PRIVACY BEHAVIOR IN MARRIED STUDENT HOUSING
A SAMPLE STUDY AT KANSAS STATE UNIVERSITY

by

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Chapter 1

PRIVACY BEHAVIOR

INTRODUCTION

In the environment and behavior field, privacy behavior has been conceptualized by Altman as a bridge between personal space, territoriality, and other realms of social behavior. "Privacy is a changing process whereby people attempt to regulate their openness/closeness to others" (Altman, 1975). In other words, according to Altman's dialectical model of privacy, people or groups use interpersonal boundaries or barriers, much like a cell membrane, to regulate their access to other persons. This "membrane" regulates both inputs from the external environment and outputs from the individual to the surrounding environment. Because an optimum level of privacy (a satisfactory match of desired and achieved privacy) is sought for in dealing with the social environment, too little or too much privacy is unsatisfactory. Privacy mechanisms facilitate privacy regulation in two ways. First, privacy can help manage social interactions between people (Altman, 1975). If privacy is not achieved at a desired level one might feel anxious or tense, for example, taking a bath without a locked door. Second, privacy can help people more psychologically to establish a sense of self-identity or selfworth, which will

assert their individuality or confirm their distinctness from others (Simmel, 1971). For example, individuals who want to assess their own worth must withdraw themselves from the social interactions of daily activities.

With this two-fold emphasis on privacy, this thesis will explore how privacy perceptions, privacy mechanisms, and privacy regulations operate in the context of married student housing at Kansas State University. This study is both theoretical and applied; it will broaden our theoretical understanding of how the physical environment interacts with the social environment to affect the acquisition of privacy, as well as apply to the development of improved management and environmental design criteria for the provision of privacy in married student housing. It is anticipated that these findings may apply to other university settings as well.

DEFINITION OF PRIVACY

Researchers who have studied privacy have found that its meaning varies according to context. "The privacy we speak of in everyday usage is not the privacy of the lawyer, the politician, or the behavioral scientist" (Margulis, 1977). This thesis will utilize Altman's general definition of privacy as the "selective control of access to the self or to one's group" (Altman, 1974:24; 1975:18). "This definition encompasses most of the meanings of privacy we

encounter in every day, legal, and scientific usage" (Charles J. Holahan, 1982). Therefore, this definition allows researchers to view privacy as both control of outputs from the self to others and control of inputs from others to the self. An operational definition of privacy will be offered later in the next chapter.

REVIEW OF LITERATURE AND RATIONALE

To learn more about privacy behavior in people's daily life and develop a framework for this study, some related literature and rationale will be reviewed. In the work environment, Sundstrom (1980) found that architectural features that allowed for visual and acoustical insulation were consistently related to greater feelings of privacy in various environments and occupational roles. Other studies by Sundstrom found that partitioned work spaces that had a door and were not visible to neighboring co-workers were perceived to be more private (administrative employees of the State of Tennessee, 1980).

Harman and Betak (1974) found that people associated their residential privacy with a single-family home on a large lot at some distance from neighbors. Therefore, these people perceived privacy mainly in terms of ability to regulate unwanted intrusions from neighbors. Chermayeff and Alexander emphasize in their book, Community and Privacy (1963), that adequate boundaries betweeen interior living

space and the outside environment, especially noise and vehicular traffic, is very important for residents to experience a sense of control over their social involvement.

In a study of university dorms at Berkeley, Sim Van Der Ryn (1967) found that noise carried along the corridor or through adjacent rooms was a great enemy of privacy in a shared living space. He also found that students desired to study without being observed by their roommates. This has been confirmed by other researchers as well. Thus, not surprisingly, most college students prefer to study in a private personal space, where outside noise and interruptions (visual and physical) can be controlled.

Altman (1975) proposed that four privacy mechanisms are used to achieve an optimum level of privacy. (1) Verbal behavior, a primary communication in social interactions, is considered from two perspectives: content ("Come in," or "I'd like to be alone"), and structure (language style, voice quality and etc.). (2) Nonverbal behavior, usually termed "body language", implies the use of different parts of the body to communicate. For example, one may intentionally look at one's watch constantly to encourage the guest or intruder to leave. (3) Environmental behavior, is restricting one's personal space or displaying territorial behavior to obtain a desired environment. For example, in the Berkeley dorm study, Van Der Ryn (1967) found that roommates tried to achieve privacy by using furniture

arrangements to create personal territory. Similarly, for the defense of privacy, Sommer (1969) found that 62 percent of the students selected the table against the wall in a library compared to 32 percent who selected a table with aisles on all sides. (4) Culturally-based norms and customs, is utilized by a given society, for example, high walls around homes designed to achieve greater privacy in Japanese culture as opposed to shrubs in North American culture (Canter and Canter, 1971).

Additionally, these mechanisms change over time. Thus, people may use different mixtures of these behavioral mechanisms at different times and in different circumstances. If boundary control mechanisms do not work successfully, adjustments are made to meet individually desired levels of interaction. Many argue that these unusual adjustment and readjustment processes made over time will result in various types of physical, physiological, and psychological stress which often translate into illness and anxiety (c.f. Altman, 1975; Weiss, 1972; Stroebel, 1971; Holmes and Rahe, 1967).

SUMMARY

This chapter has presented a general introduction of privacy definitions, functions, and a selected review of research literature in the field of environmental behavior. Privacy research can be classified primarily as situational factors, such as personal, social, or environmental ones.

Personal factors may include gender, cultural background, and marital status. Social factors refer to social roles and interpersonal relations, such as students and co-workers. Environmental factors are spatial arrangements, spatial density, and other design features.

This thesis will study privacy behavior under the specific situations mentioned above, and explore how individuals perceive their environmental privacy and make use of environmental design factors in achieving their privacy needs via the four privacy regulation mechanisms discussed above.

Chapter 2

THE RESEARCH PROBLEM

RESEARCH OBJECTIVES

This thesis has the following broad objectives: (1) to understand better the privacy behavior of residents in married student housing at Kansas State University; (2) to identify the significant effects of personal, social, and environmental factors on privacy satisfaction and privacy behavior; and (3) to draw implications and develop criteria for further research and design of similar housing environments.

HYPOTHESES

The following eight hypotheses will be investigated:

(1) People with different cultural backgrounds (e.g., Americans vs. non-Americans) will have different privacy perceptions, use different privacy regulation mechanisms, and react differently via the physical environment (e.g., verbal vs. non-verbal) in the management of their social and personal interactions.

(2) Males and females will express different levels of privacy perception and satisfaction in the same dwelling environment.

(3) Residents living at different floor locations and proximity to the main stairway will display different

levels of privacy perception, satisfaction, and utilize different privacy mechanisms.

(4) Residents who live in two-bedroom apartments will have different levels of privacy satisfaction from those who live in one-bedroom apartments.

(5) Residents living at different proximities to vehicular traffic will differ in privacy perception, satisfaction and use of privacy mechanisms.

(6) Residents with different numbers of children will display different levels of privacy satisfaction and privacy behavior.

(7) Residents with different student status (student vs. non-student) will have different levels of privacy perception and satisfaction.

(8) When some social characteristics, such as number of children are covaried, environmental factors will explain a significant amount of variance in privacy satisfaction.

DEPENDENT VARIABLES

Two categories of dependent variables will be investigated in this research: the perception of privacy, and privacy mechanisms.

Perception of Privacy

Privacy perception is how residents perceive the state of privacy in their current environment and how they

evaluate it. Privacy satisfaction measures express residents' evaluation of these perceptions. For example, "How often do you experience noise and visual intrusion upon your daily life from vehicular traffic?"; "How dissatisfied are you with these traffic intrusions?"; and "If dissatisfied, what do you do about it?".

Privacy Mechanisms

Privacy mechanisms are behaviors which residents display to achieve their desired level of privacy in a specific environment. Three of Altman's four privacy mechanisms: (1) verbal behavior, (2) nonverbal behavior, and (3) environmental behavior, are assessed to determine what the residents do in achieving desired levels of privacy. In this research, Altman's last privacy mechanism, culturally based norms and customs, was thought to be too difficult to discern due to the cross-cultural mix of Jardine residents. In any case, these cultural influences may be assessed by mechanisms 1, 2, and 3.

INDEPENDENT VARIABLES

Three categories of independent variables (personal, environmental, and social factors) will be assessed in this study. Personal factors include cultural differences and gender. Environmental factors are number of bedrooms, floor location (ground floor vs. second floor), proximity to the main stairway, and proximity to vehicular traffic. Social

factors are student status, number of children, and time spent in apartments on each day.

A complete variable list including some combined variables is shown in Table 1 on page 16 and 17.

Chapter 3

METHODS AND PROCEDURES

SAMPLING METHOD

A. Sampling of Dwellings

Environmental factors in Jardine married student housing vary along the four dimensions: proximity to vehicular traffic, floor location (ground floor and second floor), proximity to the main stairway, and number of bedrooms. Based on the first factor, ten buildings (Figure 1) were selected from a total of twenty-four buildings. Six apartments (Figure 2), then were selected for the other three factors in each building for a total of sixty apartments. Thus, apartments #1, #3, #5, #21, #23, and #25 in each selected building were the apartment sample for this study.

B. Sampling of Residents

A couple (husband and wife) in each selected apartment was regarded as two different respondents, and asked to answer questions separately. Thus, from 60 apartments, 120 respondents comprise the study sample. If a member of a husband-wife pair was not able to cooperate in this study another pair in another apartment was randomly substituted from a pool of similar apartments.

Figure 1: SITE PLAN OF JARDINE TERRACE

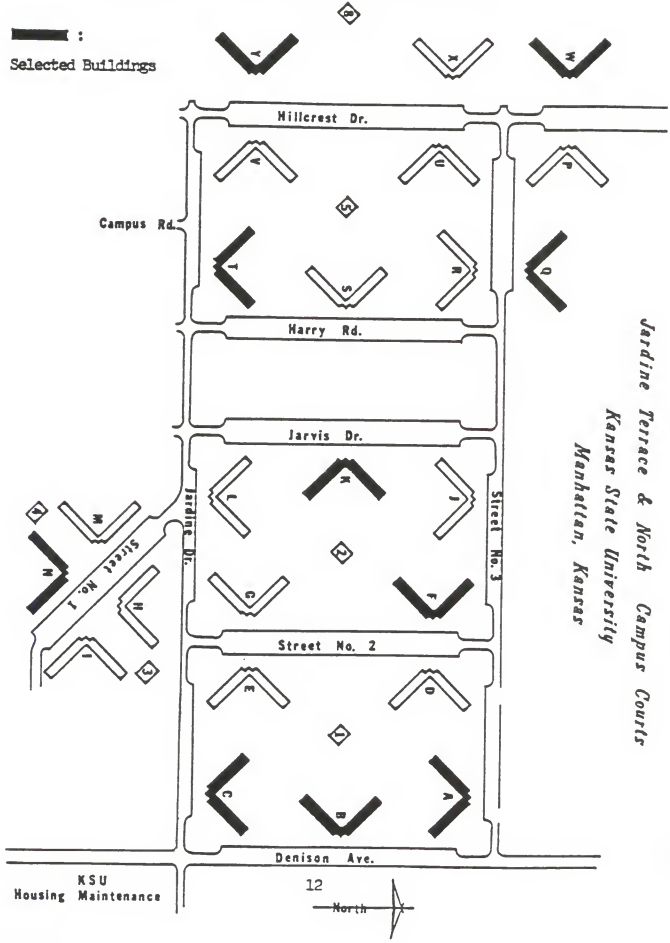
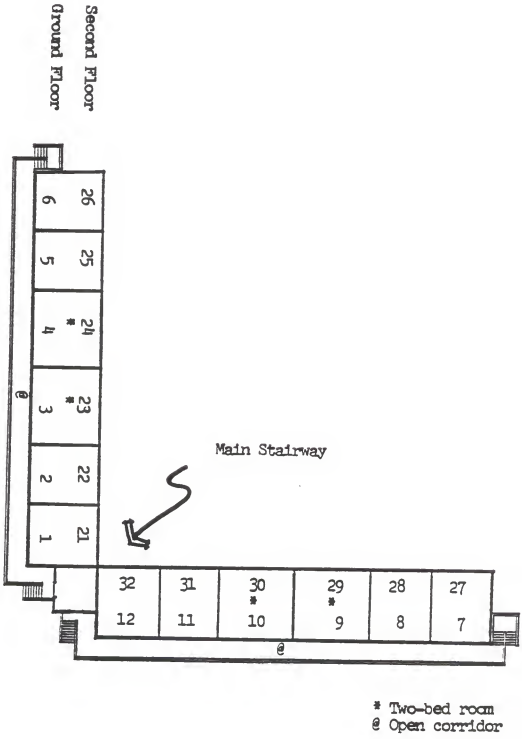


Figure 2: APARTMENT LOCATION AND NUMBER SCHEDULE



SAMPLE CHARACTERISTICS

Single parents with children (usually assigned to a two-bedroom apartment) or residents without his/her spouse living in those apartments mentioned above were replaced by other residents' living in similar apartments. In other words, only a couple who live together and both could help answer the questionnaire were regarded as respondents in this study.

One hundred twenty respondents were sampled according to these criteria. An equal number of sixty respondents were males and females.

In this sample, forty-six are Americans (38%); thirty-two are Chinese (27%); ten are Koreans (8%); ten are Arabians (8%); and eighteen (15%) are from other countries, such as Mexico, Argentine, and Sri Lanka. There are four respondents (3%) who did not report their nationalities.

Within this sample, eighty-four are with student status (70%); fifty-three (63%) of the student respondents are males. Fifty-four respondents live without a child (45%); forty live with one child (33%); twenty-two live with two children (18%); and four live with three or more (3%).

Eighty-two respondents live in one-bedroom apartments (68%); thirty-eight live in two-bedroom apartments (32%). Thirty-four respondents of the sample live close to the main traffic street (Denison Avenue) (28%). Forty respondents do not have any other apartments separating theirs from the

main stairway (33%); eighteen have a one apartment separation (15%); thirty-eight have a two apartments separation (32%); and twenty-four have a four apartments separation (20%). Additionally, half of the respondents (50%) live on the ground floor and the other half live on the second floor.

Some of those characteristics mentioned above have been found having effects on respondents' privacy behavior. These findings with statistical analyses will be discussed in the following sections.

INSTRUMENT AND DEVELOPMENT

A standardized questionnaire was developed to measure independent and dependent variables in this study (see Table 1). Personal, environmental and social factors were recorded in the first part of this questionnaire. The questionnaire also assessed residents' perceptions and satisfactions with privacy as well as their use of privacy mechanisms. For example, "How often do you experience noise and visual intrusion upon your daily life from vehicle traffic?"; "How dissatisfied are you with these traffic intrusions?"; and "If dissatisfied, what do you do about it?". A multiple-response format was used in the study. To examine the clarity and propriety of questions in this questionnaire, a pre-test was performed with several Jardine residents before the final form of the questionnaire was

Table 1

VARIABLE NAMES AND QUESTIONNAIRE NUMBERS MATCHED IN PRIVACY BEHAVIOR SURVEY

Var. No.	Variable Name	Abbrev.	Question No.	
1	Sex	SEX	(1)	
2	Nationality	NATION	(2)	
3	Status	STATUS	(3)	
4	No. of children	CHILD	(4)	
5	No. of bedrooms	BEDRM	(5)	
6	Floor location	FLOOR	(6)	
7	Building location	BLDG	(7)	
8	No. of apts. away from main stairway	INTER	(8)	
9	Time spent on Weekdays/day	WKDAY	(9)	
10	Time spent on Weekend/day	WKEND	(10)	
	Perception of Noise from			
11	Vehicles	VN	(11)	(a)
12	Neighbors' apts.	NN		(b)
13	Outside of apts.	ON		(c)
14	Member of family	FN		(d)
	Mechanism of Noise from			
15	Vehicles	MVN	(12)	(a)
16	Neighbors' apts.	MNN		(b)
17	Outside of apts.	MON		(c)
18	Member of family	MFN		(d)
	Perception of Intrusion from			
19	Vehicles	VI	(13)	(a)
20	Looking into apts.	LI		(b)
21	Member of family	FI		(c)
	Mechanism of Intrusion from			
22	Vehicles	MVI	(14)	(a)
23	Looking into apts.	MLI		(b)
24	Member of family	MFI		(c)
25	Privacy perception when working	EWOK	(15)	
	Dissatisfaction with Noise from			
26	Vehicles	SVN	(16)	(a)
27	Neighbors' apts.	SNN		(b)

(Continued)

Table 1

VARIABLE NAMES AND QUESTIONNAIRE NUMBERS MATCHED IN PRIVACY BEHAVIOR SURVEY ---- (Continued)

Var. No.	Variable Name	Abbrev.	Question No.	
28	Outside of apts.	SON		(c)
29	Member of family	SFN		(d)
	Dissatisfaction with Intrusion from			
30	Vehicles	SVI	(17)	(a)
31	Looking into apts.	SLI		(b)
32	Member of family	SFI		(c)
33	Privacy Satisfaction when working	SWOK	(18)	
34	Privacy satisfaction	SPRI	(19)	
35	Satisfaction with apartment design	SDES	(20)	
	Combined Variables			
36	Perception of Noises	PN = VN + NN + ON + FN		
37	Perception of Intrusions	PI = VI + LI + FI		
38	Dissatisfaction with Noises	SN = SVN + SNN + SON + SFN		
39	Dissatisfaction with Intrusions	SI = SVI + SLI + SFI		
40	Overall Perception of Noises and Intrusions	OP = PN + PI		
41	Overall Dissatisfaction with Noises and Intrusions	OS = SN + SI		

used. An example of the questionnaire can be found in Appendix A.

DATA COLLECTION

The questionnaire was delivered to each selected apartment by hand and collected at a time appointed by the respondents. Also, a personal letter was delievered along with the questionnaire which explained the project more fully. One hundred twenty questionnaires were collected in a typical school week.

TECHNIQUES OF DATA ANALYSES

Following a demographic description of respondents, two statistical tests, T-test and general linear models(GLM) with Duncan's post-test were applied to analyze whether significant differences could be found for perception, satisfaction, and use of privacy mechanisms in the context of each independent variable. Multiple regression analyses then were performed to predict the variance of overall privacy satisfaction accounted for by those independent variables discussed in this study. Of particular interest were the effects environmental factors had on privacy satisfaction.

RESULTS OF THE SURVEY

Table 2 shows significant differences for nationality,

perception of neighbors' noise (NN), family noise (FN), family intrusion (FI), dissatisfaction with vehicular intrusion (SVI), and overall intrusion (SI). These nationalities were grouped by residents' similar cultural backgrounds, such as spoken languages and religions. For example, subjects from Taiwan, China, Hong Kong, Singapore, and Malaysia speak Chinese as their main language, English for Americans, and Korean subjects who differ in culture and language from Chinese. Another nationality grouping was based on religion: Iran, Iraq, Lebanon, Jordan, and Yemen. In Duncan's test, some other significant differences existed between certain nationalities. They were: nationality 1 (mean is 4.15) and nationality 2 (mean is 4.16) compared with nationality 4 (mean is 3.20) on dissatisfaction with family noise (SFN); nationality 1 (mean is 4.17) compared with nationality 4 (mean is 3.22) on dissatisfaction with family intrusion (SFI); and nationalit 3 (mean is 2.6) compared with nationality 4 (mean is 3.6) on satisfaction with privacy (SPRI).

When nationalities were collected into American vs. nonAmerican (see Table 3), perception of three different noises (NN, ON, FN), two intrusions (VI, FI), and the overall perception of noise and intrusion (PN, PI) were found to have significant differences.

All dissatisfactions with three different intrusions (SVI, SLI, SFI) and overall dissatisfaction with intrusion

Table 2

ANOVA FOR SELECTED VARIABLES
BY NATIONALITIES

Variable (N)	Nationality (1)	(2)	(3)	(4)	F
Perception of Noise from					
11 Vehicles (97)	2.26	2.38	2.40	2.11	.34
12 Neighbors' apts.(97)	2.78	2.35	2.70	2.50	3.13*@
13 Outside of apts.(98)	2.52	2.22	2.40	2.22	1.77
14 Member of family(97)	2.43	2.03	1.90	2.50	2.58*@
Mechanism of Noise from					
15 Vehicles (98)	4.00	3.78	3.70	4.10	.25
16 Neighbors' apts.(98)	4.54	4.38	4.50	4.70	.13
17 Outside of apts.(98)	2.70	2.78	2.80	2.70	.06
18 Member of family(94)	3.52	3.32	3.43	2.80	.42
Perception of Intrusion from					
19 Vehicles (97)	1.20	1.50	1.44	1.20	1.90
20 Looking into apts.(98)	1.57	1.66	1.40	1.20	1.28
21 Member of family (97)	1.43b	1.59ab	1.90ab	2.00a	2.65*
Mechanism of Intrusion from					
22 Vehicles (96)	3.17	2.83	3.10	3.40	.57
23 Looking into apts.(95)	1.85	2.10	2.60	2.11	.84
24 Member of family (95)	3.08	3.30	3.56	2.70	.42
25 Privacy Perception when working (96)	1.98	1.94	2.11	1.70	.77
Dissatisfaction with Noise from					
26 Vehicles (97)	3.98	3.43	3.44	3.60	2.18
27 Neighbors' spts.(97)	2.57	2.68	2.50	3.00	.41
28 Outside of apts.(96)	3.26	3.13	3.10	3.40	.22
29 Member of family(98)	4.15a	4.16a	3.80ab	3.20b	2.19
Dissatisfaction with Intrusion from					
30 Vehicles (96)	4.24a	3.67ab	3.40b	3.40b	4.06**
31 Looking into apts.(96)	3.30	2.53	3.00	2.90	2.28
32 Member of family (94)	4.17a	3.76ab	3.50ab	3.22b	2.40
33 Privacy Satisfaction when working (97)	3.11	3.19	3.10	3.50	.32
34 Privacy Satis. (97)	3.16ab	2.97ab	2.60b	3.60a	1.37

Table 2

ANOVA FOR SELECTED VARIABLES
BY NATIONALITIES --------- (Continued)

Variable (N)	Nationality (1)	(2)	(3)	(4)	F
35 Satisfaction with apartment design (98)	3.04	2.50	2.30	2.80	1.72
36 Perception of Noises (95)	10.04	9.07	9.40	9.22	1.68
37 Perception of Intrusions (96)	4.20	4.75	4.67	4.44	1.46
38 Dissatisfaction with Noises (95)	13.96	13.43	13.56	13.20	.27
39 Dissatisfaction with Intrusions(93)	11.92	9.96	9.90	9.78	3.43*@
40 Overall Perception of Noises and Intrusions (93)	14.24	13.80	14.22	13.75	.22
41 Overall Dissatisfaction with Noises and Intrusions (92)	25.67	23.18	23.89	22.89	1.56

NOTE: * : $P < 0.05$ ** : $P < 0.01$
N : Different sample size in each variable because of missing data
@ : Does not show significant differences in Duncan's test
Means with the same letter (a or b) are not significantly different in Duncan's test.
Nationality (1): America
(2): Taiwan, China, Hong Kong, Singapore, and Malaysia
(3): Korea
(4): Iran, Iraq, Lebanon, Jordan, and Yemen

Table 3

MEAN SCORES FOR SELECTED VARIABLES
BY AMERICANS VS. NON-AMERICANS

Variable (N)	Americans $\bar{X}$	Americans S.D.	Non-Americans $\bar{X}$	Non-Americans S.D.	t-test
Perception of Noise from					
11 Vehicles (115)	2.26	.83	2.29	.84	-.18
12 Neighbors' apts.(115)	2.78	.51	2.52	.70	2.31*
13 Outside of apts.(116)	2.52	.55	2.27	.70	2.09*
14 Member of family(114)	2.48	.81	2.13	.91	2.08*
Mechanism of Noise from					
15 Vehicles (116)	4.00	1.52	3.77	1.52	.79
16 Neighbors' apts.(116)	4.54	1.54	4.49	1.54	.20
17 Outside of apts.(116)	2.70	.96	2.71	.98	-.10
18 Member of family(112)	3.52	1.86	3.15	1.87	1.03
Perception of Intrusion from					
19 Vehicles (115)	1.20	.45	1.48	.74	-2.54*
20 Looking into apts.(115)	1.57	.75	1.61	.73	-.31
21 Member of family (114)	1.43	.62	1.72	.77	-2.10*
Mechanism of Intrusion from					
22 Vehicles (114)	3.17	1.39	2.84	1.38	1.27
23 Looking into apts.(113)	1.85	1.40	2.25	1.46	-1.48
24 Member of family (113)	3.09	1.90	3.15	1.82	-.18
25 Privacy Perception when working (114)	1.98	.69	1.99	.63	-.06
Dissatisfaction with Noise from					
26 Vehicles (115)	3.98	1.00	3.32	1.06	3.33**
27 Neighbors' apts.(115)	2.57	1.19	2.65	1.17	-.39
28 Outside of apts.(114)	3.26	1.16	3.13	1.01	.63
29 Member of family(116)	4.15	1.23	3.83	1.13	1.46
Dissatisfaction with Intrusion from					
30 Vehicles (114)	4.24	1.02	3.44	1.08	3.95**
31 Looking into apts.(114)	3.30	1.36	2.65	1.22	2.69**
32 Member of family (112)	4.17	1.04	3.56	1.33	2.62**
33 Privacy Satisfaction when working (115)	3.11	1.28	3.14	1.07	-.14
34 Privacy satis. (114)	3.16	1.30	3.01	1.05	.64

Table 3

MEAN SCORES FOR SELECTED VARIABLES
BY AMERICANS VS. NON-AMERICANS --- (Continued)

Variable (N)	Americans $\bar{X}$	Americans S.D.	Non-Americans $\bar{X}$	Non-Americans S.D.	t-test
35 Satisfaction with apartment design (115)	3.04	1.23	2.52	1.23	2.23*
36 Perception of Noises (112)	10.04	1.65	9.21	2.28	2.24*
37 Perception of Intrusions (113)	4.20	1.17	4.82	1.41	-2.48*
38 Dissatisfaction with Noises (113)	13.96	3.33	13.03	3.17	1.49
39 Dissatisfaction with Intrusion (111)	11.72	2.72	9.68	2.88	3.76**
40 Overall Perception of Noises and Intrusions (110)	14.24	2.28	14.06	3.21	.34
41 Overall Dissatisfaction with Noises and Intrusions (110)	25.67	5.74	22.64	5.56	2.79**

NOTE: * : $P < 0.05$
** : $P < 0.01$
N : Different sample size in each variable because of missing data

(SI) indicated high levels of significant differences ($P < 0.01$) between Americans and non-Americans. Another significant differences were found on their dissatisfaction with vehicular noise (SVN), satisfaction with apartment design (SDES), and overall privacy satisfaction (OS). No significant differences were found between these two groups on use of privacy mechanisms. However, some of these results could be attributed to chance due to the multiple T-tests. So do the other tests on other variables in this study.

In Table 4, only one variable, dissatisfaction with vehicular noise (SVN), showed a significant difference for males and females (see Table 4). Interestingly, the perception of different noises (except neighbors' noise, NN), different intrusions and overall perception (PN, PI, OP), females seemed to perceieve more frequently than did males. Also, males had higher overall satisfaction scores (SN, SI, OS) than females.

People living on the ground floor explained neighbors' noise (NN), family intrusion (FI), overall intrusion (PI), and overall perception (OP) more frequently than did people living on the second floor (see Table 5). Mechanisms of regulating outside noise (MON) also showed significant differences for these two floor location. Dissatisfaction with neighbors' noise (SNN), family noise (SFN), and overall noise (SN) had significant differences, which indicated that

Table 4

MEAN SCORES FOR SELECTED VARIABLES
BY MALES VS. FEMALES

Variable (N)	Males $\bar{X}$	Males S.D.	Females $\bar{X}$	Females S.D.	t-test
Perception of Noise from					
11 Vehicles (115)	2.19	.85	2.37	.82	-1.15
12 Neighbors' apts.(115)	2.63	.67	2.63	.62	0.02
13 Outside of apts.(116)	2.31	.62	2.44	.66	-1.13
14 Member of family(114)	2.19	.89	2.36	.88	-1.01
Mechanism of Noise from					
15 Vehicles (116)	3.93	1.42	3.79	1.62	.50
16 Neighbors' apts.(116)	4.49	1.60	4.53	1.48	-.12
17 Outside of apts.(116)	2.78	.98	2.63	.96	.82
18 Member of family(112)	3.14	1.83	3.47	1.90	-.94
Perception of Intrusion from					
19 Vehicles (115)	1.32	.63	1.41	.68	.73
20 Looking into apts.(115)	1.56	.73	1.63	.75	.48
21 Member of family (114)	1.55	.73	1.66	.72	.80
Mechanism of Intrusion from					
22 Vehicles (114)	2.98	1.41	2.96	1.37	.07
23 Looking into apts.(113)	2.11	1.47	2.07	1.43	.12
24 Member of family (113)	3.16	1.89	3.09	1.81	.18
25 Privacy Perception when working (114)	2.07	.72	1.89	.57	1.46
Dissatisfaction with Noise from					
26 Vehicles (115)	3.80	1.10	3.36	1.03	2.21*
27 Neighbors' apts.(115)	2.58	1.23	2.66	1.12	.38
28 Outside of apts.(114)	3.22	1.08	3.14	1.07	.40
29 Member of family(116)	4.12	1.12	3.79	1.22	1.51
Dissatisfaction with Intrusion from					
30 Vehicles (114)	3.81	1.18	3.71	1.07	.49
31 Looking into apts.(114)	3.00	1.38	2.82	1.25	.72
32 Member of family (112)	3.83	1.27	3.80	1.23	.13
33 Privacy Satisfaction when working (115)	3.00	1.17	3.27	1.12	-1.25
34 Privacy satis. (114)	3.16	1.25	2.98	1.15	.80

Table 4

MEAN SCORES FOR SELECTED VARIABLES
BY MALES VS. FEMALES ------- (Continued)

Variable (N)	Males $\bar{X}$	Males S.D.	Females $\bar{X}$	Females S.D.	t-test
35 Satisfaction with apartment design (115)	2.80	1.30	2.66	1.21	.58
36 Perception of Noises (112)	9.30	2.06	9.82	2.07	-1.33
37 Perception of Intrusions (113)	4.45	1.31	4.69	1.39	.96
38 Dissatisfaction with Noises (113)	13.71	3.34	13.10	3.16	1.01
39 Dissatisfaction with Intrusion (111)	10.67	3.06	10.36	2.90	.55
40 Overall Perception of Noises and Intrusions (110)	13.75	2.91	14.54	2.75	-1.46
41 Overall Dissatisfaction with Noises and Intrusions (110)	24.38	5.81	23.38	5.81	.90

NOTE: * : $P < 0.05$
N : Different sample size in each variable because of missing data

Table 5

MEAN SCORES FOR SELECTED VARIABLES
BY GROUND FLOOR VS. SECOND FLOOR

Variable (N)	Ground Fl. $\bar{X}$	Ground Fl. S.D.	Second Fl. $\bar{X}$	Second Fl. S.D.	t-test
Perception of Noise from					
11 Vehicles (115)	2.18	.86	2.37	.81	-1.25
12 Neighbors' apts.(115)	2.77	.50	2.49	.73	2.38*
13 Outside of apts.(116)	2.40	.56	2.34	.71	.54
14 Member of family(114)	2.32	.89	2.23	.89	.53
Mechanism of Noise from					
15 Vehicles (116)	3.93	1.44	3.80	1.61	.47
16 Neighbors' apts.(116)	4.25	1.61	4.76	1.43	-1.83
17 Outside of apts.(116)	2.47	.93	2.93	.96	-2.61*
18 Member of family(112)	2.96	1.92	3.62	1.77	-1.89
Perception of Intrusion from					
19 Vehicles (115)	1.48	.66	1.25	.63	1.89
20 Looking into apts.(115)	1.61	.70	1.57	.77	.33
21 Member of family (114)	1.80	.80	1.41	.59	2.96**
Mechanism of Intrusion from					
22 Vehicles (114)	2.81	1.43	3.14	1.33	-1.29
23 Looking into apts.(113)	2.13	1.43	2.05	1.47	.27
24 Member of family (113)	3.05	1.86	3.19	1.84	-.40
25 Privacy Perception when working (114)	2.00	.54	1.97	.74	.28
Dissatisfaction with Noise from					
26 Vehicles (115)	3.46	1.04	3.69	1.12	-1.14
27 Neighbors' apts.(115)	2.37	1.10	2.86	1.21	-2.30*
28 Outside of apts.(114)	3.00	.96	3.37	1.14	-1.86
29 Member of family(116)	3.74	1.20	4.17	1.12	-2.01*
Dissatisfaction with Intrusion from					
30 Vehicles (114)	3.65	1.11	3.88	1.13	-1.08
31 Looking into apts.(114)	2.70	1.35	3.12	1.25	-1.73
32 Member of family (112)	3.65	1.27	3.98	1.21	-1.42
33 Privacy Satisfaction when working (115)	2.93	1.11	3.32	1.17	-1.85
34 Privacy satis. (114)	2.95	1.01	3.19	1.27	-1.14

Table 5

MEAN SCORES FOR SELECTED VARIABLES
BY GROUND FLOOR VS. SECOND FLOOR --(Continued)

	Ground Fl.		Second Fl.		
Variable (N)	$\bar{X}$	S.D.	$\bar{X}$	S.D.	t-test
35 Satisfaction with apartment design (115)	2.53	1.12	2.93	1.35	-1.75
36 Perception of Noises (112)	9.71	1.67	9.40	2.40	.78
37 Perception of Intrusions (113)	4.91	1.35	4.24	1.27	2.70*
38 Dissatisfaction with Noises (113)	12.68	2.77	14.12	3.55	-2.41*
39 Dissatisfaction with Intrusion (111)	10.00	2.87	11.07	3.02	-1.92
40 Overall Perception of Noises and Intrusions (110)	14.68	2.59	13.63	3.00	1.99*
41 Overall Dissatisfaction with Noises and Intrusions (110)	22.75	5.07	25.11	6.30	-2.17*

NOTE: * : $P < 0.05$
** : $P < 0.01$
N : Different sample size in each variable because of missing data

people living on the first floor seemed to be more dissatisfied with noise level. Another variable, overall satisfaction (OS), showed the means at a significant level, which could help support the point mentioned above.

The comparison among number of apartments away from the main stairway in Table 6, perception of family noise (FN), neighbors' looking into apartment (LI), and overall perceptions (PI, OP) showed at the significant difference levels. In variable 20 (LI), group 4 (with the lowest mean 1.22) seemed to be less bothered by neighbors' looking into their apartments, and group 2 had the highest mean with 1.94. Mechanisms of regulating different sources of noises except vehicular noise had significant differences among these four groups. So did the dissatisfaction with family noise (SFN), family intrusion (SFI), overall noise (SN), and overall intrusion (SI). Satisfaction when working (SWOK) and overall satisfaction (OS) also indicated significant differences among these groups. Group 4 still had the highest means (3.54 and 26.59) in both variables. In other words, group 4 seemed to be the most satisfied than the other groups. Those means in variable 38 and 39 (SN, SI) could also support this conclusion. In Duncan's test, group 3 and group 4 showed significant differences on their perception of family intrusion (FI) and privacy satisfaction (SPRI). Also, significant differences were found in mechanisms of vehicular noise (MVN) between group 2 and

Table 6

ANOVA FOR SELECTED VARIABLES
BY NUMBERS OF APARTMENTS AWAY FROM MAIN STAIRWAY

Variable (N)	Dist. from Main Stairway (1)	(2)	(3)	(4)	F
Perception of Noise from					
11 Vehicles (115)	2.25	2.50	2.26	2.21	.45
12 Neighbors' apts.(115)	2.43	2.69	2.78	2.70	2.19
13 Outside of apts.(116)	2.35	2.38	2.39	2.38	.02
14 Member of family(114)	2.10bc	2.38ab	2.72a	1.77c	6.96**
Mechanism of Noise from					
15 Vehicles (116)	3.83ab	3.31b	4.28a	3.67ab	.16
16 Neighbors' apts.(116)	4.68a	3.50b	4.67a	4.67a	2.80*
17 Outside of apts.(116)	2.73ab	2.19b	3.03a	2.54ab	3.27*
18 Member of family(112)	3.43ab	2.53b	2.83b	4.43a	4.64**
Perception of Intrusion from					
19 Vehicles (115)	1.43	1.25	1.36	1.35	.28
20 Looking into apts.(115)	1.70a	1.94a	1.56ab	1.22b	3.72*
21 Member of family (114)	1.53ab	1.73ab	1.81a	1.35b	2.28
Mechanism of Intrusion from					
22 Vehicles (114)	2.75	2.81	3.20	3.13	.83
23 Looking into apts.(113)	2.03ab	1.27b	2.24a	2.50a	2.51
24 Member of family (113)	3.25	3.20	2.68	3.50	1.07
25 Privacy Perception when working (114)	1.88	2.00	2.20	1.83	2.17
Dissatisfaction with Noise from					
26 Vehicles (115)	3.45	3.44	3.56	3.96	1.22
27 Neighbors' spts.(115)	2.73	2.31	2.40	2.96	1.57
28 Outside of apts.(114)	3.05	3.13	3.29	3.29	.42
29 Member of family(116)	4.18a	4.19a	3.22b	4.54a	8.84**
Dissatisfaction with Intrusion from					
30 Vehicles (114)	3.85	4.00	3.49	3.87	1.10
31 Looking into apts.(114)	3.03	2.63	2.76	3.13	.70
32 Member of family (112)	4.00a	4.06a	3.12b	4.29a	5.70**
33 Privacy Satisfaction when working (115)	3.33ab	3.00ab	2.69b	3.54a	3.42*
34 Privacy Satis. (114)	3.21ab	3.00ab	2.69b	3.46a	2.51

Table 6

ANOVA FOR SELECTED VARIABLES
BY NUMBERS OF APARTMENTS AWAY FROM MAIN STAIRWAY
(Continued)

Variable (N)	Dist. from Main Stairway (1)	(2)	(3)	(4)	F
35 Satisfaction with apartment design (115)	2.93	2.69	2.33	3.04	2.07
36 Perception of Noises (112)	9.13	9.94	10.14	9.10	2.10
37 Perception of Intrusions (113)	4.64a	5.00a	4.72a	3.86b	2.85*
38 Dissatisfaction with Noises (113)	13.40ab	13.06b	12.44b	15.09a	3.29*
39 Dissatisfaction with Intrusions(111)	10.87ab	10.69ab	9.46b	11.30a	2.12*
40 Overall Perception of Noises and Intrusions (110)	13.78ab	15.07a	14.86a	12.90b	2.90*
41 Overall Dissatisfaction with Noises and Intrusions (110)	24.18ab	23.75ab	21.88b	26.59a	3.12*

NOTE: * : $P < 0.05$ ** : $P < 0.01$
N : Different sample size in each variable because of missing data

Means with the same letter (a, b or c) are not significantly different in Duncan's test.
Group (1): No apartment next to main stairway
(2): One apartment away from main stairway
(3): Two apartments away from main stairway
(4): Four apartments away from main stairway

group 3, and in mechanisms of neighbors' looking into apartment (MLI) between group 2 and group 3 or group 4. Gruop locations and main stairway in each building can refer to Figure 2 on page 13.

The T-test results with specified satisfactions between one-bedroom and two-bedroom were shown in Table 7. All satisfactions, except variable 26, 27, 28, 30, and 31, had significant differences between these two types of apartments. All means gained from one-bedrooms, except from variable 28, were higher than those from two-bedrooms. Thus, people living in one-bedroom apartments seemed to have higher satisfactions with most specified privacy satisfactions.

In Table 8, T-test results between two different traffic volumes, indicated that residents living close to main street do have significant differences on their perception of vehicular noise (VN), mechanisms of vehicular noise (MVN) and vehicular intrusion (MVI). Also, with a high level of significant differences ($P<0.01$) between the two groups, residents living close to the main street were more dissatisfied with vehicular noise (SVN) and neighbors' looking into apartment (SLI).

The other variables, such as perception and dissatisfaction with vehicular intrusion (VI, SVI), did not show any significant difference. Therefore, with their different mechanisms of vehicular intrusion (MVI, $P<0.01$),

Table 7

MEAN SCORES FOR SELECTED VARIABLES
BY ONE-BEDROOM VS. TWO-BEDROOM

Variable (N)	One-Bedroom $\bar{X}$	One-Bedroom S.D.	Two-Bedroom $\bar{X}$	Two-Bedroom S.D.	t-test
Dissatisfaction with Noise from					
26 Vehicles (115)	3.59	1.16	3.56	.91	.18
27 Neighbors' apts.(115)	2.71	1.22	2.40	1.03	1.32
28 Outside of apts.(114)	3.14	1.11	3.29	.97	-.71
29 Member of family(116)	4.29	1.00	3.22	1.22	4.96**
Dissatisfaction with Intrusion from					
30 Vehicles (114)	3.89	1.14	3.49	1.04	1.77
31 Looking into apts.(114)	2.98	1.39	2.76	1.13	.78
32 Member of family (112)	4.10	1.13	3.12	1.27	4.04**
33 Privacy Satisfaction when working (115)	3.33	1.14	2.69	1.05	2.82**
34 Privacy Satis. (114)	3.24	1.19	2.69	.96	2.43*
35 Satisfaction with apartment design (115)	2.91	1.29	2.33	1.07	2.34*
38 Dissatisfaction with Noises (113)	13.82	3.43	12.44	2.62	2.10*
39 Dissatisfaction with Intrusion (111)	10.96	3.02	9.48	2.64	2.44*
41 Overall Dissatisfaction with Noises and Intrusions (110)	24.78	5.96	21.88	4.92	2.46*

NOTE: * : $P < 0.05$
** : $P < 0.01$
N : Different sample size in each variable because of missing data

Table 8

MEAN SCORES FOR SELECTED VARIABLES
BY DISTANCE TO MAIN STREET

Variable (N)	Close to st. $\bar{X}$	S.D.	Far from st. $\bar{X}$	S.D.	t-test
Perception of Noise from					
11 Vehicles (115)	2.52	.76	2.18	.85	1.96*
12 Neighbors' apts.(115)	2.64	.70	2.62	.62	.11
13 Outside of apts.(116)	2.24	.56	2.42	.66	-1.33
14 Member of family(114)	2.13	.94	2.33	.86	-1.11
Mechanism of Noise from					
15 Vehicles (116)	3.36	1.69	4.06	1.41	-2.27*
16 Neighbors' apts.(116)	4.30	1.81	4.59	1.41	-.91
17 Outside of apts.(116)	2.73	1.07	2.70	.93	.14
18 Member of family(112)	3.12	1.78	3.38	1.90	-.67
Perception of Intrusion from					
19 Vehicles (115)	1.39	.70	1.35	.64	.30
20 Looking into apts.(115)	1.69	.74	1.55	.74	.87
21 Member of family (114)	1.63	.71	1.60	.73	.18
Mechanism of Intrusion from					
22 Vehicles (114)	2.45	1.48	3.19	1.30	-2.62**
23 Looking into apts.(113)	1.94	1.44	2.15	1.45	-.69
24 Member of family (113)	3.16	1.83	3.11	1.86	.13
25 Privacy Perception when working (114)	1.91	.58	2.01	.68	.77
Dissatisfaction with Noise from					
26 Vehicles (115)	3.09	1.16	3.78	.99	-3.21**
27 Neighbors' apts.(115)	2.59	1.16	2.63	1.19	-.13
28 Outside of apts.(114)	3.16	1.00	3.19	1.10	-.14
29 Member of family(116)	4.00	1.20	3.94	1.17	.25
Dissatisfaction with Intrusion from					
30 Vehicles (114)	3.45	1.23	3.88	1.06	-1.83
31 Looking into apts.(114)	2.39	1.17	3.11	1.32	-2.68**
32 Member of family (112)	3.87	1.34	3.79	1.22	.31
33 Privacy Satisfaction when working (115)	2.94	1.03	3.21	1.19	-1.13
34 Privacy satis. (114)	3.00	.95	3.10	1.22	-.41

Table 8

MEAN SCORES FOR SELECTED VARIABLES
BY DISTANCE TO MAIN STREET ----- (Continued)

Variable (N)	Close to st. $\bar{X}$	Close to st. S.D.	Far from st. $\bar{X}$	Far from st. S.D.	t-test
35 Satisfaction with apartment design (115)	2.47	1.02	2.83	1.32	-1.40
36 Perception of Noises (112)	9.47	1.76	9.59	2.20	-.27
37 Perception of Intrusions (113)	4.72	1.55	4.51	1.27	.75
38 Dissatisfaction with Noises (113)	12.84	3.24	13.62	3.26	-1.14
39 Dissatisfaction with Intrusion (111)	9.73	2.99	10.81	2.94	-1.71
40 Overall Perception of Noises and Intrusions (110)	14.19	2.84	14.12	2.86	.12
41 Overall Dissatisfaction with Noises and Intrusions (110)	22.47	5.65	24.45	5.80	-1.61

NOTE: * : $P < 0.05$
** : $P < 0.01$
N : Different sample size in each variable because of missing data

residents seemed to be able to avoid the vehicular intrusions to achieve their desired level of privacy. For example, pulling down the curtain or arranging some plants seemed to be more frequently used by residents living close to the main street (see Appendix A: Question #14 (a)).

Residents living with different number of children (see Table 9) did have significant differences in many satisfaction variables, such as dissatisfaction with family noise (SFN), vehicular intrusion (SVI), family intrusion (SFI), and overall intrusion (SI). Also, satisfaction when working (SWOK) and privacy satisfaction (SPRI) were found having significant differences among their means. Interestingly, family with two children had the lowest means on above two variables, and family with three or more children had the highest means. Mechanisms of family noise (MFN) showed a significant difference level ($F = 3.76$, $P<0.05$) among these four groups. In Duncan's test, family with three or more children (mean is 1.00) had significantly different mechanisms on family noise (MFN) and family intrusion (MFI) from the other groups. It seems that residents with three or more children would use verbal behavior (see Appendix A: survey questionnaire #12 (d) and #14 (c)) more directly to achieve their needed privacy than the other residents with less than three children.

In Table 10, residents with student status indicated a significant difference level on the variable, satisfaction

Table 9

ANOVA FOR SELECTED VARIABLES
BY DIFFERENT NUMBERS OF CHILDREN

	Variable (N)	Numbers of Children (0)	(1)	(2)	(3)	F
	Mechanism of Noise from					
15	Vehicles (116)	3.57	3.92	4.52	3.75	2.08
16	Neighbors' apts.(116)	4.66	4.21	4.52	5.25	.96
17	Outside of apts.(116)	2.55	2.74	3.10	2.50	1.71
18	Member of family(112)	3.64a	3.44a	2.67a	1.00b	3.76*
	Mechanism of Intrusion from					
22	Vehicles (114)	2.83	3.00	3.10	4.00	.98
23	Looking into apts.(113)	1.91	2.03	2.53	3.00	1.44
24	Member of family (113)	3.36a	3.11a	2.95a	1.00b	2.18
	Dissatisfaction with Noise from					
26	Vehicles (115)	3.68	3.43	3.57	3.75	.40
27	Neighbors' spts.(115)	2.79ab	2.45b	2.30b	3.50b	1.95
28	Outside of apts.(114)	3.19	3.16	3.11	3.75	.41
29	Member of family(116)	4.45a	3.92a	3.00b	2.75b	11.80**
	Dissatisfaction with Intrusion from					
30	Vehicles (114)	4.13	3.46	3.40	3.50	3.85*@
31	Looking into apts.(114)	3.17	2.55	2.79	3.50	2.00
32	Member of family (112)	4.33a	3.63ab	2.89b	3.00b	8.48**
33	Privacy Satisfaction when working (115)	3.40a	3.14ab	2.38b	3.50a	4.41**
34	Privacy Satis. (114)	3.37	2.79	2.75	3.50	2.72*@
35	Satisfaction with apartment design (115)	3.08	2.45	2.48	2.25	2.56
38	Dissatisfaction with Noises (113)	14.11	13.14	11.90	13.75	2.38
39	Dissatisfaction with Intrusions(111)	11.64	9.62	9.28	10.00	5.16**
41	Overall Dissatisfaction with Noises and Intrusions (110)	25.70	22.78	21.06	23.75	3.82*@

NOTE: * : $P < 0.05$ ** : $P < 0.01$
N : Different sample size in each variable because of missing data
@ : Does not show significant differences in Duncan's test.
Means with the same letter (a or b) are not significantly different in Doncan's test.

Table 10

MEAN SCORES FOR SELECTED VARIABLES
BY STUDENTS VS. NON-STUDENTS

Variable (N)	Student $\bar{X}$	Student S.D.	Non-student $\bar{X}$	Non-student S.D.	t-test
25 Privacy Perception when working (114)	2.04	.69	1.84	.51	1.43
33 Privacy Satisfaction when working (115)	3.00	1.25	3.45	.79	-2.33*

NOTE: * : $P < 0.05$
N : Different sample size in each variable because of missing data

when working (SWOK), when compared with non-student status. In other words, student residents have less satisfaction with the environment while they are studying or concentrating on work in their apartments.

Multiple regression analyses, forward stepwise, were conducted with seven variables as predictors of specified privacy satisfaction in this study. To control social variables, three social variables (number of children, time spent in apartments in weekdays, and in weekends on each day) were separated from the other four environmental variables (number of bedrooms, floor location, building location and number of apartments away from the main stairway), and were tested as the first group. The results indicated that number of children could explain the greatest part of the variance of predicting satisfaction variables in the three social predictors. From equation models in the second group, four environmental variables were found to account for much higher amount of variance than the social variables. Finally, seven variables were included in the same regression equations. Three social variables were stepped in with the order of number of children, time spent in weekdays, and in weekend on each day; the other four environmental variables then were stepwised forward in these equations. These results were shown and discussed in the following.

Regression equations for noise dissatisfactions (Table 11)

Seven variables except floor location (FLOOR) yielded a significant regression equation ($F= 2.66$, $d.f.= 6.111$, $p<0.05$), and were able to predict 13% of the variance on the dissatisfaction of vehicular noise (SVN). Building location (BLDG), number of apartments away from the main stairway (INTER), and number of bedrooms (BEDRM) were entered in this equation in order, and seemed to be the best predictors of dissatisfaction with vehicular noise.

When concerned about dissatisfaction with family noise (SFN), twenty-six percent of the variance ($F= 6.60$, $d.f.= 6,112$, $p<0.01$) could be explained by number of children (CHILD), time spent in apartments on weekdays (WKDAY), number of bedrooms (BEDRM), floor location (FLOOR), and number of apartments apart from the main stairway (INTER). Number of children, floor location, and number of bedrooms were the best three predictors in the dissatisfaction with family noise.

All environmental variables in this study accounted 13% of the variance ($F= 2.38$, $d.f.= 7,108$, $p<0.05$) in dissatisfaction with overall noise (SN). Number of apartments away from the main stairway (INTER), number of bedrooms (BEDRM), floor location (FLOOR) and building location (BLDG) were entered this equation in order, but number of bedrooms (BEDRM), floor location (FLOOR), and building location (BLDG) seemed to be the strongest predic-

Table 11

MULTIPLE REGRESSION ANALYSES OF DISSATISFACTION BY VARIABLE EFFECTS ON NOISES

Var. No.	Variable	Beta-Weights SVN	SNN	SON	SFN	SN
4	CHILD	-.01	.06	.08	-.28	-.10
9	WKDAY	-.03	-.01	-.02	-.03	-.07
10	WKEND	.02	.02	.02	---	.07
5	BEDRM	-.26	-.38	---	-.87	-1.83
6	FLOOR	---	.56	.35	.17	1.07
7	BLDG	.74	---	---	---	.89
8	INTER	.19	-.07	.07	.15	.57
Constant		2.21	1.82	2.41	5.45	11.24
R		.36	.26	.20	.51	.36
R-Square (%)		.13	.07	.04	.26	.13
F for Regression		2.66*	1.39	.93	6.60**	2.38*
d.f.= x,y #		6,111	6,111	5,111	6,112	7,108

NOTE: * : $p < 0.05$ ** : $p < 0.01$
: Totals vary due to missing data.

Beta-Weights are the corresponding estimated regression coefficients.

SVN: Dissatisfaction with vehicular noise
SNN: Dissatisfaction with noise from neighbors' apartment
SON: Dissatisfaction with noise from outside of apartment
SFN: Dissatisfaction with noise from member of family
SN: Dissatisfaction with noises
SN = SVN + SNN + SON + SFN

tors in the overall dissatisfaction with noise.

Two regression equations, dissatisfaction with neighbors' noise (SNN) and dissatisfaction with outside noise (SON), did not reach significant levels.

Regression equations for intrusion dissatisfactions (Table 12)

Eleven percent of the variance ($F= 3.44$, $d.f.= 4,112$, $p<0.05$) in dissatisfaction with vehicular intrusion (SVI) could be accounted by four variables. Only building location (BLDG) and number of children (CHILD) were predictors in this regression equation.

Four variables, number of children (CHILD), time spent in apartments on weekend (WKEND), number of bedrooms (BEDRM), and apartments away from the main stairway (INTER), accounted 19% of the variance ($F= 4.96$, $d.f.= 5,109$, $p<0.01$) in dissatisfaction with family intrusion (SFI). Number of children and number of bedrooms seemed to be the best predictors in explaining the dissatisfaction with family intrusion.

In overall dissatisfaction with intrusion (SI), thirteen percent of the variance ($F= 2.55$, $d.f.= 6,107$, $p<0.05$) was able to be explained by all variables except number of apartments away from the main stairway (INTER). Building location, number of bedrooms, and floor location were entered into this equation in order. However, building

Table 12

MULTIPLE REGRESSION ANALYSES OF DISSATISFACTION BY VARIABLE EFFECTS ON INTRUSIONS

Var. No.	Variable	Beta-Weights SVI	SLI	SFI	SI
4	CHILD	-.36	.11	-.41	-.61
9	WKDAY	-.01	-.02	---	-.03
10	WKEND	.04	.02	.01	.08
5	BEDRM	---	-.44	-.56	-.86
6	FLOOR	---	.33	---	.47
7	BLDG	.49	.72	---	1.21
8	INTER	---	---	.11	---
Constant		3.08	1.46	4.85	9.03
R		.34	.30	.44	.36
R-Square (%)		.11	.09	.19	.13
F for Regression		3.44*	1.77	4.96**	2.55*
d.f.= x,y #		4,112	6,110	5,109	6,107

NOTE: * : $p < 0.05$ ** : $p < 0.01$
: Totals vary due to missing data.

Beta-Weights are the corresponding estimated regression coefficients.

SVI: Dissatisfaction with vehicular intrusion
SLI: Dissatisfaction with intrusion from looking into apts.
SFI: Dissatisfaction with intrusion from member of family
SI: Dissatisfaction with intrusions
SI = SVI + SLI + SFI

location (BLDG), number of bedrooms (BEDRM), and number of children (CHILD) were the strongest predictors among these variables.

The regression equation, dissatisfaction with looking into apartments (SLI), was not found at a significant level.

Regression equation for overall satisfactions (Table 13)

Seven variables except number of apartments away from the main stairway (INTER) accounted for 14% of the variance ($F= 2.91$, $d.f.= 6,111$, $p<0.05$) in satisfaction while residents were working (SWOK). Three environmental factors, floor location (FLOOR), building location (BLDG), and number of bedrooms (BEDRM), were entered this equation in order, and seemed to be the best predictors in this yielded equation for variable SWOK.

Number of children (CHILD), time spent in apartments on weekdays (WKDAY), number of bedrooms (BEDRM), floor location , and building location (BLDG) showed 10% of the variance ($F=2.39$, $d.f.=6,111$, $p<0.05$) to be explained in SDES equation. But those environmental predictors, building location (BLDG), floor location (FLOOR) and number of bedrooms (BEDRM) were entered this equation in order, and seemed to be the best ones in predicting the residents' satisfaction with apartment design.

All the seven predictors accounted 15% of the variance ($F= 2.55$, $d.f.= 7,105$, $p<0.05$) in predicting overall

Table 13

MULTIPLE REGRESSION ANALYSES
BY VARIABLE EFFECTS ON OVERALL SATISFACTIONS

Var. No.	Variable	Beta-Weights SWOK	SPRI	SDES	OS
4	CHILD	-.22	.09	-.13	-.74
9	WKDAY	.05	-.01	-.04	-.08
10	WKEND	-.01	-.01	---	.15
5	BEDRM	-.31	-.66	-.34	-2.93
6	FLOOR	.33	.27	.27	1.34
7	BLDG	.24	---	.36	2.20
8	INTER	---	.09	---	.80
Constant		2.37	3.39	2.93	19.81
R		.37	.25	.32	.39
R-Square (%)		.14	.06	.10	.15
F for Regression		2.91*	1.11	2.39*	2.55*
d.f.= x,y #		6,111	6,110	6,111	7,105

NOTE: * : $p < 0.05$ ** : $p < 0.01$
: Totals vary due to missing data.

Beta-Weights are the corresponding estimated regression coefficients.

SWOK: Privacy satisfaction when working
SPRI: Privacy satisfaction
SDES: Satisfaction with napartment design
OS: Overall dissatisfaction with noises and intrusions
OS = SN + SI

satisfaction of the residents (OS). Four environmental variables were entered in this equation in the order of building location (BLDG), number of apartments away from the main stairway (INTER), number of bedrooms (BEDRM), and floor location (FLOOR). Excluding number of apartments away from the main stairway, the other three variables seemed to be the strongest predictors in this satisfaction equation.

The regression equation, for satisfaction with privacy (SPRI), was not significant.

SUMMARY

Those tables shown in this section were the results of the privacy behavior survey in married student housing at Kansas State University. The findings from these statistical tests do support some hypotheses made in this study.

It was found that (1) people with different cultural backgrounds have some significant differences in their privacy perceptions and satisfactions, but not in their mechanisms. (2) residents living at different floor locations and proximity to the main stairway have different overall privacy perceptions and dissatisfactions; (3) residents living farther from the main street were found to have lower privacy perceptions, utilize different privacy mechanisms, and display lower dissatisfaction with vehicular noise; and (4) non-student residents expressed higher

privacy satisfaction than did student residents.

Three environmental factors, number of bedrooms, floor locations, and building locations; and one social factor, number of children, were found to be the best predictors of privacy satisfaction.

Some further recommendations for research and design implications were proposed and discussed in the next chapter.

Chapter 4

CONCLUSIONS

INTERPRETATION OF RESULTS

Eight hypotheses proposed in this study will be discussed individually below.

Hypothesis No.(1) People with different cultural backgrounds (e.g., American vs. non-Americans) will have different privacy perceptions, use different privacy regulation mechanisms, and react differently via the physical environment in the management of their social and personal interactions.

According to the test analyses, this hypothesis was not fully supported. Subjects from different cultural backgrounds (see Table 2) did differ significantly in their perception of neighbors' noise, family noise, and family intrusion, but did not differ in other perceptions. In addition, Arabians seemed to be more dissatisfied with their family noise and family intrusion than Americans. Koreans were less satisfied with privacy (SPRI) than Arabians. These might be explained by their different culturally-based norms, customs, or life styles. No significant differences existed in overall privacy perception and mechanisms among these four cultural groups.

In Table 3, Americans seemed to perceive noise more frequently and perceive less intrusion than did

non-Americans. Also, non-Americans were more dissatisfied with all the intrusions than Americans. This might be the reason that non-Americans seem to care more about visual intrusions of privacy.

Thus, this hypothesis was only partially supported. Subjects with different cultural backgrounds differed on a few privacy perceptions and satisfactions, but not in privacy mechanisms. This may be explained by the KSU Housing Department who has restricted residents by a number of rules (e.g., rules that prohibit room decoration by tacking on the wall surfaces). Thus, cultural preferences are not allowed to be expressed, such as hanging indoor plants to serve as visual barriers.

Hypothesis No.(2) Males and females will express different levels of privacy perception and satisfaction in the same dwelling environment.

This hypothesis did not receive wide support by the data. Only dissatisfaction with vehicular noise showed significant gender differences, and may have resulted by chance. Though no other significant differences were found, a trend was visible suggesting that females perceived noises and visual intrusions more often than did males, and were less satisfied with those disturbances. Conversely, when concentrating on work, males seemed to easily perceive disturbances and express less satisfactions with the same environment.

Some previous findings by other researchers suggest that males and females show differences in their environmental cognition due to traditional sex roles (Holahan and Holahan, 1979) and coping with crowding due to social norms (Epstein and Karlin, 1975). This hypothesis needs further study to confirm whether gender differences exist on privacy behavior.

Hypothesis No.(3) Residents living at different floor locations and proximity to the main stairway will display different levels of privacy perception, satisfaction, and utilize different privacy mechanisms.

Differences on overall perception (OP) and overall dissatisfaction (OS) were supported by the T-test and GLM in Tables 5 and 6. Residents living on the first floor perceived neighbors' noise more frequently, and were much dissatisfied with the neighbors' noise. This finding suggests that the poor soundproofing materials in Jardine apartments, especially wooden floors between the first and second floors, need to be improved. This can be verified by residents' comments listed in Appendix B. Also, perception of intrusions (PI) and dissatisfaction with intrusions (SI) were found to differ among residents with apartments at different distances away from the main stairway. This finding might be explained by the long corridor which causes residents living in the farthest end from the main stairway (group 4) to have less disturbances and highest

satisfactions. Significant differences on privacy mechanisms were not found for floor locations.

Hypothesis No.(4) Residents who live in two-bedroom apartments will have different levels of privacy satisfaction from those who live in one-bedroom apartments.

From the T-test results in Table 7, people living in one-bedroom apartments had significantly higher means ($p < 0.01$) on satisfaction with their family noise and intrusion, but no significant differences were found on the other sources of noise and intrusion. Other overall satisfaction, privacy satisfaction when working, and satisfaction with apartment design also showed significant differences. Because subjects living in two-bedroom apartments are supposed to have one or more children, number of children seemed to be more important in determining privacy satisfaction. This can also be clarified by Table 9, which indicated that families that varied in number of children showed significant differences in privacy mechanisms, privacy dissatisfaction with their family noise, and intrusion. In other words, the amount of living space in two-bedroom apartments might not be enough for families with one or more children.

Hypothesis No.(5) Residents living at different proximities to vehicular traffic will differ in privacy perception, satisfaction and use of privacy mechanisms.

Residents living at different distance from the main

street did show significant differences in their perception, mechanisms, and dissatisfaction with the vehicular noise. Differences were also found for vehicular intrusion and dissatisfaction with neighbors' looking into apartment. These results showed that only vehicular noise and intrusion had different effects on the residents' privacy behavior. Other sources of noise and intrusion, such as neighbors' noise or family intrusion, did not show any differences for subjects. Therefore, this hypothesis was only supported on the effects of vehicular and neighbors' visual intrusions. These results support Chermayeff and Alexander's point discussed in previous literature review that the control of the outside environment, especially vehicular traffic, is very important to residents' sense of control over their social involvement.

Hypothesis No.(6) Residents with different numbers of children will display different levels of privacy satisfaction and privacy behavior.

In regard to privacy satisfaction (see Table 9), this hypothesis was mostly supported, but was not supported on residents' mechanisms (except on family noise). Residents with no children showed the highest privacy satisfaction, but surprisingly, residents with three or more children did not show the lowest satisfaction. While this finding may be explained by the fact that residents with several children may have adjusted their desired levels of privacy, however,

there is no evidence in this study to explain why this difference exists.

Thus, residents with no children seemed to have the highest satisfaction with their environment, followed by those with several children and with one or two children.

Hypothesis No.(7) Residents with different student status (student vs. non-student) will have different levels of privacy perception and satisfaction.

This hypothesis was partially supported. While concentrating on work or study, residents with different status did not have significant differences on privacy perception, but they did have significant differences on satisfaction. In other words, sudent residents seemed to prefer higher levels of privacy while studying. This point has been supported in Sim Van Der Ryn's study of Berkeley dormitories reviewed earlier.

Hypothesis No.(8) When some social characteristics, such as number of children are covaried, environmental factors will explain a significant amount of variance in privacy satisfaction.

This hypothesis was mostly supported except for dissatisfaction with family noise and family intrusion, in which number of children (not an environmental factor) explained a significant amount of variance in privacy satisfaction. Thus, if Jardine apartments do not give residents ample living space for individual privacy

expression among different family members, family noise and intrusion seemed difficult to avoid.

In predicting privacy satisfactions, three environmental factors seemed to be the best predictors (see Tables 11 and 12). Number of bedrooms and floor locations accounted for significant variation in noise dissatisfaction; building location predicted significantly intrusion dissatisfaction. Also, these three predictors were also found to be the best ones for overall satisfactions (see Table 13).

DESIGN IMPLICATIONS

Based on the results of this study, a number of design implications are proposed below to help residents achieve better privacy satisfaction in married student housing at Kansas State University.

Materials

Residents living on different floor locations, especially on first floors, experience serious noise disturbance if sound absorbant materials are not used. Thus, acoustically insulated ceilings for the first floor apartments need to be installed on wooden floors; or at least carpet should be used on the second floors to reduce the vertical noise transmission from neighbors. Also, soundproofing materials utilized in wooden doors, exterior walls, and walls between units and rooms are necessary to

prevent noise transmission between apartments.

Design Features

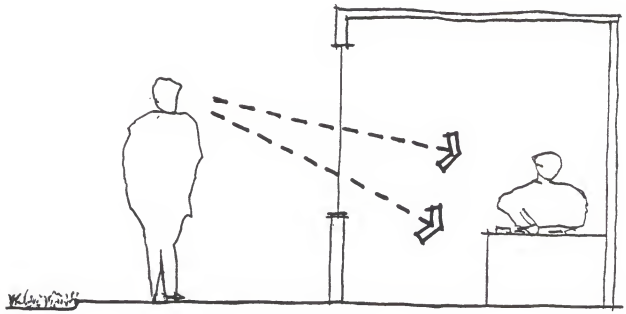
Jardine residents who live close to the main street and main stairway are bothered more easily by visual intrusions, most likely because of the large windows at ground level. Although blinds are installed, they can not be shut all day. Therefore, smaller double glazed windows should be installed. Another approach is to suspend some potted plants in front of these windows as partial visual barriers. This not only can reduce the visual intrusion, but also maintain sufficient sunlight in apartments (see Figure 3). Regarding family intrusion problems, movable closets, about 50" high, can provide needed barriers to provide a semi-private space for reading or writing (see Figure 4).

Study Areas

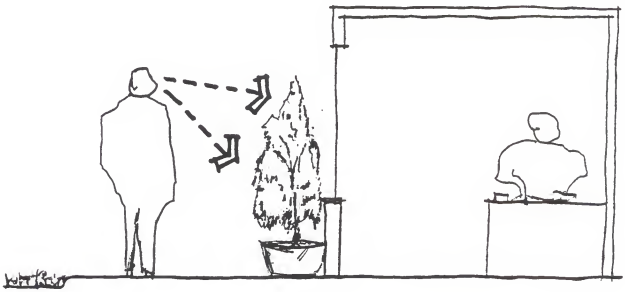
According to the results on Table 10 and respondents' comments (see Appendix B), a study room, or at least a designed study area, is needed within each apartment for Jardine residents. Sim Van Der Ryn's study in Berkeley dormitories suggested that college students prefer a quiet and isolated place while they are studying. This area could be small, but needs absolute privacy. In the current apartments, lockable doors to the bedrooms and insulation materials can help achieve this goal.

However, a study room designed to each apartment, or a

Figure 3: VISUAL INTRUSION AND POTTED PLANTS

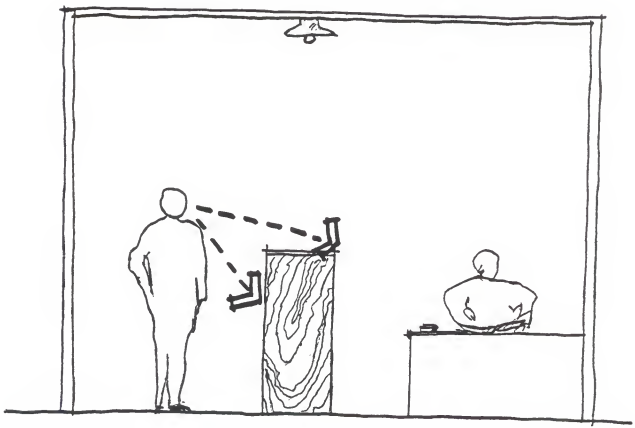


VISUAL INTRUSION DUE TO LARGE WINDOWS



POTTED PLANTS AS VISUAL BARRIERS

Figure 4: MOVABLE CLOSETS AS VISUAL BARRIERS



shared study area close to residents' apartments, could be considered in any new married student housing projects.

Living Space

In predicting dissatisfaction with family noise (SFN) and family intrusion (SFI), number of bedrooms and number of children (as a social factor) were found to be the best predictors (see Table 11 and Table 12). Also, from the results of Table 7 and Table 9, two-bedroom apartments are simply not large enough for residents with two or more children. Therefore, the Housing Department should take these two factors into account when they assign an apartment to residents, or build new married student housing.

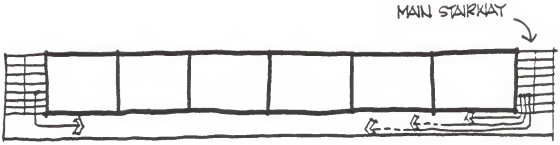
Building Types

The long corridor type connecting six apartments makes residents perceive neighbors' passing more frequently. If corridor are necessary, they should be shorter and equally used between two end stairways (see Figure 5).

Landscaping

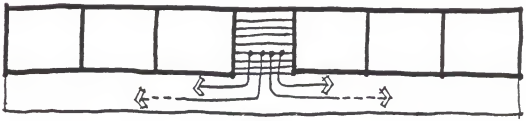
Due to the fact that Jardine buildings are surrounded by open space with lawn, providing berms and planting bigger trees (see Figure 6) can help residents, particularly those living close to the main street, to avoid some noise and intrusion from vehicles (see Table 8).

Figure 5: STAIRWAYS AND CORRIDORS



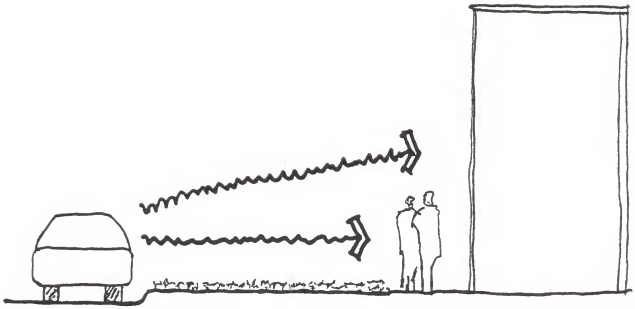
VISUAL INTRUSION BY MAIN STAIRWAY

STAIRWAYS EQUALLY USED

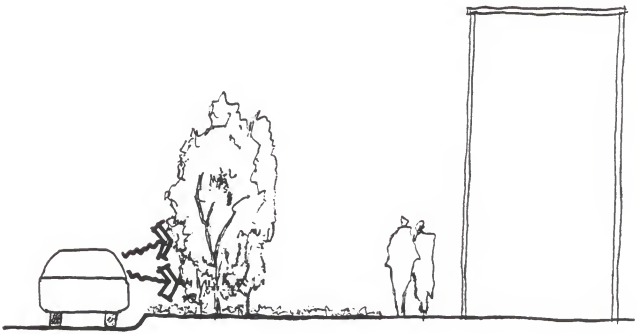


SHORTER CORRIDOR

Figure 6: NOISE AND LANDSCAPING



NOISE FROM CURRENT OPEN SPACE



TREES AS NOISE BARRIERS

FURTHER RECOMMENDED RESEARCH

This thesis has tried to explored how personal, social, and environmental factors effect residents' privacy behavior in married student housing. Similar research in other settings is needed to corroborate the findings of this study. Three related research objectives listed below are recommended for further studies.

(1) Further research needs to be done on how people with different cultural backgrounds perceive privacy, regulate their privacy mechanisms, and how they experience privacy in different ways. Architects and planners may gain better insight into the design of culturally-mixed apartment complex on university campuses.

(2) The size and number of bedrooms, especially in the context of families with different number of children needed to experience privacy, need further study.

(3) The differences between males and females on their privacy perception and privacy satisfaction need further clarification.

(4) Based on noise and visual intrusion, how different building types, such as corridor-connected apartments or arrangements of housing units effect residents' privacy behavior should be studied.

It is hoped that findings from this research can give environmental researchers, practitioners, and managers a

better understanding of privacy in married student housing. These implications should be suitable for the design of similar housing environments at this and other universities. It is hoped that this study will helpful for researchers developing theories in privacy behavior, especially, related to the residential environment.

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APPENDIX A

Survey Questionnaire

KSU
KANSAS STATE UNIVERSITY

Department of Architecture

College of Architecture and Design
Seaton Hall
Manhattan, Kansas 66506
913-532-5953

Dear Residents:

My name is Jason Chen, a graduate student in the Department of Architecture at Kansas State University. For part of my master's thesis, I am studying the issue of privacy in Jardine residents. This study will broaden our understanding of how physical environment interacts with the social environment to affect the acquisition of privacy. In recent years, privacy behavior has been thought to play an important role in helping people to manage their social lives and enhancing a sense of self-identity or self-worth.

To achieve this goal, I need your cooperation in answering a short questionnaire that should take no longer than 10 minutes. There should be no appreciable risk to you if you decide to help me and your responses will in no way affect any future housing assignments at KSU. However, your participation is entirely voluntary. Please feel free to skip any question you do not wish to answer. The information you provide will be confidential and you will not be identified with the information in any way.

A husband and a wife in this study will be regarded as different respondents. Thus, please answer these questions separately, then seal your questionnaires together in the attached envelope. I will return to pick up your questionnaires on _____.

If you have any questions regarding the study or your participation, please feel free to contact me at 539-5373, or my major professor, Dr. Paul Windley at 532-5953. Your cooperation would be very much appreciated.

Sincerely,

Jason Chen

Jason Chen

QUESTIONNAIRE: By your participation, which is entirely voluntary, you will help provide answers to important questions. Please feel free to skip any questions that you do not wish to answer. Remember, the information you provide will be confidential and you will not be identified with the information in any way.

Now, I would like to ask you some questions about yourself and your apartment. Please check the appropriate box by each question.

(1) Sex:
( ) Male ( ) Female

(2) My nationality is _____.
(Please write down your country name above.)

(3) Are you currently a student at Kansas State University?
( ) Yes ( ) No

(4) How many children do you have who live with you?
( ) 0 ( ) 1 ( ) 2 ( ) 3 or more

(5) I live in
( ) a one bedroom apartment.
( ) a two bedroom apartment.

(6) My apartment is on the
( ) ground floor.
( ) second floor.

(7) My apartment belongs to the category of
( ) building A, B, or C.
( ) building F, N, K, Q, T, W, or Y.

(8) How many apartment(s) (not counting your own) is (are) between your apartment and the main stairway?
( ) 0 ( ) 1 ( ) 2 ( ) 4

(9) On weekdays, how much time do you spend in your apartment each 24 hour-day on the average?

_____ Hours (Please write down the approximate number of hours on the left.)

(10) Normally on weekends, how much time do you spend in your apartment each 24 hour-day on the average?

_____ Hours (Please write down the approximate number of hours on the left.)

Now, Please check ONLY one answer to each of the following questions.

(11) How often do you experience the following noises in your apartment?

(a) vehicular noise (e.q., engine, brake, or horn):
( ) A few times everyday
( ) A few times a week
( ) Seldom or never

(b) noise from neighbors'apartments (e.q., voices, TV, or falling objects):
( ) A few times everyday
( ) A few times a week
( ) Seldom or never

(c) noise from outside of apartments (e.q., neighbors' chatting or playing at corridor or lawn area):
( ) A few times everyday
( ) A few times a week
( ) Seldom or never

(d) noise from a member of your family in another room:
( ) A few times everyday
( ) A few times a week
( ) Seldom or never

(12) What do you do when you experience the noise you checked above?

(a) vehicular noise:
( ) Close the door and windows.
( ) Turn on the radio or TV to screen out the noise.
( ) Think about moving to another apartment.
( ) Ignore it but feel irritated.
( ) It does not bother me.
( ) Other:_____.

(b) noise from neighbors' apartments:
( ) Go tell them to stop.
( ) Call Housing Department or police to complain.
( ) Close the door and windows.
( ) Turn on the radio or TV to screen out the noise.
( ) Ignore it but feel irritated.
( ) It does not bother me.
( ) Other:_____.

(c) noise from outside of apartments:
( ) Ask them to leave or be quiet.
( ) Close the door and windows.
( ) Ignore it but feel irritated.

( ) It does not bother me.
( ) Other:_____.

(d) noise from a member of your family in another room:
( ) Ask them to stop.
( ) Use facial expression or some other body language to deter them.
( ) Go to the private room (e.q., bedroom) and close the door.
( ) Ignore it but feel irritated.
( ) It does not bother me.
( ) Other:_____.

(13) How often do you experience the following visual intrusions in your apartment?
(a) vehicular intrusion (e.q., headlights):
( ) A few times everyday
( ) A few times a week
( ) Seldom or never

(b) neighbors' looking into your apartment:
( ) A few times everyday
( ) A few times a week
( ) Seldom or never

(c) family intrusion when privacy is needed (e.q., studying or sleeping):
( ) A few times everyday
( ) A few times a week
( ) Seldom or never

(14) What do you do about these visual intrusions you checked above?
(a) vehicular intrusion:
( ) Pull down the blinds or curtain.
( ) Arrange some furniture or plants to avoid visual contact.
( ) Ignore the intrusion but feel irritated.
( ) It does not bother me.
( ) Other:_____.

(b) neighbors' looking into your apartment:
( ) Pull down the blinds or curtain.
( ) Arrange some furniture or plants to avoid visual contact.
( ) Ignore the intrusion but feel irritated.
( ) It does not bother me.
( ) Other:_____.

(c) family intrusion when privacy is needed:
( ) Tell them your feeling.
( ) Rearrange furniture to avoid intrusions.

( ) Close the door to the room.
( ) Ignore it but feel irritated.
( ) It does not bother me.
( ) Other:_____.

(15) Which usually would describe your privacy experience when you are studying or concentrating on work in your apartment?
( ) Quiet and comfortable
( ) Sometimes bothered
( ) Always noisy and bothered
( ) Other:_____

Now, please circle ONLY one number on the scale as shown below to indicate your best summary of privacy satisfaction for each of the following questions. For example, "5" for Pleased, "4" for Mostly satisfied and so forth on to "1" for you feel Unhappy about it.

5	4	3	2	1
*	*	*	*	*
Pleased	Mostly Satisfied	Mixed (equally Satisfied & Dissatisfied)	Mostly Dis-satisfied	Unhappy

(16) How dissatisfied are you with the following amount of noise in your apartment from these sources?

(a) vehicular noise:

5 4 3 2 1

(b) neighbors' apartments:

5 4 3 2 1

(c) outside of apartments:

5 4 3 2 1

(d) a member of your family:

5 4 3 2 1

(17) How dissatisfied are you with the following visual intrusions from others in your apartment?

(a) vehicular intrusions:

5 4 3 2 1

(b) neighbors' looking into your apartment:

5 4 3 2 1

(c) family intrusion when privacy is needed:

5 4 3 2 1

(18) How satisfied are you with your apartment for studying or concentrating on work ?

5 4 3 2 1

(19) How satisfied are you with your privacy as a whole in Jardine Terrace?

5 4 3 2 1

(20) How satisfied are you with your apartment design in providing for your needed privacy?

5 4 3 2 1

SUGGESTIONS: Please feel free to write down any suggestion or comment in the blank space.

Thank you for your cooperation. Please enclose this and your spouse's questionnaire together in the attached envelope. I will come back to collect them at your scheduled time.

NOTE: You don't have to put your names on the questionnaire sheets or envelope.

APPENDIX B

Comments from Respondents

Appendix B

COMMENTS FROM RESPONDENTS

Respondents were asked to freely express comments about their apartment environment once the close-ended questions of the survey were completed. Most respondents were complaining the noise coming from their neighbors and water pipes. Some were also complained study privacy in their apartments. The following are some of the most relevant comments to this request.

"When I am cooking or my husband is using the bathroom, the noise of the water/drain is disturbing."

"The design of Jardine is poor . . . . whenever my neighbor is in his/her bathroom, we can hear the water noise and drain noise, especially in the night."

"I can hear my neighbors walk above me. Carpet would solve most of the problems as they wear hard soled shoes. . . . . Whenever anyone in the apartments closest to us runs water, we can hear it!"

"Most of the noise comes from above neighbors. We can hear them talk, walk, drop things, the TV always loud to us. The only time we don't hear them is when they are sleeping or gone."

"I am sure it is too late now . . . but some reasonable sort of insulation to prevent noises from neighbor apartments (especially below) would really improve the situation. Not only are noises not muffled, they actually seem amplified!"

"Provide all second floor with good isolation or at least by using carpet, please!"

"The problem is terrible, living upstairs, it is impossible for ourselves and our children to not disturb our neighbors below us."

"The insulation of the apartment is terrible, especially the noise from neighbors (upstairs)."

"In general, I was quite satisfied with the apartment except for some noise from neighbors."

". . . Even though we walk very carefully, this wooden floor still makes noise every time. It's embarrassed when we walk during midnight or . . . the floor is always the major source of the noise."

"We moved from the ground floor to the second floor because of the noise. . . . Futhermore, my wife makes noise while she is walking. I cna not stand noise, so I always go out to study."

". . . We don't have insulation between apts. (upper and below apts.). It is very difficult to have any kind of privacy, even in the bathroom, everything can be heard. . . . It makes it hard to concentrate on studies and creats problems among residents."

" . . . if your neighbors are considerate, Jardine is fine, if your neighbors are noisy or rude, it can be impossible to live hear."

"Apartments should have better soundproofing!"

"The acoustic of the building is poor. Noise from the 2nd. floor above your apartment is very clear. . . . Possible improvement or modification of the acoustic design is necessary."

"Please put insulation in space between ceiling of groundfloor apt. and floor of upper apt."

"I'm very surprised at how well the wall stop noise. It is just the ceiling that gives us the most trouble. Sometimes I would almost be glad to let them borrow our

carpet."

"There just isn't enough room. . . . I have very little privacy from my child. . . . Our neighbors next door are always noisy. I guess we just put up with it."

"The dissatisfaction about my privacy is not only coming from the noise or visual intrusion from my neighbors or outside, but also comes from my fear of making noise to other apartments. Also, the fear that my talking or my activity will be heard or noticed by my neighbors."

"The weak spot seems to be the conveying of sound from upstair apartments. . . ."

"AS you know I live in the second floor, we try to do the less noise possible but always there's some, like when we walk or accidentally something falls to the floor. . . ."

"Notify the upstair apartment people of the type of noise. . . . not to pour large quantities of the water down the sink."

"Noise comes from the piping system and second floor always bother me a lot. Sometimes makes me crazy."

"There is more noise from the water pipes than the people."

"When our neighbors using the toilet or they taking shower, the water falls down conveying a noise."

"The window design is terrible. It demands blinds to be down all the time overall."

"The windows close to the corridor directly makes us feel unsafe. Our blinds must pull down almost all day long."

"You can see right into the bedroom through the window from outside. No privacy at all!"

"Need to either make separate room for studying, or allow more space in bedroom for desk to be placed so that door may be shut."

"I don't know how to concentrate myself on styuding in my apartment. Too much noise comes from water pipes and neighbors."

PRIVACY BEHAVIOR IN MARRIED STUDENT HOUSING
A SAMPLE STUDY AT KANSAS STATE UNIVERSITY

by

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ABSTRACT

This thesis explores privacy behavior in the context of married student housing at Kansas State University.

Personal, social, and environmental factors comprised the independent variables in the study while privacy perception and privacy satisfaction were the dependent variables. Using the conceptual framework provided by Altman (1975), eight hypotheses were tested . T-tests, ANOVA, and multiple regression were used to test for significant differences and relationships in the data.

It was found that (1) people with different cultural backgrounds have some significant differences in their privacy perceptions and satisfactions, but not in their mechanisms. (2) residents living at different floor locations and proximity to the main stairway have different overall privacy perceptions and dissatisfactions; (3) residents living farther from the main street were found to have lower privacy perceptions, utilize different privacy mechanisms, and display lower dissatisfaction with vehicular noise; and (4) non-student residents expressed higher privacy satisfaction than did student residents.

Three environmental factors, number of bedrooms, floor locations, and building locations; and one social factor, number of children, were found to be the best predictors of privacy satisfaction.

Some further recommendations for research and design implications were proposed and discussed in this thesis.