18 up to 60 (M=30.76, S.D=10.80).

3.3 Process and Method

The study was undertaken through the methods of questionnaire and interview. The data collection occurred during the July 2011 at different time (8:00-12:00 am and 5:00-10:00 pm) on weekdays and weekends over a 2-week period in each park.

The primary purpose of this study was to examine whether Northern and Yazdi women differed in their desired and achieved levels of privacy in parks. The second purpose of this study was to investigate the relationships between the desired and the achieved levels of privacy and the experience of crowding in parks. The final purpose was to describe the cultural differences in the experience of crowding between Northern and Yazdi women. Thus, the questions were categorized into three different parts:

A) General questions in the beginning of the questionnaires in order to make the participants ready for the rest of questions.

B) The second part contains the estimated desired level of privacy in the park. These questions were organized according to Likert spectrum.

C) The last part of the questionnaire evaluates the women's perception of crowding through the semantic differential scales.

In order to assess women's desired and achieved levels of privacy, women were asked to indicate how much privacy they would like to have in the city park, and then were asked how much privacy they actually have in the city park to assess their achieved privacy level. Participants responded these questions on the basis of Likert Spectrum (5-point rating scale from 1 (not at all) to 5 (a lot)). On the other hand, to examine how women perceive the city parks in regard to crowding; a total 10 items were used. These items were Semantic Differential Scales about the perception of the parks (e.g., cramped-uncramped, stuffy-not stuffy, crowded-uncrowded, free to move-restricted, spacious-confined), adopted from Kaplan (1982).

4.0 Results

After gathering the data through the questionnaire on the basis of Likert Spectrum and Semantic Differential Scales, these data were analyzed through Chi-square Test, Independent-sample T Test, Pearson Correlation coefficient and Analysis of variance (ANOVA), on the following variables: culture, privacy regulation and perception of crowding. Methods used in data analysis are to examine the effect of Culture on the desired and achieved privacy levels and to find the relationships between the crowding and the desired and achieved levels of privacy for Northern and Yazdi women separately.

4.1 The Differences in desired and achieved Privacy levels

Based on Altman's regulation model (1975), the degree of desired privacy may vary across individual and cultural factors. Correlation results revealed a significant relationship between the two privacy levels ($r = 0.17$, $p = 0.01$). In order to examine whether the desired and

achieved privacy levels differed between Yazdi and Northern women, Independent Samples Test was run. The results indicate that the women desired (T = 7.42, d.f. = 98, P = 0.00) and achieved privacy levels (T = -5.23, d.f. = 98, P = 0.00) were significantly different between the two samples. As shown in Fig.2, Northern women had a higher mean score for the achieved privacy (M = 1.98, S.D. = 0.91), but a lower mean score for the desired privacy (M = 2.24, S.D. = 0.71) than Yazdi women (M = 1.22, S.D. = 0.46 and M = 3.12, S.D. = 0.43).

Table 1. Mean and standard deviations of the desired and achieved privacy levels for Northern and Yazdi women

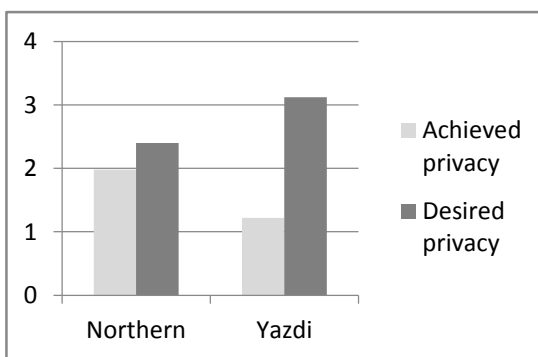| Culture	Desired privacy			Achieved privacy	
	N	M	S.D	M	S.D
Northen	50	2.24	0.71	1.98	0.91
Yazdi	50	3.12	0.43	1.22	0.46

Fig. 2. Desired and Achieved mean scores for Northern and Yazdi women

4.2 Relationships between desired and achieved levels of privacy and crowding
Pearson Correlation coefficient was run to examine the relationships between desired and achieved levels of privacy and crowding scores for Northern and Yazdi women separately. For the two groups of Northern and Yazdi women (N = 100), the results indicate a positive correlation between the desired privacy and the crowding scores (r = 0.85, p = 0.00 and r = 0.67, p = 0.00), but a negative correlation was found between the achieved privacy and the crowding scores (r = -0.37, p = 0.007 and r = -0.68, p = 0.00) for the Northern and Yazdi samples. The results further revealed that when a woman's achieved level of privacy increased, the crowding decreased. Also, when desired privacy increased, the crowding in the park increased.

4.3 Differences in the experience of crowding
In order to make a comparison, the interviewed were divided into three groups based on their discrepancy scores between the achieved and desired privacy levels (Altman, 1975). The

discrepancy scores could range from -1 to -5 (crowded), from +1 to +5 (isolated) or could be 0 (optimum). For example, if a woman's achieved privacy score was 2 and her desired privacy score was 4, then the discrepancy score would be -2, indicating an inadequacy in the individual's privacy level (crowded). Second, if the achieved privacy score was 3 and desired privacy score was 1, then the discrepancy score would be +2, indicating an excessive level of privacy (isolated). Third, if the achieved privacy level equaled the desired level, the discrepancy score would be 0, indicating an optimum level. The Chi Squared Test was used in order to study the difference between the discrepancy scores in the Yazdi and Northern samples. The results show [$\chi 2$ (2, N = 100) = 6.38, P = 0.03], and so there is significant differences among the discrepancy scores in the two groups.

Tukey's test for post-hoc was used to investigate the differences between the crowding scores among three groups. The results indicate a significant difference in crowding scores of the crowded women and the isolated women and the optimum women (p = 0.00). The crowded women have a higher mean of crowding score than isolated than the optimum women. Moreover, Yazdi women perceive the city park as more crowded than Northern women (M = 22.30, S.D. = 0.43 and M = 27.85, S.D. = 0.81).

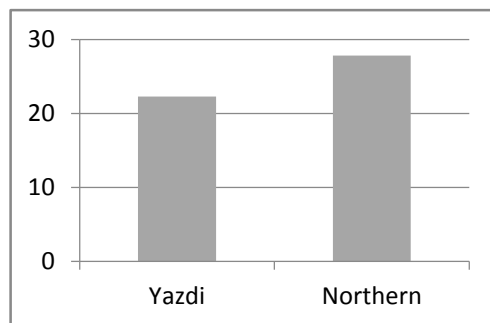Fig. 3. Crowding mean scores for Northern and Yazdi women.

5.0 Discussion

This research focused on Edward Hall's seminal studies based on the effects of cultures and sub-cultures on the privacy regulation. The results of this study well illustrate that there are differences in the privacy regulation between two ethnic sub-culture Iranian groupings - Yazdi and Northern women.

Consistent with Altman's privacy regulation model (1975), the results indicate that Yazdi and Northern women significantly differ in their desired privacy levels. Yazdi women have higher needs for privacy (desired privacy) in the public spaces than Northern women. However, Northern women's achieved privacy level is higher than Yazdi women.

On the other hand, the results show that Yazdi women perceive the city park as more crowded than Northern women. Moreover, the crowded women (for both groups) have a higher mean of crowding score than the isolated and the optimum women.

The research also accepts Altman's studies (1975): individual's desired and achieved levels have associations with the level of perceived crowding in physical environments. For both groups of women (Yazdi and Northern), the results indicate a significant relationship between the achieved and the desired levels of privacy and the perception of crowding. Therefore, when a woman's desired level of privacy increased, the crowding increased. Also, when a woman's achieved level of privacy increased, the crowding decreased. Regardless of one's culture, women whose needs for privacy are not met feel more crowded than either women whose levels of social interaction are less than what they desired or those whose privacy is optimized (i.e. desired privacy = achieved privacy).

The differences in the privacy regulation among Yazdi and Northern women could be explained by the cultural and ideological background in which an individual is raised. In Northern society, the way women interact within public spaces was recognized more liberal than Yazdi society related to the women's presence in public realms out of kin groups. Northern women usually socialized with men and they are quite free and confident.

In line with these, we can claim that the perception of privacy in Northern women is different from Yazdi women. Northern society's tension was not as strong as Yazdi society, which had led to adopting more restrictions on the presence of female in public spaces, and even to defining more complicated ways of entering the houses, and ultimately to the restriction of the houses from being outward looking.

Finally, due to numerous sub-cultures in Iran and a shortage of studies on these sub-cultures, researchers must conduct other cultural studies to create a quality urban environment based on them. It is essential for future studies to utilize other personality indicators such as introversion, maladjustment and anxiety.

Acknowledgements

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